

Question Booklet Series : **A** Question Booklet Sr. No. **045092**

## Ph.D. Entrance Test – 2014

Subject : **Zoology**

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

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14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. Which of the following is not function of microtubules

- A) Movement
- B) Transport
- C) Cytokinesis
- D) Separation of metaphase chromosomes

2. Selective cell-cell interaction are not mediated by which of the following proteins

- A) Selectins
- B) Integrins
- C) Immunoglobulin superfamily members
- D) Clathrins

3. In vertebrate visual receptors which of the following secondary messengers plays a key role

- A) cAMP
- B)  $Ca^{++}$
- C) cGMP
- D) Phospholipids

4. Nitric oxide and CO are molecules involved in

- A) Autocrine signalling
- B) Paracrine signalling
- C) Endocrine signalling
- D) Hormonal signalling

5. Which of the following function in both paracrine and autocrine signalling

- A) Retinoic acid
- B) Eicosanoids
- C) Nitric oxide
- D) Steroid hormone

6. Which of the following does not belong to GTP binding protein

- A) Rab
- B) Rac
- C) Rar
- D) Raf

7. Which of the following is not an intermediate filament protein

- A) Vimentin
- B) Keratin
- C) Profilin
- D) Desmin

8. Which of the following shows holoblastic rotational cleavage

- A) Mammals
- B) Amphibians
- C) Birds
- D) Reptiles

9. Furunculosis in fishes is caused by

- A) *Pseudomonas*
- B) *Aeromonas salmonicida*
- C) *Nocardia asteroides*
- D) *Flexibacter columnaris*

10. In humans secondary neurulation occurs at the level of

- A) Sacral vertebra
- B) Lumbar vertebra
- C) Tail vertebra
- D) Thoracic vertebra

11. Which of the following of immunoglobulin Type is present in abundance in human colostrums.

- A) IgA
- B) IgM
- C) IgD
- D) IgE

Which of the following reaction ensures lysosomal enzymes to be packed in vesicles called primary lysosomes

- A) Glycosylation at Threonine
- B) Phosphorylation at mannose
- C) Sulphation at mannose
- D) Hydroxylation at glutamate

3. Phosphorylation of lamins by kinases like Cdc2 results in

- A) Polymerization of nuclear lamina
- B) Depolymerization of nuclear lamina
- C) Condensation of chromatin by inactivation of condensin
- D) Disruption of mitosis

4. Which of the following is pest of stored grains

- A) *Sitotroga cerealella*
- B) *Pyrilla perpusilla*
- C) *Scirpophaga novella*
- D) *Bemisia tabaci*

15. Depth of fish pond water for fish culture should be

- A) 1.0 -1.5 m
- B) 0.5-1 m
- C) 2-3 m
- D) 10-15 m

16. What is not true for T-cells

- A) They are formed in the thymus gland
- B) They form by division of lymphoblasts
- C) They differentiate to plasma cells
- D) They react against transplants and cancer cells

17. Silk worm spins silk from

- A) Outside to inside
- B) Inside to outside
- C) Random fashion
- D) Anterior to posterior side



18. The correct sequence of arrangement of segments in the leg of cockroach is
- A) Coxa ,femur,trochanter ,tibia, and tarsus
  - B) Coxa ,Trochanter ,femur ,tibia, and tarsus
  - C) Tibia ,trochanter,femur ,tarsus and coxa
  - D) Trochanter, coxa, tibia,femur and tarsus
19. The type of parthenogenesis in which the male develops from unfertilized egg and female from fertilized egg is known as
- A) Thelytoky
  - B) Apospory
  - C) Gynogenesis
  - D) Arrhenotoky
20. Physostomous type of swimbladder is found in
- A) Gars
  - B) Carp
  - C) Perch
  - D) Lungfish
21. Breathing rate in mammals is controlled by a part of brain called
- A) Thalamus
  - B) Hypothalamus
  - C) Medulla oblongata
  - D) Cerebellum
22. Digestive enzymes are released by pancreas and the bile is released by liver in response to the hormone
- A) Insulin
  - B) Cholecystokinin
  - C) Secretin
  - D) Zymogen
23. In SCID there is due to non-functional
- A) IgM
  - B) Neutrophils
  - C) T-cells or B- cells
  - D) Macrophages

14. Cushing's syndrome is due to oversecretion of

- A) Glucocorticoids
- B) Testosterone
- C) ADH
- D) Mineralocorticoids

15. Prostaglandins

- A) Act as local hormones
- B) Help induce inflammation
- C) Are important in fat metabolism
- D) All of the above

16. Which of the following is a non - organ specific (systemic ) autoimmune disease

- A) Myasthenia gravis
- B) Systemic lupus erythematosus (SLE)
- C) Hashimoto's thyroiditis
- D) Pernicious anemia

17. All of the following are true about flow cytometry except

- A) Cells can be tagged with fluorescent dye
- B) Cells must be cultured prior to the flow cytometry analysis
- C) Cells that are naturally fluorescent can be detected
- D) This is a rapid method for microbe detection

18. The food fishes, commonly called as Feather-backs are

- A) *Wallago attu* & *Bagarius bagarius*
- B) *Clarius batrachus* & *Heteropneustes fossilis*
- C) *Notopterus notopterus* & *Notopterus chitala*
- D) *Hilsa ilisha* & *Setipinna phasa*

19. *Phlebotomus argentipes* aids in the spread of

- A) Plague
- B) Kala azar
- C) Gambia fever
- D) Tertian malaria

20. Myiasis is a disease caused by

- A) Mosquito
- B) Bedbug
- C) Maggots
- D) Human louse

21. Ecological succession refers to

- A) Changes in forest as trees grow taller
- B) Building of soil nutrients
- C) Change in community composition
- D) Process by which a species becomes abundant

32. Which of the following is an example of convergent evolution

- A) Wings of birds and bats
- B) Hb gene family
- C) rRNA genes
- D) Number of toes of human and horse

33. Removal of which species will always result in great changes in an ecological system

- A) Competitive species
- B) Keystone species
- C) Carnivorous species
- D) Rare species

34. How many H-Bonds will stabilize a 2000 bp long B-DNA when 30% of all the bases in the DNA are guanine

- A) 2300
- B) 2700
- C) 4600
- D) 5400

35. Allotypic determinants are

- A) constant region determinants that distinguish each Ig class and subclass within a species
- B) Expressed only from the paternal chromosome
- C) Not immunogenic in individuals who do not have that allotype
- D) Amino acid differences encoded by different alleles for same H or L chain locus

36. In which of the following groups of animals the germ cells migrate through blood stream?

- A) Amphibians and birds
- B) Birds and mammals
- C) Reptiles and birds
- D) Amphibians and reptiles

37. In which sequence the following proteins are activated as prerequisite for ventralisation in *Drosophila*

- A) Snake, Spatzel, Easter
- B) Snake, Easter, Spatzle
- C) Spatzel, Snake, Easter
- D) Easter, Snake, Spatzle

The 9:3:3:1 ratio is modified in complementary genes as

- A) 15:1
- B) 12:3:1
- C) 13:1
- D) 9:7

Transformation experiment was performed on which bacteria

- A) *Salmonella*
- B) *E.coli*
- C) *Streptococcus pneumonia*
- D) *Pasteurella prestis*

In Deuteropenia there is lack of perception of which colour?

- A) Blue
- B) Red
- C) White
- D) Green

The repeat sequence in human telomeres is

- A) TTAGGG
- B) GGGGTT
- C) GGGGTTT
- D) TTTAGGG

"Gene battery model" of gene regulation in eukaryotes was proposed by

- A) Kornberg and Ochoa
- B) Britten and Davidson
- C) Beadle and Tatum
- D) Jacob and Monod

A deleterious allele decreases more rapidly in frequency if it is

- A) Rare
- B) Recently mutated
- C) Recessive
- D) Dominant

Who developed the process of DNA finger printing

- A) Kary Mullis
- B) T.H.Morgan
- C) H.O.Smith
- D) Alec Jeffreys



45. Hydroxylation of certain amino acids of a protein takes place in

- A) Cytoplasm
- B) Endoplasmic reticulum
- C) Golgi complex
- D) Peroxisomes

46. LOD scores are used to predict

- A) Cross over frequencies
- B) gene sequencing
- C) Gene linkage
- D) Number of chromosomes in genome

47. Mesonephric kidney in which tubules extend posteriorly throughout the length of coelom, is referred to as

- A) pronephros
- B) Opisthonephros
- C) Holonephros
- D) metanephros

48. HIV infection begins with the binding of which of the following to CD4 receptor on surface of helper T cells

- A) gp 135
- B) gp120
- C) gp 90
- D) gp100

49. The gene for which of the following would be considered as a protooncogene

- A) p53
- B) Rb protein
- C) p21(a Cdk inhibitor protein)
- D) Ras

50. Exogenous antigen is processed

- A) After presentation by antigen presenting cells
- B) By nearly every nucleated cell
- C) By cytosolic processing pathway
- D) In acidified endosome

Question Booklet Series : **A** Question Booklet Sr. No. **046072**

## Ph.D. Entrance Test – 2014

Subject : Microbiology

Paper-I

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1. Diphtheria is an example of
  - A) Bacteraemia
  - B) Pyaemia
  - C) Septicemia
  - D) Toxemia
2. Causative agent of Scarlet fever:
  - A) *Staphylococcus aureus*
  - B) *Streptococcus viridians*
  - C) *Streptococcus pyogens*
  - D) *Streptococcus epidermidis*
3. The drug of choice in anaphylactic shock is
  - A) Histamine
  - B) Corticosteroid
  - C) Epinephrine
  - D) Crocin
4. All of the following are bacteriostatic chemotherapeutic agent except
  - A) Bacitracin
  - B) Chloramphenicol
  - C) Novobiocin
  - D) Tetracycline
5. What is the strength of the bond between antigen and antibody?
  - A) Affinity
  - B) Avidity
  - C) Covalent
  - D) None covalent
6. Tritiated thymidine, if added to the cell culture medium gets incorporated into
  - A) Mature B cells
  - B) Mature macrophases
  - C) Immature lymphocytes
  - D) Immature neutrophils
7. LPS is a mitogen for
  - A) T cells
  - B) B cells
  - C) Eosinophils
  - D) Basophils
8. Which of the following is not an autoimmune disease?
  - A) Rheumatoid arthritis
  - B) Lupus erythmatosus
  - C) Graves Disease
  - D) Filariasis
9. Import of small hydrophilic molecules in Gram negative bacterial cells is facilitated by special class of proteins in the outer membrane known as
  - A) Selectins
  - B) Porins
  - C) Integrins
  - D) Tubulins
10. Nucleic acid detection can be done by the following except
  - A) Northern blotting
  - B) Southern blotting
  - C) Western blotting
  - D) O.D. at 260/280







20. Pus- forms are called as  
A) Pyoderm  
B) Pyogenic  
C) Pyrogen  
D) Pyocyanin
21. T3 & T4 levels are increased in  
A) Hashimoto's diseases  
B) Grave's diseases  
C) Multiple sclerosis  
D) SLE
22. Myasthenia gravis is an auto immune disease which represents  
A) Type-I HS  
B) Type-II HS  
C) Type-III HS  
D) Type-IV HS
23. Virulence of gonococcus is due to  
A) Pili  
B) Cell membrane  
C) Cellular location  
D) Cyclic enzymes
24. Japanese encephalitis is caused by  
A) Togo Viruses  
B) Arbo Viruses  
C) Para myxo Viruses  
D) Ortho myxo Viruses
25. Dengue virus is transmitted from man to man by the  
A) Sand fly  
B) Ticks  
C) Aedes aegypti  
D) Culex
26. Common food poisoning microbes are  
A) *Clostridium* and *Salmonella* Fungicide  
B) *Clostridium* and *E.coli*  
C) *E.coli* and *Salmonella*  
D) *Clostridium* and *Streptococcus*
27. *Clostridium perfringens* poisoning is associated with  
A) Meat products  
B) Vegetables  
C) Canned foods  
D) Fish products
28. Which of the following bacteria is called a superbug that could clean up oil spill  
A) *Bacillus subtilis*  
B) *Pseudomonas putida*  
C) *Pseudomonas denitrificans*  
D) *Bacillus denitrificans*
29. The process of extracting metals from ore bearing rocks is called  
A) Bioextraction  
B) Microbial extraction  
C) Biofiltration  
D) Biorecovery

30. The process of converting environmental pollutants into harmless products by naturally occurring microbes is called
- A) Ex situ bioremediation                      B) Intrinsic bioremediation  
C) Extrinsic bioremediation                    D) None of these
31. Microorganisms remove metals by
- A) Adsorption and complexation              B) Adsorption and precipitation  
C) Adsorption and volatilization              D) All of these
32. If protein A is 10% of the total proteins in a preparation. Maximum how many folds of purification of this protein can be achieved.
- A) 10                      B) 100                      C) 1                      D) 0.1
33. Specific activity of an enzyme is
- A) International unit of an enzyme per milligram of protein  
B) International unit of an enzyme per microgram of protein  
C) International unit of an enzyme per gram of protein  
D) Total number of an enzyme molecule per milligram of protein
34. Agar agar is obtained from
- A) Gelidium                      B) Polysiphonia  
C) Fucus                      D) laminaria
35. Milk fermentation to produce cheese is done by inoculating with
- A) *Saccharomyces cerevisiae*  
B) *Streptococcus lactis* and *Lactobacillus* sp.  
C) *Acetobacter* and *Gluconobacter*  
D) *Lactobacillus bulgaricus* and *Streptococcus thermophilus*
36. Which one of the following mineral elements play an important role in biological nitrogen fixation
- A) Copper                      B) Magnesium  
C) Zinc                      D) Molybdenum
37. The number of ATP molecules formed during cyclic phosphorylation are
- A) One                      B) Two                      C) Four                      D) Six
38. Aflatoxin is produced by
- A) *Aspergillus* sp.                      B) *Salmonella* sp.  
C) *Fusarium* sp.                      D) *Streptococcal* sp.

39. One of the following present in blue green algae  
A) starch  
B) cyanophacean starch  
C) polysachharides  
D) floridian starch
40. The manufacture of baker yeast's involve  
A) *S. cerevisiae*  
B) *S. thermophilus*  
C) *Bacillus subtilis*  
D) None of these
41. The fermentation of wine can be carried out using the strains of  
A) *S.cervisiae*  
B) *S. carlsbergensis*  
C) *Bacillus subtilis*  
D) *Pedicoccus cervisiae*
42. In the passive diffusion, solute molecules cross the membranes as a result of  
A) concentration difference  
B) passive difference  
C) ionic difference  
D) all of these
43. In aerobic respiration, the terminal electron acceptor are  
A) oxygen  
B) nitrogen  
C) hydrogen  
D) nitrate
44. The 95 % ethanol is equivalent to  
A) 190 proof  
B) 110 proof  
C) 170 proof  
D) 120 proof
45. The sugar concentration of molasses used in fermentation should be  
A) 10-18 %  
B) 20-30%  
C) 4-5%  
D) 30-38%
46. Nothern blotting is the technique used in the determination of  
A) RNA  
B) DNA  
C) Proteins  
D) All of these
47. DNA finger printing is based on  
A) Repetitive sequences  
B) Unique sequences in coding region  
C) Amplified sequences  
D) Unique sequences in non coding region
48. Which one of the following does not need a primer in order to function  
A) DNA Pol I  
B) DNA Pol II  
C) DNA Pol III  
D) RNA Polymerase

(6)

49. Which of the following is false about *E. coli* Lac operon.
- A) It is polycistronic
  - B) It is an example of negative control
  - C) The presence of lactose acts as an inducer
  - D) The repressor binds to the promoter
50. Which of the following enzyme (s) can remove or insert supercoil twists into the circular DNA
- A) Topoisomerase
  - B) Helicase
  - C) DNA poly II
  - D) Spliceosome

x-x-x



Question Booklet Series : **A** Question Booklet Sr. No. **047017**

## Ph.D. Entrance Test – 2014

Subject : Stem Cell & Tissue Engineering

### Paper-I

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1. Embryonal Carcinoma are the
  - A. Stem Cells of embryo
  - B. Stem cells of teratocarcinoma
  - C. Stem cells of blastula
  - D. Stem cells of gastrula
  
2. .... are present in SHED
  - A. Dental stem cells
  - B. Heart stem cells
  - C. Embryonic stem cells
  - D. Skeletal muscle stem cells
  
3. Nervous tissue is derived form
  - A. Endoderm
  - B. Ectoderm
  - C. Mesoderm
  - D. Primordial germ cells
  
4. \_\_\_\_\_ is the generation of functional cells of a tissue, organ or lineage that is distinct from that of the founding stem cells
  - A. Transdifferentiation
  - B. Dedifferentiation
  - C. Nuclear transfer
  - D. Metaplasia
  
5. Embryonic stem cells are
  - A. Unipotent
  - B. Totipotent
  - C. Pluripotent
  - D. Multipotent

6. The epidermis contains skin stem cells. This was first demonstrated by
- A. Solter
  - B. Withers
  - C. Michael West
  - D. Donnal Thomas
7. The bulge cells have the ability to make
- A. Hair follicle and epithelial cells
  - B. Only hair follicle
  - C. Skin stem cells
  - D. Only epithelial cells
8. The finger like projections of small intestine which protrude in to the lumen are called
- A. Villi
  - B. Microvilli
  - C. Macrovilli
  - D. Crypts
9. The mesenchymal stem cells containing the gene encoding green fluorescent protein (GFP) under the control of myosin heavy chain promoter, when engrafted in *mdx* mice, was found to functionally restore the muscles in recipient. This was demonstrated due to the presence of
- A. Green donor cells in *mdx* mice
  - B. Green muscle cells in *mdx* mice
  - C. Green mesenchymal stem cells in *mdx* mice
  - D. Non green muscle cells in *mdx* mice
10. Embryonic germ cells are
- A. Multipotent
  - B. Unipotent
  - C. Totipotent
  - D. Pluripotent



11. Neurogenesis occurs in \_\_\_\_\_ region of the brain
- A. Pia matter
  - B. Ventricular
  - C. Sub ventricular
  - D. Dura matter
12. Wnt is a secreted growth factor that binds to
- A. Frizzled receptor
  - B. Beta-catenin
  - C. E - cadherin
  - D. Sonic hedgehog
13. *Pax7* has been widely used as a marker for
- A. Muscle cells
  - B. Liver stem cells
  - C. Satellite cells
  - D. Pancreatic stem cells
14. Just after fertilization, the male pronucleus is actively
- A. Demethylated
  - B. Re methylated
  - C. Methylated
  - D. Degraded
15. The class 1 MHC molecules are not expressed by
- A. B-cells
  - B. RBC
  - C. Antigen presenting cells
  - D. Liver cells
16. Affinity maturation takes place in
- A. Bone marrow
  - B. Blood
  - C. Thymus
  - D. Lymph nodes



17. Somatic hypermutation occurs in CDR region of antibody encoding genes. It leads to
- A. Change in specificity of antibody
  - B. Increase in antibody affinity
  - C. Decrease in antibody affinity
  - D. Increase in antibody avidity
18. The absence of the formation of an agglutinate is reported as the presence of the antigen in the reaction mixture. This is called
- A. Passive agglutination
  - B. Indirect agglutination
  - C. Direct agglutination
  - D. Immunoprecipitation
19. The kinesin-1 is motor protein that mediates
- A. Reterograde transport
  - B. Anterograde transport
  - C. Endocytosis
  - D. Cell movement
20. The protein conformation is determined by
- A. X-ray crystallography
  - B. Electron microscopy
  - C. SDS- PAGE
  - D. Western blot
21. The proteins in a complex biological sample are identified by
- A. LC
  - B. LC - MS / MS
  - C. SDS - PAGE
  - D. Native PAGE
22. The 5' cap of the mRNA is connected to the terminal nucleotide of the RNA by
- A. 3' , 5' phosphodiester bond
  - B. 5' , 3' triphosphate linkage
  - C. 5' , 3' phosphodiester bond
  - D. 5' , 5' triphosphate linkage

23. The wobble position is the
- Second base in tRNA anticodon
  - Third base in tRNA anticodon
  - Third base in mRNA codon
  - First base in mRNA codon
24. This technique is used to analyze the nucleotide sequence bound by the RNA polymerase.
- DNA walking
  - Foot printing
  - DNA jumping
  - Northern blot hybridization
25. In the nonsense suppression mutants, the nonsense mutation in the gene is suppressed by the second mutation in the
- Anticodon of tRNA gene
  - Codon of mRNA gene
  - rDNA
  - Aminoacyl tRNA synthetase
26. The integrated viral DNA is called
- Virus
  - Prophage
  - Temperate phage
  - Bacteriophage
27. The Klenow fragment has the following activities
- 5',3' polymerase and 5',3' exonuclease
  - 5',3' polymerase, 5',3' exonuclease and 3',5' exonuclease
  - 5',3' polymerase and 3',5' exonuclease
  - 5',3' polymerase alone
28. When the gene is introduced into mammalian cells through an expression vector which carries viral origin of replication, then it is called
- Transient transfection
  - Stable transfection
  - Transformation

- D. Transduction
29. The commonly used selection marker for stable transfection in ES cells is the gene that codes for
- A. Neomycin phosphotransferase
  - B. Ampicillin
  - C. Tetracyclin Phosphotransferase
  - D. Beta - lactamase
30. In the reference section of a thesis, the entries are alphabetized according to the first letter of the
- A. Surname of the first author
  - B. Firstname of the first author
  - C. Surname of the last author
  - D. Firstname of the last author
31. DNA fingerprinting depends on the differences in the lengths of
- A. Introns
  - B. Non repetitious DNA
  - C. Telomeres
  - D. Mini satellites
32. The F-Class proton pump present in the inner mitochondrial membrane pumps
- A.  $H^+$  ions from the cytosol in to the mitochondria
  - B.  $H^+$  ions from the mitochondria into the cytosol
  - C.  $H^+$  ions out of the cell
  - D.  $H^+$  ions from mitochondria into the lysosome
33. The cancer stem cells are generally resistant to various cytotoxic drugs due to the presence of \_\_\_\_\_ in their membranes.
- A. P- Class pumps
  - B. F- Class pumps
  - C. V- Class pumps
  - D. ABC transporters

34. The formation of ATP molecules by phosphorylation of ADP in the process of converting glucose to pyruvate is called
- A. Oxidative phosphorylation
  - B. Substrate level phosphorylation
  - C. Reductive phosphorylation
  - D. Chemiosmotic phosphorylation
35. The cholera toxin modifies
- A.  $G_{12s}$
  - B.  $G_{12i}$
  - C.  $G_{12q}$
  - D.  $G_{12r}$
36. Diacylglycerol activates
- A. Protein kinase A
  - B. Protein kinase G
  - C. Protein kinase C
  - D. Phospholipase C
37. Myosin binds to
- A. Micro filaments
  - B. Myosin
  - C. Tubulin subunits
  - D. Microtubules
38. Taxol is used as a potent antitumor drug in chemotherapy. It mediates its cytotoxic effect through
- A. Micro filaments
  - B. Microtubules
  - C. Myosin
  - D. Intermediate filaments
39. The small intestinal epithelial cells are polarized due to the presence of
- A. Tight junctions at the luminal side
  - B. Adherence junctions at the luminal side
  - C. Hemidesmosomes at basolateral side
  - D. Desmosomes at lateral side



40. The bipotent oval cells are present in
- A. Sinusoids
  - B. Pancreas
  - C. Canal of Hering
  - D. Hepatic chords
41. The bile is produced by
- A. Sinusoids
  - B. Kuffer cells
  - C. Gallbladder cells
  - D. Hepatocytes
42. In good pasture's syndrome, an autoimmune disease, autoantibodies are raised against
- A. Type-I collagen of glomerular basement membrane
  - B. Type -IV collagen of glomerular basement membrane and lungs
  - C. Insulin
  - D. Cells of kidney
43. The RGD sequence is recognized by
- A. Integrins
  - B. Fibronecton
  - C. Laminin
  - D. Collagen
44. The right places for limb development are determined by
- A. Even-skipped genes
  - B. Hox genes
  - C. Kruppel genes
  - D. Hunchback genes
45. Polytetrafluroethylene is a polymer used in bone tissue engineering. It is
- A. Synthetic and Biodegradable
  - B. Natural and Biodegradable
  - C. Synthetic and Non-Biodegradable
  - D. Natural and Non-Biodegradable

46. Genetically modified adult stem cells induce rapid bone formation. For this purpose adult stem cells have been engineered to express genes of
- A. *Oct* family
  - B. *Sox* family
  - C. Bone morphogenetic protein family
  - D. *Pau* family
47. The cardiac stem cells are stored in niches located in
- A. Ventricles
  - B. Apex
  - C. Atria
  - D. Atria, apex and ventricles
48. The ES cells have been found to grow best in this medium
- A. RPMI 1640
  - B. F1
  - C. DBSS
  - D. DMEM/F12
49. There are risks associated while using murine feeder cells for culturing hES cells. Hence feeder cells can be replaced by
- A. Murine feeder conditioned medium
  - B. Human feeder conditioned medium
  - C. Murine embryonic fibroblasts
  - D. Bovine FGF
50. This is the bioengineered dermal substitute
- A. Meroclone
  - B. Myskin
  - C. Integra
  - D. Epidex

-000-

Question Booklet Series : **A** Question Booklet Sr. No. 048037

## Ph.D. Entrance Test – 2014

Subject : **Nanoscience & Nanotechnology**

### Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

#### INSTRUCTIONS

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2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
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4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
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8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
9. For rough work only the blank sheet at the end of the Question Booklet be used.
10. The Answer Sheet is designed for computer evaluation. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e. not following the instructions completely, shall be of the candidate only.**
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12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**



1. Given that Molecular weight of NaCl =58.5. The lattice constant for rock salt crystal (density=2180Kg/m<sup>3</sup>) is
 

A) 5.53 Å	B) 5.63 Å	C) 4.63 Å	D) 4.53 Å
-----------	-----------	-----------	-----------
2. Lorentz number is related to
 

A) Electrical and thermal conductivity of semiconductors	B) Electrical and thermal conductivity of metals	C) Magnetic properties of solids	D) Superconductivity of solids
--	--	----------------------------------	--------------------------------
3. Ballistic aggregation in sol-gel chemistry refers to:
 

A) Approaching polymers follow a linear path	B) Erratic path of a diffusing cluster	C) Case of many collisions	D) Random collisions of polymer particles
--	--	----------------------------	---
4. CVD is an important term used in nanoparticle formation, it means:
 

A) Critical volatile demand	B) Critical volatile delimit
C) Chemical vapour deposition	D) Chemical vapour demand
5. Atomic force microscopy generates
 

A) Phase height images	B) phase contrast images
C) Surface topography	D) all the above
6. Atomic force microscopy is based on the principle of:
 

A) elastic response of the surface	B) electron impregnation	C) electron permeation	D) electron conductivity
------------------------------------	--------------------------	------------------------	--------------------------
7. Gallium arsenide is not as popular as silicon in MEMS application because of its
 

A) Its higher cost of production	B) low mechanical strength
C) difficulty of mechanical work	D) high electron mobility
8. Photon Correlation Spectroscopy experiments help analyse:
 

A) size properties	B) conducting properties
C) magnetic properties	D) electrical properties
9. PECVD is popular because it offers
 

A) good adhesion	B) a simple process
C) relatively low process temperature	D) high temperature process



(2)

10. Synchrotron x-rays are used in photolithography in the LIGA process because
- A) They are more effective with the photoresist
  - B) They are cheaper source of light
  - C) They can penetrate deep into the photo resist material
  - D) None of the above
11. Shape and size of the nanoparticles can be viewed by the instrument
- A) Raman
  - B) Ellipsometer
  - C) TEM
  - D) XRD
12. The depletion region in an open circuited p-n junction contains
- A) electron
  - B) holes
  - C) uncovered immobile impurity ions
  - D) neutralized impurity atoms
13. The surface states at the semiconductor surface
- A) enhances the recombination rate
  - B) decreases the recombination rate
  - C) do not alter the recombination rate
  - D) none of the above
14. If  $d_p$  is the equivalent diameter of a non-spherical particle,  $V_p$  its volume and  $S_p$  its surface area, then its sphericity  $\Phi_s$  is defined by
- A)  $\Phi_s = 6 V_p / d_p S_p$
  - B)  $\Phi_s = V_p / d_p S_p$
  - C)  $\Phi_s = 6 d_p S_p / V_p$
  - D)  $\Phi_s = d_p S_p / V_p$
15. In the cut off mode of the transistors operation
- A) emitter-base junction is forward biased and base collector junction is reverse biased
  - B) both junctions are forward biased
  - C) both junctions are reverse biased
  - D) emitter-base junction is reverse biased and base collector junction is forward biased.
16. The convergence of which of the following method is sensitive to starting value
- A) False position
  - B) Gauss Seidal method
  - C) Newton-Raphson method
  - D) Bi-section value
17. The maximum width of surface depletion region for a metal-SiO<sub>2</sub>-Si capacitor ( $N_A = 5 \times 10^{16} \text{ cm}^{-3}$ ) is
- A) 0.25  $\mu\text{m}$
  - B) 0.15  $\mu\text{m}$
  - C) 0.40  $\mu\text{m}$
  - D) 0.55  $\mu\text{m}$
18. The mode spacing for a typical GaAs laser with  $\lambda = 0.94 \mu\text{m}$ ,  $n = 3.6$  and  $L = 200 \mu\text{m}$  is
- A) 4  $^\circ\text{A}$
  - B) 6  $^\circ\text{A}$
  - C) 8  $^\circ\text{A}$
  - D) 10  $^\circ\text{A}$
19. The Debye temperature for diamond is 2230 K. The highest possible vibrational frequency is
- A)  $4.64 \times 10^{13} \text{ Hz}$
  - B)  $5.64 \times 10^{14} \text{ Hz}$
  - C)  $3.64 \times 10^{13} \text{ Hz}$
  - D)  $4.64 \times 10^{14} \text{ Hz}$

(3)

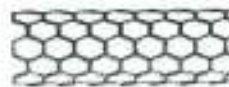
20. Whole has large mass compared to electron because  
A) It is made up of electrons and phonons      B) It is present in the valence band  
C) Applied field exert more force on it      D) It does not move
21. A remote control valve is .....type  
A) needle      B) gate      C) butterfly      D) globe
22. 'The concept of miniaturization was given by'  
A) Issac Newton      B) Albert Einstein  
C) Richard Feynman      D) Eric Drexler
23. Supramolecular chemistry is  
A) Host-guest chemistry      B) Chemistry of non-covalent interactions  
C) Chemistry of covalent interactions      D) Both (a) and (b)
24. The SI physical unit of dynamic viscosity is  
A) Pa.s      B) Pa.s<sup>2</sup>      C) Pa.s<sup>-1</sup>      D) Pa.s<sup>-2</sup>
25. Which statement about FRET is false?  
A) Förster resonance energy transfer  
B) FRET can operate upto 10nm distance  
C) It is short range mechanism  
D) In FRET energy exchange occurs by dipole-dipole coupling
26. Kevlar is commercial name for \_\_\_\_\_  
A) Glass fibers      B) Carbon fibers  
C) Aramid fibers      D) Cermets
27. Find the incorrect statement related to oxidative purification of carbon nanotubes  
A) Oxidative purification lead to cutting and shortening of carbon nanotubes  
B) Sidewall functionalization is absent during oxidative purification  
C) During oxidative purification, carboxylic groups are introduced at ends and defect sites  
D) Oxidative removal of metallic catalyst particles used in synthesis of carbon nanotubes happen
28. In a bucky ball each carbon atom is bound to.....adjacent carbon atoms  
A) 1      B) 2      C) 3      D) 4
29. SMAD stands for  
A) Solvated Metal Atom Dispersion      B) Single Metal Atom Dispersion  
C) Solvated Metal Atom Dissolution      D) Single Metal Atom Dissolution



30. Which one of the following statements is not true?
- A) Gold at the nanoscale is red
  - B) Copper at the nanoscale is transparent
  - C) Silicon at the nanoscale is an insulator
  - D) Aluminium at the nanoscale is highly combustible
31. For correct results in all acid-base titrations the indicator must change colour at a pH
- A) slightly greater than 7
  - B) slightly less than 7
  - C) equal to 7
  - D) equal to stoichiometric point
32. Layered silicates can be classified into :
- A) zero-dimensional fillers
  - B) one dimensional fillers
  - C) two dimensional fillers
  - D) three dimensional fillers
33. In-situ polymerization for polymer-clay composites implies:
- A) clay is added after polymerization
  - B) clay is not added if polymerization is started
  - C) clay is not added at all
  - D) clay is added before polymerization
34. Quantum dots is an example of a.....material :
- A) 1-D
  - B) 2-D
  - C) 3-D
  - D) 0-D
35. Self assembly is an attribute of the:
- A) Top down approach
  - B) Right way approach
  - C) Bottom up approach
  - D) Left way approach
36. From an X-Ray Diffraction pattern one can calculate the:
- A) Particle strength
  - B) Crystallite size
  - C) Particle conductivity
  - D) Particle voltage
37. Nanocomposites can be said to be the combination of the following:
- A) organic-inorganic materials
  - B) organic-organic materials
  - C) inorganic-inorganic materials
  - D) all of the above
38. At isoelectric point, net mobility of an amino acid is
- A) Towards cathode
  - B) Towards anode
  - C) Zero
  - D) None
39. Which of the following processes interfere in the sequence based phylogeny?
- A) Horizontal gene transfer
  - B) Adaptive mutations
  - C) DNA repair
  - D) Reverse transcription

(5)

40. Analog and..... are two basic types of signal  
A) digilog            B) sine wave            C) digital            D) vetilog
41. Which of the following is a biomaterial?  
A) Plastic            B) Reinforced Steel    C) Bakelite            D) Cellulose
42. CNTs belong to family of  
A) Glycerols            B) Polyanilines            C) Fullerenes            D) Amines
43. Photosynthesis is a process  
A) reductive and exergonic            B) reductive and catabolic  
C) reductive, endergonic and catabolic    D) reductive, endergonic and anabolic
44. Density of states for electron gas confined in one dimension is  
A) Proportional to  $E^{1/2}$             B) Proportional to  $E^{-1/2}$   
C) Constant            D) Proportional to  $E^2$
45. Dynamic light scattering experiments are based on:  
A) Brownian motion            B) Feynman motion  
C) Deschman motion            D) Frankianmotion
46. Rheology is referred to for nanofluidics:  
A) conductivity in channel            B) length of channel  
C) Width of channel            D) flow in channel
47. The right type of structure for the following carbon nanotube  
A) Armchair            B) Zig-zag  
C) Chiral            D) None of the above



48. Vapour pressure of pure liquid solvent A= 0.80 atm. When a non-volatile substance B is added to the solvent, its vapour pressure drops to 0.60 atm. What is mole fraction of component B in the solution:  
A) 0.75            B) 0.50            C) 0.25            D) 1.0
49. Discovery of graphene in Physics was awarded the  
A) Nobel prize in 2010            B) Nobel prize in 2012  
C) Bhatnagar award in 2009            D) Bhatnagar award in 2011
50. Oxygen in our blood is transported by a protein named  
A) haemoglobin            B) keratin  
C) collagen            D) myoglobin



Question Booklet Series : **A** Question Booklet Sr. No. **065012**

**Ph.D. Entrance Test – 2014**  
**Subject : System Biology & Bioinformatics**  
**Paper-I**

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Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No. 

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*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**      **Number of Questions: 50**      **Maximum Marks : 50**

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1. What is full form of RCSB?
- Research collaborator for structural bioinformatics
  - Research collaboration for structural bioinformatics
  - Research contributory for structural bioinformatics
  - Research contribution for structural bioinformatics
2. What makes BLAST faster than FASTA?
- The processor speed of the computer
  - Hash table lookup
  - Dynamic programming
  - The scoring matrix used
3. Gen bank file format is DNA centric report because of
- Coding region
  - Decoded region
  - Qualifier
  - CDS
4. What is the difference between RefSeq and GenBank?
- RefSeq includes publicly available DNA sequences
  - GenBank includes non redundant curated data
  - GenBank sequences are derived from RefSeq
  - RefSeq sequences are derived from GenBank
5. What is ASN.1?
- Language
  - CODE by
  - Format
  - International standard for structure data
6. Define syntax for Accession number
- First letter & six digit
  - First letter upper case & six digit
  - Two letter and six digit
  - Two letter upper case and six digit
7. The Pitch/turn of helix observed generally in B-DNA structures is
- 33.3
  - 33.2
  - 33.1
  - 33.4
8. The major groove of B-DNA structures is
- narrow
  - Shallow
  - deep, narrow
  - wide, shallow
9. What are Mage, CAD & VRML
- File format
  - Modeling software
  - 3D viewers
  - ab initio* modeler
10. Which of the following can be determined using molecular modeling?
- orbital direction
  - Electrostatic current
  - algorithm
  - Minimum energy conformation
11. The Phi-Psi scatter diagram is a
- Ramachandran plot.
  - Chi plot
  - Scatter plot
  - Decision plot
12. Which factor distinguish between sensitivity in BLAST
- P value
  - E value
  - P & E value
  - P or E value
13. GENSCAN developed by
- Chris burge
  - Sam karlin
  - Both
  - Can
14. How Sequence filtering in BLAST help in fast database searching
- Searches for LCR
  - Searches for Repeats
  - Both 1 & 2
  - Searches for long repeats
15. Using SEG and PSEG in BLAST increase
- Sensitivity
  - Specificity
  - Search result
  - E value
16. Many genes involved in pathogenicity are located in defined continuous regions ("islands") of the genome and have different GC content from other portions of the genome, suggesting that they have arisen through
- horizontal gene transfer
  - gene duplication and subsequent mutation
  - protection from methylation
  - increase in the rate of mutation of successive GC pairs
17. Parametric bootstrap differ from non parametric because



- A. it uses simulated replicate rather than pseudo replicate  
 B. it uses simulated pseudo replicate rather than replicate  
 C. it uses simulation parameter for search  
 D. it do not uses simulation parameter for search
18. Mention the type of the following reaction  $C_2H_4O + H_2O \rightarrow C_2H_6O + C_2H_2O$
- A. Synthesis  
 B. Hydrolysis  
 C. Dehydration  
 D. Hydrogenation
19. Value of coefficient of kurtosis for a Normal distribution is  
 A. positive  
 B. negative  
 C. equal to one  
 D. equal to three
20. The Northern blotting technique depends on  
 A. similarities between the sequences of probe DNA and experimental DNA  
 B. similarities between the sequences of probe RNA and experimental RNA  
 C. similarities between the sequences of probe protein and experimental protein  
 D. the molecular mass of proteins
21. In an airline reservation system, the entities are date, flight number, place of departure, destination, type of plane and seats available. The primary key is  
 A. flight number  
 B. flight number + place of departure  
 C. flight number + date  
 D. flight number + destination
22. MEGA phylogenetic software uses  
 A. compute synonymous and not nonsynonymous sites  
 B. compute both synonymous and nonsynonymous sites  
 C. compute only synonymous and nonsynonymous sites  
 D. compute only nonsynonymous sites
23. PSI-BLAST & BLAST?  
 A. Different  
 B. Same  
 C. Search engine  
 D. Server
24. What are the advantages of computer in CADD?  
 A. Simple & fast  
 B. Simple, short & fast  
 C. Complex & slow  
 D. 1 & 2
25. Kyte-Doolittle hydropathy plot are?  
 A. Membrane  
 B. Prediction software  
 C. Part of plot  
 D. Used by TGREASE
26. Which one is correct?  
 A. 8 bit = 1 byte  
 B. 1026 KB = 1MB  
 C. 1028 GB = 1TB  
 D. 1024GB = 1 Terabyte
27. Starch content of potatoes can be increased by us a bacterial gene, known as  
 A. sucrose phosphate synthase gene  
 B. ADP glucose pyrophosphorylase gene  
 C. Polygalactouranase gene  
 D. none of the above
28. What are the major advantage of using minimum evolution method for phylogenetic?  
 A. Identify all possible match  
 B. Identify all possible mismatch  
 C. Identify all ungapped match  
 D. NONE
29. DOT PLOT uses  
 A. Low window and high stringencies  
 B. Low stringencies and high window  
 C. Low window and low stringencies  
 D. High window and high stringencies
30. Repeat and inverted repeats in DNA sequences significantly identify by DOT PLOT  
 A. Agree  
 B. May be  
 C. Strongly agree  
 D. Not possible
31. Normal distribution require for statistically signification?  
 A. 1572 change amino acid changes in P  
 B. 71 groups of PAM  
 C. Entropy of PAM  
 D. Enthalpy
32. Full form of SAGE  
 A. Serial analysis of gene expression  
 B. Series analysis of gene expression  
 C. Sorted analysis of gene expression  
 D. Segregated analysis of gene expression
33. Significant of pair sequence alignment is not possible without scoring matrix.  
 A. Statement is correct  
 B. Statement is incomplete  
 C. Statement is no universal  
 D. Statement is justified



34. In prokaryotes, just before the cell divides, the two daughter genomes are attached side by side to the
- cell membrane
  - replication origin
  - centromeres
  - equatorial plate
35. Charge-charge relationship of noncovalent interactions to the distance separating the interaction molecules is
- $1/r$
  - $1/r^2$
  - $1/r^3$
  - $1/r^4$
36. LOD score
- Statistical estimation
  - Establish linkage between two loci
  - None
  - 1 & 2
37. What is the range of sample size used in SDS-PAGE methods?
- micrograms
  - nanograms
  - picograms
  - milligrams
38. Who coined the term mitosis
- strasburger
  - Flemming
  - Strasburger & Flemming
  - None of the above
39. Rotameric structures are?
- Different phi & psi but differ in side chain
  - Same psi but differ in side chain
  - Same phi & psi but differ in side chain
  - Same phi but differ in side chain
40. Beta Globin fold consist of
- All alpha helices
  - Eight alpha helices
  - Four alpha & four beta helices
  - None of the above
41. Macro molecular thermodynamics deals with
- pressure
  - entropy
  - free energy
  - all of the above
42. DH5 alpha Plasmid DNA is
- Positively supercoiled
  - Negatively supercoiled
  - Early supercoiled
  - supercoiled
43. Linking number of DNA describe
- Topology
  - conformation
  - model
  - All of the above
44. Phylogenetic analysis based on
- Homo character
  - Analogy
  - TREE
  - Orthology
45. Which of these amino acids is highly conserved & abounded in nature?
- Glycine
  - Alanine
  - both
  - none
46. Triad tools in molecular modeling consist of
- Force field, Parameter sets, molecular mechanism
  - Force field, Minimization algorithm, Parameter sets
  - Force field, molecular dynamics, parameter sets
  - All of the above
47. Which is second generation force field
- MMFF
  - MM Family
  - AMBER
  - None of the above
48. How many copies of mitochondria is present in an eukaryotic cell
- $10^3 - 10^4$
  - $10^2 - 10^3$
  - 1000
  - $10^6 - 10^7$
49. Minimum energy conformation is always an active conformation of the model
- Statement is correct
  - State is incomplete
  - Statement is not justify
  - None of the above
50. Which of them are rare amino acid
- citrullinine
  - cysteine
  - Glycine
  - 3,4-dihydroxy-phenylalanine

Question Booklet Series : **A** Question Booklet Sr. No. **055022**

**Ph.D. Entrance Test – 2014**  
**Engineering (Chemical Engineering)**  
**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**      **Number of Questions: 50**      **Maximum Marks : 50**

**INSTRUCTIONS**

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
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12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**



- The half-life of an  $n^{\text{th}}$  order reaction in a batch reactor depends on
  - only the rate constant
  - only the rate constant and the order of the reaction
  - only the rate constant and the initial reactant concentration
  - the rate constant, initial reactant concentration, and the order of the reaction
- A thermometer initially at  $100^{\circ}\text{C}$  is dipped at  $t = 0$  into an oil bath, maintained at  $150^{\circ}\text{C}$ . If the recorded temperature is  $130^{\circ}\text{C}$  after 1 minute, then the time constant of thermometer (in mm) is
  - 1.98
  - 1.35
  - 1.09
  - 1.26
- The enthalpy of vaporization of methanol ( $\text{CH}_3\text{OH}$ ) is  $35.3 \text{ kJ/mol}$  at the boiling point of  $64.2^{\circ}\text{C}$ . Calculate the entropy change for methanol going from a liquid to vapor.
  - $600 \text{ J/Kmol}$
  - $551 \text{ J/Kmol}$
  - $105 \text{ J/Kmol}$
  - $-105 \text{ J/Kmol}$
- \_\_\_\_\_ is the separation technique used for desalination of sea water.
  - Thermal diffusion
  - Reverse osmosis
  - absorption
  - Adsorption
- The Bode stability criterion is applicable when
  - Gain and phase curves decrease continuously with frequency
  - Gain curve increases and phase curve decreases with frequency
  - Gain curve and phase curve both increase with frequency
  - Gain curve decreases and phase curve increases with frequency
- The Grashoff number for convective heat transfer from a  $0.4 \text{ m}$  vertical square plate maintained at an uniform temperature  $130^{\circ}\text{C}$  in ambient air at  $25^{\circ}\text{C}$  is
  - $2.39 \times 10^8$
  - $3.80 \times 10^8$
  - $4.37 \times 10^8$
  - $6.67 \times 10^8$
- Which of the following is not concerned with the fluid-particle interaction ?
  - Drag co-efficient
  - Froude number
  - Galileo number
  - Weber number
- The ethanol-water azeotrope at  $1 \text{ atm}$  occurs at
  - $89.4 \text{ mole per cent ethanol and } 78.2^{\circ}\text{C}$
  - $89.4 \text{ mole per cent water and } 78.2^{\circ}\text{C}$
  - $96.0 \text{ mole per cent ethanol and } 78.2^{\circ}\text{C}$
  - $96.0 \text{ mole per cent ethanol and } 100^{\circ}\text{C}$



9. The shell side pressure drop in a shell and tube heat exchanger is maximum for \_\_\_\_\_ baffle
- disk and ring
  - segmental
  - orifice
  - independent of the type of baffle
10. Minimum reflux ratio in a distillation column results in
- maximum condenser size.
  - optimum number of trays.
  - minimum number of trays.
  - minimum reboiler size.
11. The value of  $K$  for the formation of  $\text{HBr}(\text{g})$  from  $\text{H}_2(\text{g})$  and  $\text{Br}_2(\text{g})$  is  $2.2 \times 10^9$  at 298 K. What is the corresponding value of  $\Delta G^\circ$  (298 K)?
- $+53 \text{ J mol}^{-1}$
  - $-53 \text{ J mol}^{-1}$
  - $-53 \text{ kJ mol}^{-1}$
  - $+53 \text{ kJ mol}^{-1}$
12. For a heterogenous catalytic reaction,  $A + B \rightarrow C$ , with equimole feed of  $A$  and  $B$ , the initial rate  $r_{A0}$  is invariant with total pressure. The rate controlling step is
- surface  $K_c/(1 + T_S)$  reaction between absorbed  $A$  and  $B$  in the gas phase.
  - surface reaction between absorbed  $A$  and absorbed  $B$ .
  - surface reaction between  $A$  in the gas phase and absorbed  $B$ .
  - desorption of  $C$ .
13. Half life period of a first order irreversible reaction  $A \rightarrow B$  is
- $k/2$
  - $\ln k/2$
  - $\ln 2/k$
  - $\ln 0.5/k$
14. Catalyst used in catalytic reforming is
- platinum on alumina
  - nickel
  - iron
  - aluminium chloride
15. A bulb of diameter 10 cm is heated internally with an electric heater of 100 W. The bulb dissipates the heat to the atmosphere by convection. The convection heat transfer coefficient between the air and bulb is  $65 \text{ W/m}^2\text{C}$ . If the atmosphere is at  $35^\circ\text{C}$ , the bulb surface temperature is
- $90.28^\circ\text{C}$
  - $83.97^\circ\text{C}$
  - $43.4^\circ\text{C}$
  - $78.45^\circ\text{C}$

16. Which of the following has the lowest flash point of all?  
A. Diesel  
B. Kerosene  
C. Petrol  
D. Furnace oil
17. Dacron is a/an  
A. polyamide  
B. unsaturated polyester  
C. polyester  
D. inorganic polymer
18. A counter-flow double-pipe heat exchanger is used to heat water from  $20^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  using a hot oil which enters the exchanger at  $180^{\circ}\text{C}$  and leaves at  $140^{\circ}\text{C}$ . The flow rate of water is  $3.0\text{ kg/s}$  and the overall heat transfer coefficient is  $130\text{ W/m}^2\text{C}$ . Assume that the specific heat of oil is  $2.1\text{ kJ/kgK}$ . If the water flow rate is reduced to half, the new oil flow rate necessary to maintain the same outlet water temperature is  
A.  $1.493\text{ kg/s}$   
B.  $1.704\text{ kg/s}$   
C.  $2.345\text{ kg/s}$   
D.  $3.086\text{ kg/s}$
19.  $\text{CO}_2$  present in reformed gas (obtained by steam reforming of naphtha) is removed by absorbing in  
A. mono-ethanolamine (MEA)  
B. slaked lime  
C. ammoniacal liquor  
D. Methyl-Ethyl Ketone (MEK)
20. A composite wall is made up of two slabs with outermost surface temperatures maintained at  $1300^{\circ}\text{C}$  and  $115^{\circ}\text{C}$ . The first slab has a thickness of  $500\text{ mm}$  and thermal conductivity of  $1.4\text{ W/mK}$  and the thickness and the thermal conductivity of the second slab are  $161\text{ mm}$  and  $0.35\text{ W/mK}$  respectively. The temperature of the surfaces in contact is  
A.  $800.05^{\circ}\text{C}$   
B.  $782.1^{\circ}\text{C}$   
C.  $506.5^{\circ}\text{C}$   
D.  $306.2^{\circ}\text{C}$
21. Which of the following is the most suitable for very high pressure gas phase reaction?  
A. Tubular flow reactor  
B. Stirred tank reactor  
C. Batch reactor  
D. Fluidised bed reactor
22. First gas cracker plant is located at?  
A. Digboi  
B. Haldia  
C. Jam Nagar  
D. Nagothane

23. Tricresyl phosphate is chemically represented as  
A.  $(\text{CH}_3 \text{C}_6 \text{H}_4)_3 \text{PO}_4$   
B.  $\text{Ca}_{10}(\text{PO}_4)_3\text{F}_6$   
C.  $(\text{NH}_4)_2\text{HPO}_4$   
D.  $\text{NH}_4\text{H}_2\text{PO}_4$
24. Which of the following is not used in case of Polyurethane?  
A. Polyols  
B. Hexa methylene diisocyanate  
C. Hexamethylene diamine  
D. Adipic acid
25. Working principle of radiation pyrometer is based on the  
A. Kirchoff's law  
B. Stefan-Boltzman law  
C. Seebeck effect  
D. Wien's law
26. The ratio of inertial forces to elastic forces is called the \_\_\_\_\_ number.  
A. Euler  
B. Reynolds  
C. Mach  
D. Weber
27. Which of the following is made from hexamethylene diamine and adipic acid?  
A. Nylon 66  
B. Nylon 6  
C. Terylene  
D. Dacron
28. Isochronal test is used for measuring?  
A. Smoke point  
B. Asphalt content  
C. Wax content  
D. Back pressure of testing well
29. The temperature distribution profile across the thickness from one side of a wall is given by  $T=5x^2 - 24x$  where T is in  $^{\circ}\text{C}$  and x is in metres. Thermal conductivity (K) of the wall is  $50 \text{ W/m}^{\circ}\text{C}$ . The heat flux across the wall at  $x = 10 \text{ cm}$  is  
A.  $1100 \text{ W/m}^2$   
B.  $1030 \text{ W/m}^2$   
C.  $1150 \text{ W/m}^2$   
D.  $1110 \text{ W/m}^2$
30. Major source of propylene in a refinery is?  
A. Catalytic reforming  
B. Visbreaking  
C. Fluidised bed catalytic cracking  
D. Iso craking process



31. Smoke density of the flue gas going out of the chimney is measured by a
  - A. thermal conductivity meter
  - B. polarograph
  - C. photo electric cell
  - D. chromatograph
  
32. The time constant of a unity gain, first order plus time delay process is 5 min. If the phase lag at a frequency of 0.2 rad/min is  $60^\circ$ , then the dead time (in minutes) is
  - A.  $\pi/6$
  - B.  $\pi/3$
  - C.  $\pi/12$
  - D.  $5\pi/12$
  
33. Which is the most suitable conveyor for transportation of sticky material ?
  - A. Belt conveyor
  - B. Screw conveyor
  - C. Apron conveyor
  - D. Pneumatic conveyor
  
34. A table tennis ball is placed inside a vertical kitchen funnel. On blowing air upwards through the tube the ball but does not get blown out. Is this due to:
  - A. The Magnus effect
  - B. viscous effects
  - C. the Bernoulli effect
  - D. momentum conservation
  
35. In a manufacturing industry, break even point occurs, when the
  - A. total annual rate of production equals the assigned value.
  - B. total annual product cost equals the total annual sales.
  - C. annual profit equals the expected value.
  - D. annual sales equals the fixed cost
  
36. The stress developed in a material without any permanent set is called the
  - A. yield stress
  - B. ultimate stress
  - C. breaking stress
  - D. elastic limit
  
37. In which of the following evaporators, steam is fed inside while the liquor is outside the tube ?
  - A. Short tube vertical evaporator
  - B. Long tube vertical evaporator
  - C. None of these
  - D. Horizontal tube evaporator
  
38. For turbine agitator, the impeller diameter is about
  - A. 0.3 to 0.5 d
  - B. 0.65 to 0.85 d
  - C. 0.95 d
  - D. 0.1 to 0.2 d

39. \_\_\_\_\_ closure is the weakest enclosure for cylindrical vessels.
- A. Conical or flat plate
  - B. Elliptical
  - C. Hemispherical
  - D. Torispherical
40. If the discharge of a centrifugal pump is throttled, then its suction lift
- A. data insufficient to predict
  - B. remains unchanged
  - C. increases
  - D. decreases
41. Boundary layer separation is caused by the
- A. adverse pressure gradient.
  - B. boundary layer thickness reducing to zero.
  - C. reduction of pressure to vapour pressure.
  - D. reduction of pressure gradient to zero.
42. Which of the following curves shows the effect of temperature on the extent of gas-solid adsorption at a given pressure?
- A. Langmuir adsorption isotherm
  - B. None of these
  - C. Adsorption isobar
  - D. Freundlich adsorption isotherm
43. A photochemical reaction is \_\_\_\_\_ light.
- A. accompanied with emission of
  - B. initiated by
  - C. used to convert heat energy into
  - D. catalysed by
44. When If the rate of a chemical reaction becomes slower at a given temperature, then the
- A. free energy of activation is higher.
  - B. free energy of activation is lower.
  - C. initial concentration of the reactants remains constant.
  - D. entropy changes are negligible
45. If a force greater than that of gravity is used to separate solids & fluids of different densities, the process is termed as the
- A. sedimentation
  - B. dispersion
  - C. centrifugation
  - D. flocculation
46. Ball mill is used for
- A. crushing
  - B. coarse grinding
  - C. fine grinding
  - D. attrition

47. The energy required per unit mass to grind limestone particles of very large size to  $100\ \mu\text{m}$  is  $12.7\ \text{kWh/ton}$ . An estimate (using Bond's law) of the energy to grind the particles from a very large size to  $50\ \mu\text{m}$  is
- A.  $18\ \text{kWh/ton}$
  - B.  $6.35\ \text{kWh/ton}$
  - C.  $25.4\ \text{kWh/ton}$
  - D.  $9.0\ \text{kWh/ton}$
48. When liquid and vapour phases of one component system are in equilibrium (at a given temperature and pressure), the molar free energy is
- A. replaced by chemical potential which is more in vapour phase
  - B. same in both the phases.
  - C. more in liquid phase.
  - D. more in vapour phase.
49. Antioxidants are added to rubber to protect it from the attack of light, heat & atmospheric ozone. Which of the following is an antioxidant used in rubber?
- A. Thiokol
  - B. Alkylated diphenyl amine
  - C. Magnesium
  - D. Carbon
50. Which is the best and the most effective method for the removal of organic contaminant present in the polluted water in very small quantity (say  $< 200\ \text{mg/litre}$ )?
- A. Activated carbon adsorption
  - B. Lagooning
  - C. Biological oxidation pond
  - D. Chemical coagulation



Question Booklet Series : **A** Question Booklet Sr. No. **056012**

**Ph.D. Entrance Test – 2014**  
**Engineering (Industrial Chemistry)**  
**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

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*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

**INSTRUCTIONS**

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
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**PhD Entrance Test - 2014, Paper I, Industrial Chemistry**

1	The maximum value of $5 + 4x - 4x^2$ will be equal to	
	A. 5	C. 1
	B. 6	D. 2
2	Dilatometer is used to measure	
	A. stress	C. Deflection
	B. Strain	D. Contraction/expansion due to changes in temperature
3	One mole of methane undergoes complete combustion in a stoichiometric amount of air. Mole fraction of water vapour in the product gases is about	
	A. 0.19	C. 0.40
	B. 0.33	D. 0.67
4	Filter aid is used to	
	A. Increase the rate of filtration	C. Increase the porosity of the cake
	B. Decrease the pressure drop	D. Act as a support base for the septum
5	Mercaptans is represented as	
	A. R-COOH	C. R-S-R
	B. R-S-H	D. R-S-R'
6	For 1 mole of an ideal gas expanding isothermally to twice its volume, the work obtained is equal to	
	A. $RT \ln 2$	C. $RT$
	B. $RT \ln (1/2)$	D. $2 RT$
7	Stokes law is valid when the particle Reynolds number is	
	A. Less than 1	C. Less than 10
	B. More than 1	D. More than 10
8	Operating principle of cyclone separator is based on the action of .....dust particles	
	A. Diffusion of	C. gravitational force on
	B. Centrifugal force on	D. Electrostatic force on
9	Which of the following fine dust removal equipments is the most efficient?	
	A. Bag filter	C. Electrostatic precipitator
	B. scrubber	D. Cyclone separator
10	Slurries can be most conveniently pumped by a _____ pump.	
	A. Screw	C. Gear
	B. Reciprocating	D. Centrifugal
11	For a given gas the virial coefficients	
	A. Depend on pressure only	C. Depend on temperature and pressure
	B. Depend on temperature only	D. Are independent of temperature and pressure
12	Which of the following valves permits flow in one direction only?	
	A. Globe valve	C. Ball valve
	B. Gate valve	D. Check valve
13	Catalyst used in Haber's process for ammonia production is	
	A. Reduced iron oxide	C. Vanadium penta-oxide
	B. Nickel	D. Silica gel
14	The conversion of a reactant undergoing a first order reaction at a time equal to three times the half life of the reaction is	
	A. 0.875	C. 0.425
	B. 0.5	D. Not possible to calculate because of



- 2 -

**PhD Entrance Test - 2014, Paper I, Industrial Chemistry**

		insufficient data
15	What is the unit of thermal conductivity	
	A. Kcal/hr.m <sup>2</sup> .°C	C. Kcal/hr.m <sup>2</sup>
	B. Kcal/hr.m <sup>0</sup> .°C	D. Kcal/hr. °C
16	Plasticisers are added to polymers to improve their	
	A. Tensile strength	C. Acid resistance
	B. Softness and flexibility	D. Alkali resistance
17	Heat in the amount of 8 kJ is added to a closed system while its internal energy decreases by 12 kJ. Work done by the system is equal to	
	A. 20 kJ	C. 4 kJ
	B. - 20 kJ	D. - 4 kJ
18	The pressure and temperature of an ideal gas with constant heat capacities undergoing a reversible adiabatic process are related by	
	A. $TP^{(1-\gamma)/\gamma} = \text{constant}$	C. $TP^{\gamma-1} = \text{constant}$
	B. $TP^{(\gamma-1)/\gamma} = \text{constant}$	D. $PT^{-\gamma} = \text{constant}$
19	An automobile radiator is a device where hot water passes through a bank of tubes and loses heat to the air. On the outside of the tubes, extended surfaces receive heat from the tube walls and transmit it to the air by	
	A. Free convection	C. Radiation
	B. Forced convection	D. Conduction
20	Work hardening of a material	
	A. Decreases its tensile strength	C. Increases its ductility
	B. Decreases its ductility	D. Does not affect its ductility
21	For the reaction $A + B \rightarrow 2B + C$	
	A. $r_A = r_B$	C. $r_A = 2r_B$
	B. $r_A = -r_B$	D. $r_A = r_B/2$
22	The favourable conditions for the maximum yield of ammonia by Haber process are	
	A. High pressure and high temperature	C. low pressure and high temperature
	B. High pressure and low temperature	D. low pressure and low temperature
23	What is the degree of freedom for a system comprising liquid water in equilibrium with its vapour	
	A. zero	C. Two
	B. one	D. Three
24	A composite wall consists of two plates A and B placed in series normal to the flow of heat. The thermal conductivities are $k_A$ and $k_B$ and the specific heat capacities are $C_{PA}$ and $C_{PB}$ respectively. Plate B has twice the thickness of plate A. At steady state, the temperature difference across plate A is greater than that across plate B when	
	A. $C_{PA} > C_{PB}$	C. $k_A < 0.5 k_B$
	B. $C_{PA} < C_{PB}$	D. $k_A > 2 k_B$
25	High pressure steam is expanded adiabatically and reversibly through a well insulated turbine, which produces some shaft work. If the enthalpy change and entropy change across the turbine are represented by $\Delta H$ and $\Delta S$ respectively, for this purpose:	
	A. $\Delta H = 0$ and $\Delta S = 0$	C. $\Delta H \neq 0$ and $\Delta S \neq 0$
	B. $\Delta H \neq 0$ and $\Delta S = 0$	D. $\Delta H = 0$ and $\Delta S \neq 0$



## PhD Entrance Test - 2014, Paper I, Industrial Chemistry

26	Absorptivity and reflectivity of a perfect black body are respectively	
	A. 1 and 0	C. 1 and $\infty$
	B. 0 and 1	D. 0 and 0.5
27	The advantage of using a 1-2 shell and tube heat exchanger over a 1-1 shell and tube heat exchanger is	
	A. lower tube side pressure drop	C. higher tube side heat transfer coefficient
	B. Lower shell side pressure drop	D. higher shell side heat transfer coefficient
28	The efficiency of Carnot engine working between temperature $T_1$ and $T_2$ ( $T_1 < T_2$ ) is	
	A. $\frac{T_2 - T_1}{T_2}$	C. $\frac{T_1 - T_2}{T_2}$
	B. $\frac{T_2 - T_1}{T_1}$	D. $\frac{T_1 - T_2}{T_1}$
29	Liquified Petroleum Gas (LPG) used for household cooking comprises mainly of	
	A. Propane and butane	C. Methane and ethane
	B. Butane and ethane	D. Methane and carbon monoxide
30	The general chemical formula of saturated fatty acids is	
	A. $C_nH_{2n}COOH$	C. $C_nH_{2n+2}COOH$
	B. $C_nH_{2n+2}COOH$	D. $C_nH_{2n+1}COOH$
31	In an irreversible process	
	A. $Tds = dE - dW = 0$	C. $Tds - dE + dW < 0$
	B. $dE - dW - Tds = 0$	D. $Tds - dT + dW < 0$
32	The sphericity of a solid particle of cubical shape is	
	A. $\Pi$	C. $(\Pi/6)^{1/2}$
	B. $(\Pi/6)^{1/3}$	D. $\Pi/3$
33	Cumene is	
	A. isopropanol	C. Isoprene
	B. isopropylbenzene	D. Ethylbenzene
34	Plate and frame filter press is classified as	
	A. Continuous pressure filter	C. discontinuous pressure filter
	B. Continuous vacuum filter	D. discontinuous vacuum filter
35	A closed system is cooled reversibly from 100 °C to 50 °C. If no work is done on the system	
	A. Its internal energy (U) decreases and its entropy (S) increases	C. U decrease but S is constant
	B. U and S both decrease	D. U is constant but S decreases
36	Criterion of a chemical reaction equilibrium is that the total Gibbs free energy change is	
	A. always positive	C. Zero
	B. Always negative	D. Not specifically defined
37	The surface area of a unit mass of particles	
	A. Decreases as the particle size is reduced	C. Remains constant as the particle size is reduced
	B. increases as the particle size is reduced	D. Decreases as the square root of the equivalent diameter of particle



## PhD Entrance Test - 2014, Paper I, Industrial Chemistry

38	Naphtha in a fertiliser plant is used as a source of	
	A. Fuel	C. $N_2$
	B. $H_2$	D. $O_2$
39	Polycaprolactum is	
	A. Nylon-6	C. Dacron
	B. Nylon-66	D. Rayon
40	Most commonly used rubber vulcanisation agent is	
	A. sulphur	C. Platinum
	B. bromine	D. Graphite
41	As the reflux ratio increases, the slope of the operating line for rectifying section	
	A. Increases	C. Remains constant
	B. decreases	D. Data insufficient, cannot be predicted
42	The average velocity of a Newtonian fluid in a straight tube under viscous flow conditions equals to	
	A. The Maximum velocity	C. 50% of the maximum velocity
	B. $2/3^{\text{rd}}$ of maximum velocity	D. $1/3^{\text{rd}}$ of maximum velocity
43	Nitrile rubber is produced by the polymerisation of	
	A. Acrylonitrile and butadiene	C. Isobutylene and isoprene
	B. Acrylonitrile and styrene	D. None of these
44	Rate of a chemical reaction is independent of the concentration of reactants for a ---- reaction	
	A. Zero order	C. Consecutive
	B. Third order	D. None of these
45	A gaseous mixture contains 14 kg of $N_2$ , 16 kg of $O_2$ and 17 kg of $NH_3$ . The mole fraction of oxygen is	
	A. 0.16	C. 0.66
	B. 0.33	D. 0.47
46	Which of the following fluid flow measuring devices can measure the largest flow rate	
	A. V - notch	C. Orificemeter
	B. Rotameter	D. Weir
47	Atmospheric pressure corresponds to a hydrostatic head of	
	A. 13.6 cm of Hg	C. 1 m of water
	B. 34 ft of water	D. 13.6 m of Hg
48	Number of gram equivalent of solute dissolved in one litre of solution is called its	
	A. Normality	C. Molality
	B. Molarity	D. Formality
49	The hydroxyl ion concentration in a solution having pH value of 3 will be	
	A. $10^{-11}$	C. $10^{-3}$
	B. $10^{-10}$	D. $10^{-4}$
50	A device that directly converts thermal energy into electrical energy is called a	
	A. Thermocouple	C. Piezoelectric device
	B. Solar cell	D. Generator



Question Booklet Series : **A** Question Booklet Sr. No. **057017**

**Ph.D. Entrance Test – 2014**  
**Engineering (Food Technology)**  
**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

**INSTRUCTIONS**

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
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1. Which cereal has a multiple layer of aleurone cells?  
a) Rice b) Wheat c) corn d) Ragi
2. What type of wheat is suitable for pasta manufacturing?  
a) Hard wheat b) Soft wheat c) Durum wheat d) None of the above.
3. Chemical name of pectin is  
a) Methoxyl ester of poly-galactouronic acid b) methyl ester of poly-galactouronic acid c) methyl ester of glutamic acid d) methoxyl ester of glutamic acid.
4. Caffeine is absent in  
a) Tea b) coffee c) fresh fruit juice d) cola drinks.
5. Minimum juice content in squash is:  
a) 10% b) 25% c) 40% d) 60%
6. Lecithin is the by-product of  
a) Sugar industry b) Wine industry c) oil industry d) bakery industry.
7. The manometer is used to measure:  
a) fluid velocity b) fluid density c) fluid pressure d) fluid viscosity
8. Kjeldahl method estimate protein in food products in terms of  
a) Nitrogen b) Carbon c) phosphorus d) hydrogen.
9. Hedonic test pertains to:  
a) sensory evaluation b) total solids evaluation  
c) total soluble solids evaluation d) none of the above
10. Raw material used for the preparation of Sake is:  
a) wheat b) rice c) corn d) barley
11. Preservative action of sugar in food is due to:  
a) its affinity towards moisture b) greater osmotic pressure  
c) reduced osmotic pressure d) sweetening effect
- 12) Component responsible for bitterness in orange is  
a) limoniene b) lycopene c) tannin d) peroxidase
- 13) Deodarisation of oil is carried out by  
a) Steam distillation b) evaporation c) fractionation d) drying
- 14) Aerated candy is  
a) Chocolate b) hard boiled candy d) lollypop d) cotton candy
- 15) Straight dough method is used in

- a) deep fat frying b) bread making c) freeze drying d) sterilization
16. IR-8 , Jaya, Bora, pusa are the names of varieties of  
a) rice b) mango c) rape seed d) none of the above
17. PET is: a) Polyethylene terephthalate b) para ethyl toluene c) poly ethylene tube  
d) none of the above.
18. 'Yield stress' term is related with  
a) leaching b) distillation c) rheology d) extraction
19. Bulging of can due to  
a)  $H_2$  gas production b) expansion of food product c)  $N_2$  production  
d) none of the above
20. Maillard browning is due to  
a) non-enzymatic browning b) Reaction of amino acid and sugar c) reaction of  
glucose and amino acid d) all of the above.
21. Oleic acid is  
a) unsaturated fatty acid b) C-18 fatty acid d) present in oil d) all of the  
above
22. Which of the following chemicals is a solvent used for testing fat content?  
a) hydrochloric acid b) sodium hydroxide c) amylase d) petroleum ether
23. Which of the following analytical methods can be used to distinguish flavour  
compounds?  
a) polarimetry b) gas chromatography c) spectroscopy d) hydrometry
24. Wij's reagent is used for determination of  
a) Iodine number b) Peroxide value c) Acid no. d) Saponification value.
25. Oxidative rancidity follow  
a) free radical mechanism b) surface reaction c) oxidation-reduction reaction  
d) all the above.
26.  $C_{12}$  fatty acid is  
a) Myristic acid b) palmitic acid c) oleic acid d) none of the above.
27. Solvent extraction of oil follow  
a) Diffusion process b) leaching c) centrifugation d) osmosis.
28.  $Y = \exp(-k t)$  is a:  
a) linear equation b) non-linear equation c) quadratic equation  
d) polynomial equation

29. Which one is not a food packaging material  
a) Polyethylene b) Polypropylene c) Bi-axially oriented Polypropylene d) acetylene.
30. Brilliant blue is a food grade  
a) color b) flavour c) emulsifier d) bleaching agent
31. Dewaxing is essential for  
a) Margarine b) Vanaspati c) Chocolate d) Salad dressing.
32. Example of essential amino acid  
a) Alanine b) Phenyl alanine c) Glycine d) all the above
33. China, India, Indonesia, Bangladesh are major producer of  
a) Mango b) Poultry c) Rubber d) paddy.
34. Animal fat is extracted by  
a) distillation b) mechanical extraction c) rendering d) none of the above.
35. Bread dough is ----- in nature.  
a) Viscous b) elastic c) Viscoelastic d) none of the above.
36. The most heat resistant microorganism is a) Clostridium botulinum  
b) Str. cremoris c) Saccharomyces cerevase d) Lactobacillus bulgaricus
37. Potassium metabisulfite in processed food acts as:  
a) antioxidant b) preservative c) color additive d) favoring compound
38. By what mechanism dettol exerts its control of microorganisms?  
a) inactivation b) pasteurization c) disinfection d) sterilization
39. Which one of them is a gram positive bacteria?  
a) pseudomonas b) salmonella c) proteus d) bacillus
40. Wheat is rich in:  
a) gluten b) albumin c) casein d) keratin.
41. Heat sensitive foods should preferably be processed:  
a) below atmospheric pressure b) at atmospheric pressure  
c) above the atmospheric pressure d) none of these.
42. Which one of the following is a milk sugar:  
.....a) fructose bi) sucrose c) lactose d) glucose
43. The Reynolds number for turbulent fluid flow in a pipe is:  
a) less than 2100 b) greater than 2100 c) greater than 4000 d) greater than 10,000



44.  $80^{\circ}\text{C}$  is equal to:  
a) 156F      b) 166F      c) 176F      d) 186F
45. Which of the following is not an unsaturated fatty acid:  
a) oleic acid    b) stearic acid    c) linoleic.    d) linolenic acid
46. Milk is pasteurized at.  
a) 62C for 15 sec    b) 72C for 15 sec    c) 52C for 15 sec    d) 62C for 60 min.
47. The unit of viscosity is expressed as:  
a) erg    b) Pa    c) Pa.s    d) N
48. Tomato ketchup may be classified as:  
a) Newtonian    b) Non-Newtonian    c) Viscoelastic    d) None of the above
49. Most preferred material of construction in food processing equipments:  
a) stainless steel      b) high carbon steel      c) copper      d) aluminium
50. The dimensions of A2 $\times$ 1/2 Can is expressed as:  
a) 401 $\times$ 411    b) 603 $\times$ 700    c) 301 $\times$ 411    d) 211 $\times$ 400

Question Booklet Series : **A** Question Booklet Sr. No. 058087

**Ph.D. Entrance Test – 2014**  
**Engineering (Electronics & Communication Engineering)**  
**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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**Time: 60 minutes**

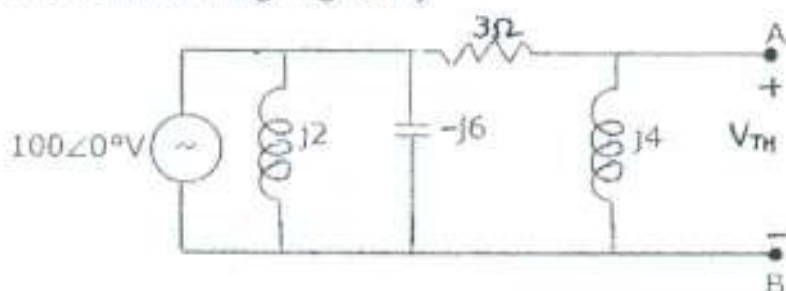
**Number of Questions: 50**

**Maximum Marks : 50**

**INSTRUCTIONS**

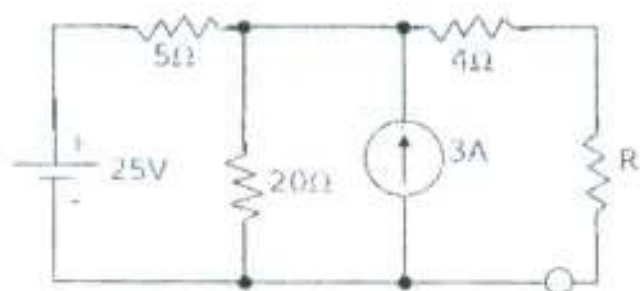
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1. The Thevenin equivalent voltage  $V_{th}$  appearing between the terminals A and B of the network shown in Fig. is given by



- (a)  $j16(3-j4)$  (b)  $j16(3+j4)$   
 (c)  $16(3+j4)$  (d)  $16(3-j4)$

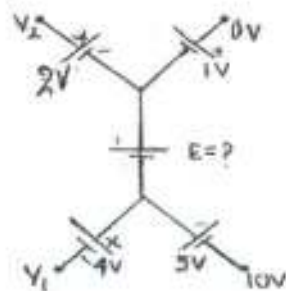
2. The value of  $R$  (in ohms) required for maximum power transfer in the network shown in Fig. is



- (a) 2 (b) 4  
 (c) 8 (d) 10

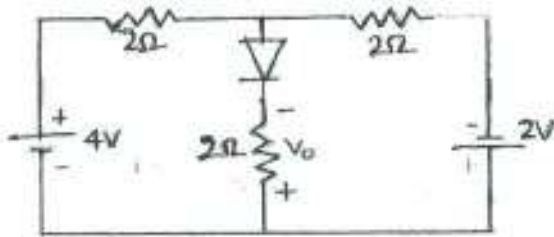
3. In the circuit of Fig., the value of the voltage source  $E$  is

- (a) -16 V (b) 4 V  
 (c) -6 V (d) 16 V



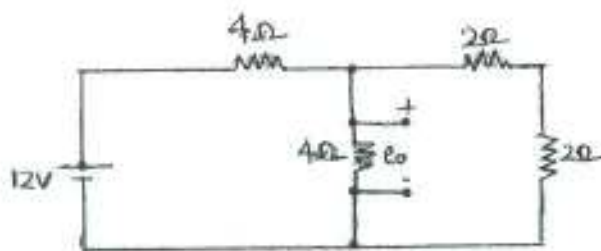
4. For the circuit in Fig. the voltage  $V_0$  is





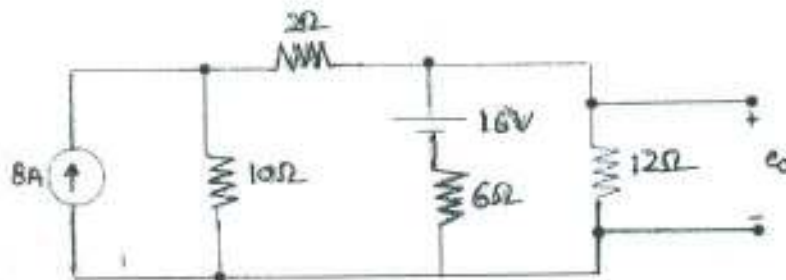
- (a) 2V  
 (b) 1V  
 (c) -1V  
 (d) None of the above

5. The voltage  $e_0$  in figure is



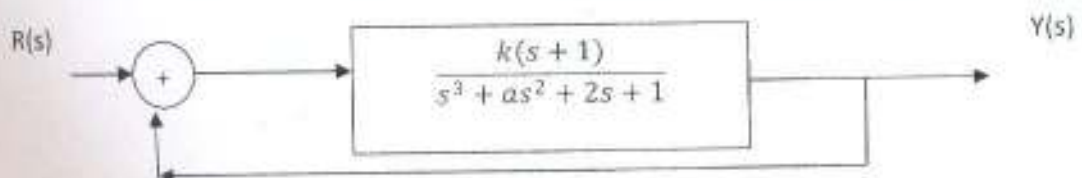
- (a) 2V  
 (b) 4/3 V  
 (c) 4V  
 (d) 8V

6. The voltage  $e_0$  in figure is



- (a) 48 V  
 (b) 24 V  
 (c) 36 V  
 (d) 28 V

7. The feedback system shown below oscillates at 2 Rad/sec when  $k$  and  $a$  are



- (a)  $K=2$  and  $a=0.75$   
 (b)  $K=3$  and  $a=0.75$

(c)  $K=4$  and  $a=0.5$ (d)  $K=2$  and  $a=0.5$ 

8. A unity negative feedback closed loop system has a plant with transfer function  $G(s) = \frac{1}{s^2 + 2s + 2}$  and a controller  $G_c(s)$  in the feed forward path. For a unit step input, the transfer function of the controller that gives minimum steady state error is

(a)  $G_c(s) = \frac{s+1}{s+2}$

(b)  $G_c(s) = \frac{s+2}{s+1}$

(c)  $G_c(s) = \frac{(s+1)(s+4)}{(s+2)(s+3)}$

(d)  $G_c(s) = 1 + \frac{2}{s} + 3s$

9. If the closed loop transfer function  $T(s)$  of a unity negative feedback system is given by

$$T(s) = \frac{a_{n-1}s + a_n}{s^n + a_1s^{n-1} + \dots + a_{n-1}s + a_n}$$

then the steady state error for a unit ramp input is

(a)  $\frac{a_n}{a_{n-1}}$

(b)  $\frac{a_n}{a_{n-1}}$

(c)  $\frac{a_{n-2}}{a_{n-1}}$

(d) zero

10. If the characteristic equation of a closed-loop system is  $s^2 + 2s + 2 = 0$ . Then the system is

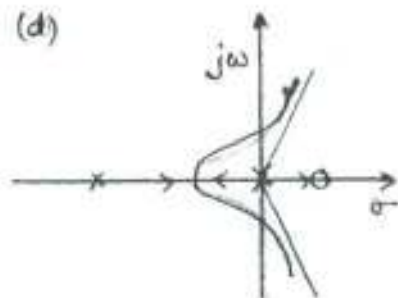
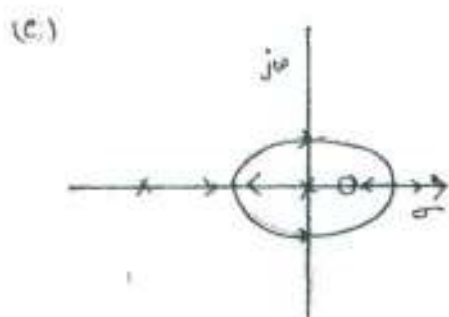
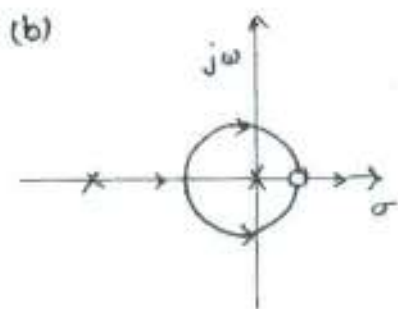
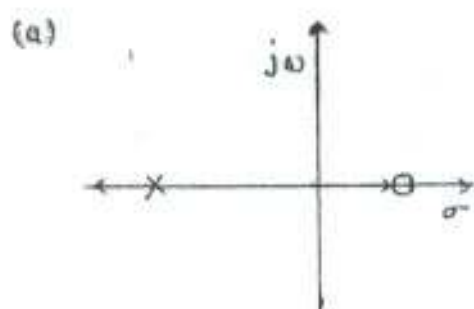
(a) overdamped

(b) Critically damped

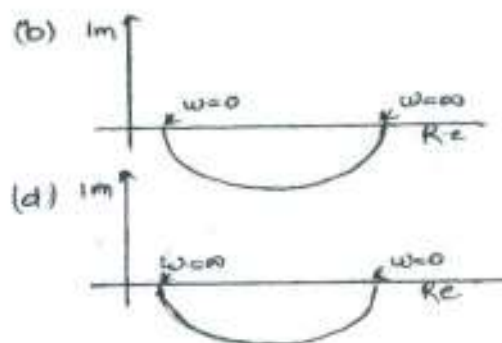
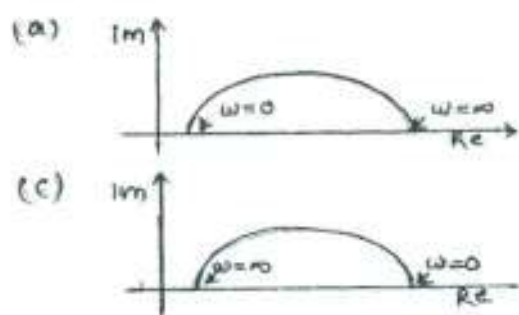
(c) Under damped

(d) Undamped

11. An unity feedback system is given as,  $G(s) = \frac{K(1-s)}{s(s+3)}$ , indicate the correct root locus diagram



12. Which one of the following polar diagrams corresponds to a lag network?



13. A casual LTI system is described by the difference equation

$$2y(n) = \alpha y(n-2) - 2x(n) + \beta x(n-1]$$

The system is stable only if

(a)  $|\alpha| < 2, |\beta| < 2$

(b)  $|\alpha| > 2, |\beta| > 2$

(c)  $|\alpha| < 2$ , any value of  $\beta$

(d)  $|\beta| < 2$ , any value of  $\alpha$

14. Which of the following cannot be the Fourier series expansion of a periodic signal?

(a)  $x(t) = 2\cos t + 3\cos 3t$

(c)  $x(t) = \cos t + 0.5$

(b)  $x(t) = 2\cos \pi t + 7\cos t$

(d)  $x(t) = 2\cos 1.5\pi t + \sin 3.5\pi t$



15. The Fourier transform  $F\{e^f u(t)\}$  is equal to  $1/1+j2\pi f$ . Therefore  $F\{1/1+j2\pi t\}$  is

- (a)  $e^f u(f)$  (b)  $e^{-f} u(f)$   
 (c)  $e^f u(-f)$  (d)  $e^{-f} u(-f)$

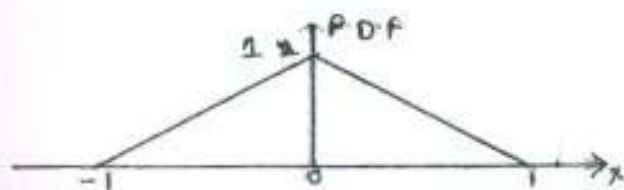
16. If the Laplace transform of a signal  $y(t)$  is  $Y(s)=1/s(s-1)$ , then its final value is

- (a) -1 (b) 0  
 (c) 1 (d) unbounded

17. If  $R(\tau)$  is the autocorrelation function of a real, wide-sense stationary random process, then which of the following is NOT true?

- a)  $R(\tau) = R(-\tau)$  b)  $|R(\tau)| \leq R(0)$   
 c)  $R(\tau) = -R(-\tau)$  d) The mean square value of process is zero

18. The probability density function (PDF) of a random variable  $X$  is as shown below



The corresponding cumulative distribution function (CDF) has the form

- (a) (c)
- (b) (d)

19. A modulated signal is given by  $s(t) = m_1(t)\cos(2\pi f_c t) + m_2(t)\sin(2\pi f_c t)$  where the baseband signal  $m_1(t)$  and  $m_2(t)$  have bandwidths of 10 kHz and 15 kHz, respectively. The bandwidth of the modulated signal in KHz is

- (a) 10                      (b) 15                      (c) 25                      (d) 30

20. The input to a coherent detector is DSB-SC signal + noise. Noise at the detector output is

- (a) the in phase component                      (b) the quadrature component  
(c) 0                      (d) the envelope

21. The noise at the input to an ideal frequency detector is white. The detector is operating above threshold. The power spectral density of the noise at the output is

- (a) raised cosine                      (b) flat  
(c) parabolic                      (d) Gaussian

22. In a PCM system if the code word length is increased from 6 to 8 bits, the signal to quantization noise ratio improves by the factor

- (a) 8/6                      (b) 12                      (c) 16                      (d) 8

23. Which of the following analog modulation schemes require the minimum transmitted power and minimum channel bandwidth

- (a) VSB                      (b) DSB-SC                      (c) SSB                      (d) AM

24. A source generates three symbols with probabilities 0.25, 0.25, 0.50 at a rate of 3000 symbols/second assuming independent generation of symbols the most efficient source encoder would have average bit rate

- (a) 6000 bits/second                      (b) 4500 bits/second  
(c) 3000 bits/second                      (d) 1500 bits/second

25. In a twin wire transmission line in air, the adjacent voltage maximums are at 12.5 cm and 27.5 cm. The operating frequency is

- (a) 300 MHz                      (b) 1 GHz                      (c) 2 GHz  
(d) 6.28 GHz

26. A rectangular waveguide has dimensions 1 cm x 0.5 cm. Its cutoff frequency is

- (a) 5 GHz                      (b) 10 GHz                      (c) 15 GHz                      (d) 12 GHz

27. A TEM wave is incident normally upon a perfect conductor. The E and H fields at the boundary will be

- (a) minimum and minimum (c) minimum and maximum  
(b) maximum and maximum (d) maximum and minimum

28. A medium wave radio transmitter operating at a wavelength of 492 m has a tower antenna of height 124m. What is the radiation resistance of the antenna?

- (a) 25Ω (b) 36.5Ω (c) 50Ω (d) 73Ω

29. The dominant mode in a rectangular waveguide is TE<sub>10</sub>, because this mode has

- (a) no attenuation (b) no cut-off  
(c) no magnetic field component (d) the highest cut-off wavelength

30. In an impedance Smith chart, a clockwise movement along a constant resistance circle gives rise to

- (a) a decrease in the value of reactance  
(b) an increase in the value of reactance  
(c) no change in the reactance value  
(d) no change in the impedance value

31. The electric field on the surface of a perfect conductor is 2 V/m. The conductor is immersed in water with  $\epsilon = 80\epsilon_0$ . The surface charge density on the conductor is ( $\epsilon = 10^{-9} / (36\pi) \text{ F/m}$ ),

- (a) 0 C/m<sup>2</sup> (b) 2 C/m<sup>2</sup>  
(c)  $1.8 \times 10^{-11} \text{ C/m}^2$  (d)  $1.14 \times 10^{-9} \text{ C/m}^2$

32. The phase velocity of an electromagnetic wave propagating in a hollow metallic rectangular waveguide in the TE<sub>10</sub> mode is

- (a) equal to its group velocity (b) less than the velocity of light in free space  
(c) equal to the velocity of light in free space (d) greater than the velocity of light in free space

33. An 8 bit successive approximation analog to digital converter has full scale reading of 2.55 V and its conversion time for an analog input of 1V is 20μs. The conversion for a 2V input will be

- (a) 10 μs (b) 20 μs (c) 40 μs (d) 50 μs





(c)  $5.00 \times 10^{20}/\text{m}^3$

(d)  $3.00 \times 10^{-5}/\text{m}^3$

41. For an n-channel enhancement type MOSFET, if the source is connected at a higher potential than that of the bulk (i.e.  $V_{SB} > 0$ ), the threshold voltage  $V_T$  of the MOSFET will

(a) remain unchanged

(b) decrease

(c) change polarity

(d) increase

42. When the gate-to-source voltage ( $V_{GS}$ ) of a MOSFET with threshold voltage of 400 mV, working in saturation is 900 mV, the drain current is observed to be 1 mA. Neglecting the channel width modulation effect and assuming that the MOSFET is operating at saturation, the drain current for an applied  $V_{GS}$  of 1400 mV is

(a) 0.5 mA

(b) 2.0 mA

(c) 3.5 mA

(d) 4.0 mA

43. The longest wavelength that can be absorbed by silicon, which has the bandgap of 1.12 eV, is 1.1  $\mu\text{m}$ . If the longest wavelength that can be absorbed by another material is 0.87  $\mu\text{m}$ , then the bandgap of this material is

(a) 1.416 eV

(b) 0.886 eV

(c) 0.854 eV

(d) 0.706 eV

44. The neutral base width of a bipolar transistor, biased in the active region, is 0.5  $\mu\text{m}$ , the maximum electron concentration and the diffusion constant in the base are  $10^{14}/\text{cm}^3$  and  $D_n = 25 \text{ cm}^2/\text{sec}$  respectively. Assuming negligible recombination in the base, the collector current density is (the electron charge is  $1.6 \times 10^{-19}$  coulomb)

(a) 800 A/cm<sup>2</sup>

(b) 8 A/cm<sup>2</sup>

(c) 200 A/cm<sup>2</sup>

(d)

2 A/cm<sup>2</sup>

45. A dc power supply has a no-load voltage of 30V, and a full-load voltage of 25 V at a full-load current of 1A. Its output resistance and load regulation, respectively are

(a) 5  $\Omega$  and 20%

(b) 25  $\Omega$  and 20%

(c) 5  $\Omega$  and 16.7%

(d) 25  $\Omega$  and 16.7%

46. An amplifier is assumed to have a single pole high frequency transfer function. The rise time of its output response to a step function input is 35 nsec. The upper -3 dB frequency (in MHz) for the amplifier to a sinusoidal input is approximately at

(a) 4.55

(b) 10

(c) 20

(d) 28.6

47. The current gain of a bipolar transistor drops at high frequencies because of

(a) transistor capacitances  
base

(b) high current effects in the

(c) parasitic inductive elements

(d) the Early effect

48 The most commonly used amplifier in sample and hold circuits is

- (a) a unity gain inverting amplifier  
(b) a unity gain non-inverting amplifier  
(c) an inverting amplifier with a gain of 10  
(d) an inverting amplifier with a gain of 100

49. In a negative feedback amplifier using voltage-series (i.e. voltage-sampling series mixing) feedback. ( $R_i$  and  $R_o$  denote the input and output resistance respectively)

- (a)  $R_i$  decreases and  $R_o$  decreases  
(b)  $R_i$  decreases and  $R_o$  increases  
(c)  $R_i$  increases and  $R_o$  decreases  
(d)  $R_i$  increases and  $R_o$  increases

50. An amplifier using an opamp with a slew-rate  $SR = 1V/\mu\text{sec}$  has a gain of 40 dB. If this amplifier has to faithfully amplify sinusoidal signals from dc to 20 KHz without introducing any slew-rate induced distortion, then the input signal level must not exceed.

- (a) 795 mV  
(b) 395 mV  
(c) 79.5 mV  
(d) 39.5 mV



**Ph.D. Entrance Test – 2014**  
**Engineering (Computer Science & Engineering)**  
**Paper-I**

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Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

**INSTRUCTIONS**

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1. A pulse train can be delayed by a finite number of clock periods using
  - a. a serial-in serial-out shift register
  - b. a serial-in parallel-out shift register
  - c. a parallel-in serial-out shift register
  - d. a parallel-in parallel-out shift register
2. The 2's complement representation of  $(-539)_{10}$  in hexadecimal is
  - a. ABE
  - b. DBC
  - c. DE5
  - d. 9E7
3. A one-to-four line demultiplexer is to be implemented using a memory. How many bits must each word have?
  - a. 1 bit
  - b. 2 bits
  - c. 4 bits
  - d. 8 bits
4. The time required for a pulse to decrease from 90 to 10 percent of its maximum value is called
  - a. rise time
  - b. decay time
  - c. binary level transition period
  - d. propagation delay
5. Which one of the following set of gates are best suited for parity checking and parity generation
  - a. AND, OR, NOT gates
  - b. EX-NOR or EX-OR gates
  - c. NAND gates
  - d. NOR gates
6. Which one of the following information holds the information before going to the decoder?
  - a. control register
  - b. data register
  - c. accumulator
  - d. address register
7. If we use 3 bits in the instruction word to indicate if an index register is to be used and if necessary, which one is to be used, then the number of index registers to be used in the machine will be
  - a. 3
  - b. 6
  - c. 7
  - d. 8
8. What is the byte capacity of a drum which is 5 inch high, 10 inch diameter, and which has 60 tracks per inch bit density of 800 bits per inch?
  - a. 942000 bytes

- 2 -
- b. 471000 bytes
  - c. 188400 bytes
  - d. 16384 bytes
9. The number of bits that are typically stored on each track of a magnetic disk is usually
- a. the same
  - b. different
  - c. depend on the program to be stored
  - d. fifty
10. Running out of memory may occur due to
- a. non-recursive function call
  - b. recursive function call
  - c. use of more global variable
  - d. none of these
11. A \_\_\_\_\_ search begins the search with the element that is located in the middle of the array.
- a. serial
  - b. random
  - c. parallel
  - d. binary
12. Stacks can't be used to
- a. evaluate an arithmetic expression in postfix form
  - b. implement recursion
  - c. convert a given arithmetic expression in infix form to its equivalent postfix form
  - d. allocate resources ( like CPU) by the operating system
13. To insert a node in a circular list at rear position, it should be inserted at \_\_\_\_\_ of the queue.
- a. Front position
  - b. Front-1 position
  - c. Rear position
  - d. Rear-1 position
14. Traversing a binary tree first root and then left and right subtrees called \_\_\_\_\_ traversal.
- a. postorder
  - b. preorder
  - c. inorder
  - d. none of these
15. The way a card game player arranges his cards as he picks them up one by one, is an example of
- a. bubble sort
  - b. selection sort
  - c. insertion sort
  - d. merge sort
16. If there is an NP-complete language L whose complement is in NP, then complement of any language in NP is in
- a. P
  - b. NP
  - c. both a and b



- d. none of these
17. Both P and NP are closed under the operation of
- a. union
  - b. intersection
  - c. concatenation
  - d. Kleene
18. An automaton is a \_\_\_\_\_ device and a grammar is a \_\_\_\_\_ device
- a. generative, cognitive
  - b. generative, acceptor
  - c. acceptor, cognitive
  - d. cognitive, generative
19. An FSM can be used to add how many given integers?
- a. 1
  - b. 3
  - c. 4
  - d. 5
20. The defining language for developing a formalism in which language definitions can be stated, is called
- a. syntactic meta language
  - b. decidable language
  - c. intermediate language
  - d. high level language
21. A PDM behaves like a TM when the number of auxiliary memory it has, is
- a. 0
  - b. 1 or more
  - c. 2 or more
  - d. none of these
22. Bounded minimalization is a technique
- a. proving whether a primitive recursive function is Turing computable or not
  - b. proving whether a primitive recursive function is a total function or not
  - c. generating primitive recursive functions
  - d. generating partial recursive functions
23. Type checking is normally done during
- a. lexical analysis
  - b. syntax analysis
  - c. syntax directed translation
  - d. code optimization
24. An ideal compiler should
- a. be smaller in size and take less time for compiling
  - b. be written in a high level language
  - c. produce object code that is smaller in size and executes faster
  - d. all of these
25. When a computer is first turned on or restarted, a special type of absolute loader is executed called
- a. "Compile and GO" loader

- b. Boot loader
  - c. Boot strap loader
  - d. Relating loader
26. Scissoring enables
- a. a part of data to be displayed
  - b. entire data to be displayed
  - c. full data display on full area of screen
  - d. no data to be displayed
27. Two basic types of record-access methods are
- a. sequential and random
  - b. direct and immediate
  - c. sequential and indexed
  - d. on line and real time
28. If the CPU scheduling policy is SJF, the average waiting time (without pre-emption) will be
- a. 16 ms
  - b. 12.8 ms
  - c. 6.8 ms
  - d. none of these
29. If the CPU scheduling policy is priority scheduling without pre-emption, the average waiting time will be
- a. 12.8 ms
  - b. 11.8 ms
  - c. 10.8 ms
  - d. none of these
30. Dirty bit is to used to show the
- a. page with corrupted data
  - b. the wrong page in the memory
  - c. page that is modified after being loaded into cache memory
  - d. page that is less frequently accessed
31. Trojan Horse
- a. A code segment that misuses its file is called Trojan horse
  - b. good for file accessing
  - c. both a and b
  - d. none of these
32. Two programs of worm are
- a. grappling hook program
  - b. main program
  - c. secondary program
  - d. primary storage
33. Protection against computer viruses is
- a. prevention
  - b. practice of safe computing
  - c. purchasing unopened software from vendors
  - d. avoiding free or pirated copies from public sources
34. In a relational Schema, each tuple is divided in to fields called

- a. relations
  - b. domains
  - c. queries
  - d. none of these
35. If a field size is too small for the longest piece of data to be entered , then
- a. data base program will freeze
  - b. field will automatically expand
  - c. part of the data will be cut off
  - d. none of these
36. Subschema can be used to
- a. create very different personalized views of the same data
  - b. present information in different formats
  - c. high sensitive information by omitting fields from the subschema description
  - d. all of these
37. Data integrity control
- a. is used to set upper and lower limits on numeric data
  - b. requires the use of passwords to prohibit unauthorized access to the file
  - c. has the data dictionary to keep the data and time of last access, last back-up, and most recent modification for all files
  - d. none of these
38. In a decision table if there are 3 variables and 3 rules, it implies
- a. specification may not be complete
  - b. design could be faulty
  - c. coding will be incorrect
  - d. all of these
39. The maximum effort distribution in phases of software development is
- a. requirement analysis
  - b. design phase
  - c. coding
  - d. testing
40. In object oriented design of software, objects have
- a. attributes and name only
  - b. operations and name only
  - c. attributes name and operations
  - d. none of these
41. Business application programs include
- a. tax planning and preparation program
  - b. drill and practice programs
  - c. expert systems
  - d. all of these
42. The graph theoretic concept will be useful in software testing is
- a. Cyclomatic number
  - b. Hamultonian circuit
  - c. Eulerian cycle
  - d. None of these



43. Which of the following network access standard disassemble is used for connection station to a packet switched network?
- X.3
  - X.21
  - X.25
  - X.75
44. An example of a network layer is
- Internet Protocol (IP)-ARPANET
  - x.25 Packet Level Protocol (PLP)-ISO
  - Source routing and domain naming- USENET
  - all of these
45. In an Ethernet network, what is the relationship between round-trip time and the collision domain?
- Round-trip time increases; collision domain decreases
  - Round trip time decreases; collision domain decreases
  - Round-trip time decreases, collision domain increases
  - None of these
46. When a protocol specifies that address of the sender must occupy the first address of the sender must occupy the first four bytes of a message, what is the issue?
- Syntax
  - Semantics
  - Timing
  - None of these
47. Decryption and Encryption of data are responsibility of
- physical layer
  - data link layer
  - presentation layer
  - session layer
48. In session layer, during data transfer, the data stream responsible for the control purpose (i.e. control of the session layer itself) is
- regular data
  - typed data
  - capability data
  - expedited data
49. MSXML is
- a Microsoft language
  - XML parser that ships with IE5.0
  - used for interacting with XML
  - none of these
50. How DOM differs from SAX?
- DOM is not event driven and builds up the whole memory
  - SAX is event driven and requires less space
  - DOM and SAX are packages
  - None of these

Question Booklet Series : **A** Question Booklet Sr. No. **060021**

**Ph.D. Entrance Test – 2014**  
**Engineering (Electrical & Electronics Engineering)**  
**Paper-I**

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O.M.R. Answer Sheet Serial No. 

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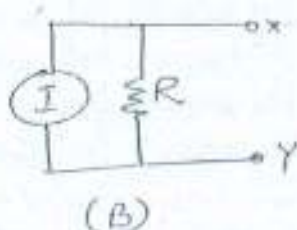
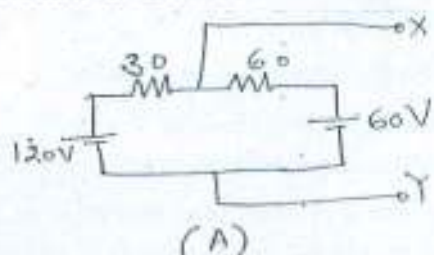
**Time: 60 minutes**      **Number of Questions: 50**      **Maximum Marks : 50**

**INSTRUCTIONS**

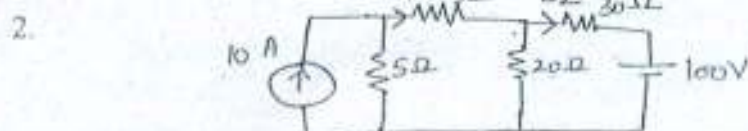
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1. Consider circuit A and B. For what values of  $I$  &  $R$  respectively the circuit B is equivalent to circuit A.



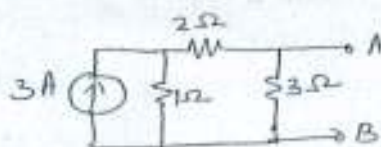
- A) 3 A, 20Ω                      B) 5 A, 20Ω  
C) 2/3 A, 90Ω                    D) 2 A, 90Ω



The current  $I_1$  and  $I_2$  in the above circuit are

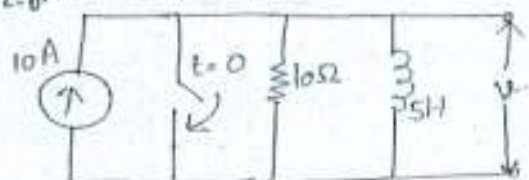
- A) 1.818A, -0.4545A              B) 2.451A, -1.568A  
C) 0.4545 A, -1.818A              D) 1.56A, -2.45A

3. In the network shown in fig., the Thevenin source and the impedance across A & B terminals will be respectively.



- A) 0.75 V, 1.5 Ω                    B) 1.5 V, 1.5 Ω  
C) 1.5 V, 0.75 Ω                    D) 5.0 V, 1.5 Ω

4. In the circuit shown in fig., if the switch  $S$  is closed at  $t = 0$ , then the voltage  $v(t)$  and its derivative  $\frac{dv}{dt}|_{t=0^+}$  will be respectively.



- A) 10V & 50V/s                      B) 10V & -50 V/s  
C) 100V & 200 V/s                    D) 100V & -200 V/s

5. A three, heating unit and induction motor are connected in parallel across a 208V three phase supply. Motor is rated at 5hp, 0.8pf with efficiency 0.85. Heating unit is rated at 1500W, the line current will be.

- A) 185A                      B) 1.85A                      C) 18.5A                      D) 15A

6. A Gaussian sphere encloses an electric dipole within it. the total flux across the sphere is

- A) Half that due t a single charge  
B) Double that due to a single charge  
C) Dependent on the position of the dipole  
D) Zero



7. A current  $I$  flows along the length of an infinitely long straight thin walled pipe. Then
- The magnetic field is zero on the axis of the pipe
  - The magnetic field is different at different points inside the pipe
  - The magnetic field inside the pipe is zero
  - The magnetic field inside at all the points is same but not zero
8. A hollow metallic sphere of radius 10cm is charged such that potential of its surface is 70V. The potential at the centre of the sphere would be
- 0V
  - 7V
  - 70V
  - 700V
9. The laplace transform of the function  $f(t)$  is  $F(s)$ ,  $u(t)$  represents the unit step function. The inverse laplace transform of  $e^{-s}F(s)$  is
- $f(t) u(t-1)$
  - $f(t-1) u(t)$
  - $f(t-1) u(t-1)$
  - $\frac{f(t)}{t-1}$
10. If applied voltage of a certain transformer is increased by 50% and frequency is reduced by 50% (assuming that magnetic circuit remains unsaturated), the maximum core flux density will be
- Changes to 3 times the original value
  - Changes to 0.5 times the original
  - Changes to 1.5 times the original
  - remains same
11. An induction motor when started on load does not accelerate upto full speed but runs at  $1/7^{\text{th}}$  of the rated speed. The motor is said to be:
- Locking
  - Plugging
  - Crawling
  - Cogging
12. The rotor power output of three phase induction motor is 15KW. The rotor copper loss at a slip of 4% will be
- 600W
  - 625W
  - 650W
  - 700W
13. Armature reaction of a synchronous generator supply power at rated voltage and zero power factor leading is
- Magnetizing
  - Demagnetizing
  - Cross magnetizing
  - Both magnetizing & Cross magnetizing
14. In a synchronous machine, damper windings are used to
- Help in starting as motor
  - Run it as an induction motor
  - Help in starting as a motor and reduce hunting
  - Increase efficiency
15. A DC shunt generator when driven without connecting field winding shows an open circuit terminal voltage of 12V. When winding is connected and excited the terminal voltage drops to zero because
- Field resistance is higher than critical resistance
  - There is no residual magnetism in the circuit
  - Field winding is connected wrongly
  - There is a fault in armature circuit

16. A 2-phase servomotor in control system uses
- Drag cup rotor
  - Solid cylindrical rotor without slots or windings
  - Ordinary squirrel cage rotor
  - Slip ring rotor with inherent low rotor resistance
17. Capacitor in single phase induction motor is used for
- Improving power factor
  - Improving starting torque
  - Starting the motor
  - Reducing harmonics
18. When excitation of normally operating unloaded salient pole synchronous motor suddenly gets disconnected, it continues to run as
- Schrage motor
  - Spherical motor
  - Switched reluctance motor
  - Variable reluctance motor
19. A DC shunt motor is excited from an alternating power frequency voltage source. Its brush axis is rotated by an angle  $\alpha$  from the geometrical Neutral axis. The torque developed will be proportional to which one of the following.
- $\sin \alpha$
  - $\cos \alpha$
  - $\tan \alpha$
  - $\cos 2 \alpha$
20. Shunt compensation in EHV line is used to
- Improve stability
  - Reduce fault level
  - Improve the voltage profile
  - Substitute for synchronous phase modifier
21. Corona loss increases with
- Decrease in conductor size and increase in supply frequency
  - Increase in both conductor size and supply frequency
  - Decrease in both conductor size and supply frequency
  - Increase in conductor size and decrease in supply frequency
22. The incremental fuel cost for two generating units are given by  $IC_1 = 25 + 0.2 PG_1$ ,  $IC_2 = 32 + 0.2 PG_2$  where  $PG_1$  and  $PG_2$  are real power generated by the units. The economic allocation for a total load of 250 MW, neglecting transmission loss is given by
- $PG_1 = 140.25 \text{ MW}$ ,  $PG_2 = 109.75 \text{ MW}$
  - $PG_1 = 109.75 \text{ MW}$ ,  $PG_2 = 140.25 \text{ MW}$
  - $PG_1 = PG_2 = 125 \text{ MW}$
  - $PG_1 = 100 \text{ MW}$ ,  $PG_2 = 150 \text{ MW}$
23. The following sequence currents were recorded in a power system under a fault condition  $I_{\text{positive}} = j 1.653 \text{ pu}$ ,  $I_{\text{negative}} = -j0.5 \text{ pu}$ ,  $I_{\text{zero}} = -j1.153 \text{ pu}$ , the fault is
- L-G
  - 3-phase
  - L-L-G
  - All the above



(4)

24. A synchronous machine having  $E=1.1\text{pu}$  is feeding an infinite bus with voltage of  $1.0\text{pu}$ . If transfer reactance is  $0.5\text{pu}$ , the steady state power limit is
- A)  $1.1\text{ pu}$       B)  $0.55\text{pu}$       C)  $2.2\text{pu}$       D)  $2.6\text{pu}$
25. A distance relay is said to be inherently directional if its characteristics in R-X diagram
- A) is a straight line offset from the origin  
B) is a circle that passes through the origin  
C) is a circle that encloses the origin  
D) Always a separate directional relay is required
26. The rate of rise of restricting voltage depends upon
- A) The type of circuit breaker  
B) The inductance of system only  
C) The capacitance of system only  
D) The inductance and capacitance of system
27. The critical clearing time of a fault in power system is related to
- A) Reactive power limit      B) Short circuit current limit  
C) Steady state stability limit      D) Transient stability limit
28. The convergence characteristics of the Newton-Raphson method for solving load flow problem is
- A) Quadratic      B) Linear      C) Geometric      D) Cubic
29. If the poles of a system lie on the imaginary axis the system will be
- A) Stable      B) Conditionally stable  
C) Marginally stable      D) Unstable
30. For type 2 system, the steady state error due to ramp input is equal to
- A) Zero      B) Finite constant  
C) Infinite      D) Indeterminate
31. The Nyquist plot of a system passes through  $(-1, j0)$  point in the  $G(j\omega)H(j\omega)$  plane, the phase margin of the system is
- A) Infinite  
B) Greater than zero but not infinite  
C) Zero  
D) Less than zero



32. A transfer function of a control system does not have pole-zero cancellation. Which one of the following statement is true?
- A) System is neither controllable nor observable  
 B) System is completely controllable and observable  
 C) System is observable but uncontrollable  
 D) System is controllable but unobservable
33. A property of a phase-lead compensation is that the
- A) Overshoot is increased  
 B) Bandwidth of closed loop system is reduced  
 C) Rise-time of closed loop system is reduced  
 D) Gain margin is reduced
34. Two equal voltage of same frequency applied to the X plates and Y plates of a CRO, produce a circle on the screen. The phase difference between the two voltages is
- A)  $30^\circ$       B)  $60^\circ$       C)  $90^\circ$       D)  $150^\circ$
35. Consider the following statements in respect of a Wein bridge
1. It is suitable for measurement of capacitance
  2. It is not affected by harmonics present in the applied voltage
  3. It is suitable for measurement of frequency
- which of the following statements are correct
- A) 1, 2 and 3      B) 1 and 2  
 C) 2 and 3      D) 1 and 3
36. To achieve the optimum transient response, the indicating instruments are so designed as to
- A) Be critically damped  
 B) Be undamped  
 C) Provide damping which is slightly more than critical value  
 D) Provide damping which is slightly less than critical value
37. The capacitance and loss angle of a capacitor can be accurately measured by
- A) Kelvin's bridge      B) Anderson's bridge  
 C) Schering bridge      D) Carey-Forster's bridge
38. A resistance strain gauge is fastened to a beam subjected to strain of  $1 \times 10^{-6}$ , yielding a resistance change of  $240 \mu\Omega$ . If the original resistance of the strain gauge is  $120 \Omega$ , the gauge factor would be
- A) 5      B) 2      C) 1      D) 0.2
39. In a single phase inducting type energy meter the lag adjustment is done to ensure that
- A) Current coil flux lags the applied voltage by  $90^\circ$   
 B) Pressure coil flux lags the applied voltage by  $90^\circ$   
 C) Pressure coil flux is in phase with the applied voltage  
 D) Current coil flux lags the pressure coil flux by  $90^\circ$

(6)

40. An over current relay having a current setting of 125% is connected to a supply circuit through a current transformer of ratio 400/5. The pickup value is  
A) 6.25A      B) 10A      C) 12.5A      D) 15A
41. A 12 bit A/D converter has a range 0-10V what is the approximate resolution of the converter.  
A) 1 mV      B) 2.5mV      C) 2.5 $\mu$ V      D) 12mV
42. Increase in the applied reverse voltage to a p-n junction diode results in increase in the  
A) Depletion width      B) Barrier height  
C) Depletion width and Barrier height      D) Junction temperature
43. What is the main source of distortion in push-pull amplifier  
A) Fundamental component      B) Second harmonic  
C) Third harmonic      D) All even harmonics
44. What is the simplified form of the Boolean Expression  $F = (X+Y) (X+\bar{Y}) (\bar{X}+Y)$   
A)  $\bar{X}\bar{Y}$       B)  $\bar{X}Y$       C)  $XY$       D)  $X\bar{Y}$
45. The lower turn off time of MOSFET when compared to BJT can be attributed which one of the following  
A) Input Impedance      B) Positive Temperature Coefficient  
C) Absence of minority carriers      D) On-state resistance
46. Negative feedback amplifier  
A) Reduces gain      B) Increases frequency and phase distance  
C) Reduces bandwidth      D) Increase noise
47. The typical turn off time of a transistor is  
A) 10 n sec      B) 60 n sec      C) 70 n sec      D) 40 n sec
48. A single phase AC voltage controller is controlling current in a purely inductive load. If firing angle of the SCR is  $\alpha$ . What will be the conduction angle of SCR  
A)  $\pi$       B)  $\pi - \alpha$       C)  $2\pi - \alpha$       D)  $2\pi$
49. A single phase full converter feeds power to RLE load with  $R = 10\Omega$ ,  $L = 10\text{mH}$  and  $E = 50\text{V}$ , the ac source voltage is 230V, 50Hz. For continuous conduction what is the average value of load current for firing delay angle of  $60^\circ$ .  
A) 4.63A      B) 6A      C) 6.5A      D) 5.35A
50. A cyclo converter fed induction motor drive is most suitable for which one of the following:-  
A) Compressor drive      B) Machine tool drive  
C) Paper Mill drive      D) Cement Mill drive



**Ph.D. Entrance Test – 2014**  
**Engineering (Mechanical Engineering)**  
**Paper-I**

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Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

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1. A weight of 4.9 N rests on a rough horizontal plane that has coefficient of friction  $\mu = 0.5$ . If  $g = 9.8 \text{ m/s}^2$  the smallest horizontal force that gives the weight an acceleration of  $4 \text{ m/s}^2$  is nearly  
 (a) 2 N (b) 2.5 N (c) 4.5 N (d) 9.8 N
2. Two simple harmonic motions are represented by the equations  
 $X_1 = 6(\sin 3\pi t + \sqrt{3} \cos 3\pi t)$   
 $X_2 = 12 \sin \left\{ \pi t + \frac{\pi}{6} \right\}$   
 Their amplitudes are in the ratio  
 (a) 1:2 (b) 2:3 (c) 1:1 (d)  $\pi:1$
3. The young modulus E, the shear modulus G and the Poisson's ratio  $\mu$  for a material are related by the expression:  
 (a)  $E = 2G(1 + \mu)$  (b)  $E = 3G(1 - \mu)$   
 (c)  $E = 3G(1 - 2\mu)$  (d)  $E = 3G(1 + 2\mu)$
4. Thermal stress is generally induced in a component when  
 1. a temperature gradient exists in the component  
 2. the component is free from any restraint  
 3. the component is restrained to expand or contract freely  
 Which of the following given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 3 alone (d) 2 alone
5. At a point in the two-dimensional stress system,  $\sigma_x = 10 \text{ N/mm}^2$  and  $\sigma_y = \tau_{xy} = 40 \text{ N/mm}^2$ . What is the radius of Mohr circle drawn with a scale of  $1 \text{ cm} = 10 \text{ N/mm}^2$ .  
 (a) 3 cm (b) 4 cm  
 (c) 5 cm (d) 6 cm
6. For general stress calculations, a cylinder is considered thin if  
 (a)  $\frac{t}{d} \leq 0.075$  (b)  $\frac{t}{d} \leq 0.05$   
 (c)  $\frac{t}{d} \leq 0.02$  (d)  $\frac{t}{d} \leq 0.01$
7. The ratio of maximum shear stress to hoop stress in a thin cylinder pressure vessel is  
 (a) 4:1 (b) 2:1  
 (c) 1:1 (d) 1:4
8. The thick cylinder with internal diameter  $d$  and outside diameter  $2d$  is subjected to internal pressure  $p$ . Then maximum hoop stress developed in the cylinder is  
 (a)  $p$  (b)  $\frac{2}{3}p$   
 (c)  $\frac{5}{3}p$  (d)  $2p$
9. A beam freely supported at its ends carries a central concentrated load and the maximum bending moment is  $M$ . If the same load is uniformly over the beam length, then what is the maximum bending moment?  
 (a)  $M$  (b)  $\frac{M}{2}$   
 (c)  $\frac{M}{3}$  (d)  $2M$
10. A uniformly distributed load  $w$  in  $\text{kN/m}$  is acting over the entire length of a 3 m long cantilever beam. If the shear force at a mid-point of cantilever is 5 kN, what is the value of  $w$ ?  
 (a) 2 (b) 3  
 (c) 4 (d) 5
11. The point of contraflexure in a loaded beam refers to a section where  
 (a) the bending moment is maximum  
 (b) the shear force is maximum  
 (c) the shear force is zero  
 (d) the bending moment changes sign
12. A cantilever beam of effective length  $l$  carries a load  $W$  at the free end. The maximum deflection would be  
 (a)  $Wl^3/3EI$  (b)  $Wl^3/8EI$   
 (c)  $Wl^3/48EI$  (d)  $5Wl^3/384EI$
13. A crank of radius 12 cm is rotating at 60 rpm with an angular acceleration of  $50 \text{ rad/sec}^2$ . The tangential acceleration of the crank is about  
 (a)  $4.75 \text{ m/s}^2$  (b)  $5.2 \text{ m/s}^2$   
 (c)  $6 \text{ m/s}^2$  (d)  $7.4 \text{ m/s}^2$
14. The gears employed for connecting two non-intersecting and non-parallel, i.e., non-coplanar shafts are  
 (a) Bevel gears (b) Spiral gears  
 (c) Helical gears (d) Mitre gears
15. A fixed gear having 100 teeth is in mesh with another gear having 50 teeth. The two gears are connected by an arm. The number of turns made by the smaller gear for one revolution of arm about the centre of the bigger gear is  
 (a)  $2/4$  (b) 3

- (c) 4 (d) 5
16. What is the condition for dynamic balancing of a shaft-rotor system?  
 (a)  $\Sigma M = 0$  and  $\Sigma F = 0$  (b)  $\Sigma M = 0$   
 (c)  $\Sigma F = 0$  (d)  $\Sigma M + \Sigma F = 0$   
 Where  $\Sigma F$  is the total force and  $\Sigma M$  is the total torque
17. The natural frequency of a spring mass system on earth is  $\omega_n$ . The natural frequency of this system on the moon  $g_{\text{moon}} = g_{\text{earth}}/6$  would be  
 (a)  $\omega_n$  (b)  $0.408 \omega_n$   
 (c)  $0.204 \omega_n$  (d)  $0.167 \omega_n$
18. A shaft is rotating at a speed less than the critical speed. The phase difference between displacement and centrifugal force would be  
 (a)  $0^\circ$  (b)  $45^\circ$   
 (c)  $90^\circ$  (d)  $180^\circ$
19. The efficiency of a riveted joint is the ratio of  
 (a) strength of a riveted joint to strength of unriveted plate  
 (b) shearing strength of rivet to strength of unriveted plate  
 (c) crushing strength of rivet to strength of unriveted plate  
 (d) tearing strength of plate to strength of unriveted plate
20. Self locking condition for a pair of square thread screw and nut having a coefficient of friction  $\mu$ , lead of thread  $l$  and pitch diameter  $d$  of thread is given by  
 (a)  $d > \frac{l}{\pi \mu}$  (b)  $d > \pi \mu l$   
 (c)  $d > \mu l$  (d)  $d < \frac{l}{\pi}$
21. The washer is generally used to  
 (a) absorb shocks and vibrations  
 (b) provide greater bearing area  
 (c) provide cushioning effect  
 (d) fill up the axial gap and provide smooth surface
22. Consider the following statements regarding V belts  
 V-belts are specified by their  
 1. nominal inside length in mm  
 2. nominal pitch length  
 3. belt cross-section symbol  
 4. weight per unit length of the belt
- Which of the following is correct  
 (a) 1, 2 and 3 (b) 1 and 2  
 (c) 1 and 3 (d) 3 and 4
23. The minimum number of teeth on the pinion which will mesh with any gear without interference for 14.5 degree full depth involute will be  
 (a) 12 (b) 14  
 (c) 18 (d) 32
24. The thermal conductivity  $k$  and the electrical conductivity  $\sigma$  of a metal at absolute temperature  $T$  are related as  
 (a)  $\frac{k}{\sigma} = \text{constant}$  (b)  $\frac{k}{\sigma T} = \text{constant}$   
 (c)  $\frac{k\sigma}{T} = \text{constant}$  (d)  $\frac{kT}{\sigma} = \text{constant}$
25. Critical thickness of insulation of spheres is given by  
 (a)  $k/h$  (b)  $k/4h$   
 (c)  $h/2k$  (d)  $2k/4$   
 Where  $k$  is the coefficient of thermal conductivity and  $h$  is convective heat transfer coefficient
26. On a heat transfer surface, fins are provided to  
 (a) increase temperature gradient so as to enhance heat transfer  
 (b) increase turbulence in flow for enhancing heat transfer  
 (c) increase surface area to promote the rate of heat transfer  
 (d) decrease the pressure drop of the fluid
27. For laminar conditions, the thickness of thermal boundary layer increases with its distance ( $x$ ) from the leading edge in proportion to  
 (a)  $x$  (b)  $x^{3/4}$   
 (c)  $x^{1/4}$  (d)  $x^{1/2}$
28. Which one of the properties given below is an intensive property of the system?  
 (a) composition (b) volume  
 (c) kinetic energy (d) entropy
29. The work done equals  $\int p \, dv$  for  
 (a) an irreversible process  
 (b) unrestricted expansion  
 (c) non-flow quasi-static process  
 (d) the arrangement where work is done on the gas as the paddle wheel turns by a falling weight



30. A heat pump working on a reversed Carnot cycle has a COP of 5. If it works as a refrigerator taking 1 kW of work input, the refrigeration effect will be  
(a) 1 kW (b) 2 kW  
(c) 3 kW (d) 4 kW
31. Consider the following statements  
In an irreversible process  
(a) entropy always increases  
(b) the sum of the entropy of all bodies taking part in a process always increases  
(c) once created, entropy cannot be destroyed  
Identify the correct statement using the codes given below:  
(a) 1 and 2 (b) 1 and 3  
(c) 2 and 3 (d) 1, 2 and 3
32. The characteristic gas equation  $pV = mRT$  is essentially valid for a  
(a) real gas (b) perfect gas  
(c) monoatomic gas (d) gases mixture
33. Silicon in cast iron  
(a) makes the castings unsound  
(b) promotes the formation of graphite  
(c) aids fusibility and fluidity  
(d) makes the iron soft and easily machinable
34. Consider the following treatments  
(a) normalising (b) hardening  
(c) martempering (d) cold working  
Hardness and tensile strength in austenitic steel can be increased by  
(a) 1, 2 and 3 (b) 1 and 3  
(c) 2 and 4 (d) 4 alone
35. The machineability of steel cannot be improved by alloying it with  
(a) silicon (b) lead  
(c) sulphur (d) phosphorus
36. Which of the following elements does not impart hardness to steel?  
(a) silicon (b) copper  
(c) nickel (d) chromium
37. During refrigeration cycle based on vapour compression system, the heat is rejected by the refrigerant in  
(a) condenser (b) expansion valve  
(c) evaporator (d) compressor
38. The property of a material by which it can be rolled in to sheets is called  
(a) elasticity (b) plasticity  
(c) ductility (d) malleability
39. For the real fluid moving with uniform velocity, the pressure  
(a) depends upon depth and orientation  
(b) is independent of depth but depends upon orientation  
(c) is independent of orientation but depends upon depth  
(d) is independent of both depth and orientation
40. The centre of buoyancy is  
(a) centre of gravity of the body  
(b) centre of the displaced fluid volume  
(c) point of intersection of the buoyant force and the centre line of the body  
(d) point of intersection of the buoyant force and the gravitational force
41. The Bernoulli's equation refers to conservation of  
(a) mass (b) momentum  
(c) force (d) energy
42. The magnitude of water hammer depends on  
1. elastic properties of the pipe material  
2. elastic properties of fluid flowing through the pipe  
3. geometric parameters of the pipe  
4. speed with which the valve is closed  
Identify the correct statement using the codes given below:  
(a) 1 and 2 (b) 1, 3 and 4  
(c) 2 and 4 (d) 1, 2, 3 and 4
43. The pressure drop in a pipe flow is directly proportional to the mean velocity. It suggests that the  
(a) flow is laminar (b) flow is turbulent  
(c) pipe is smooth (d) pipe is rough
44. Filler metal is used in  
(a) seam welding (b) spot welding  
(c) projection welding (d) gas welding
45. In orthogonal cutting, the angle at which the cutting face is inclined to the direction of cut is  
(a)  $90^\circ$  (b) less than  $90^\circ$   
(c) between  $30^\circ$  and  $45^\circ$  (d) greater than  $90^\circ$
46. The main purpose of boring operation as compared to drilling is to  
(a) drill a hole  
(b) finish the drilled hole



- (c) correct the hole
- (d) enlarge the existing hole

47. Job production is characterized by
1. high variety and low volume of products
  2. requirement of highly skilled force
  3. highly discontinuous flow of materials and components between work stations
  4. all of above

Which of the statements made above are correct?

- (a) 1 and 2
- (b) 3 and 4
- (c) 1, 2 and 3
- (d) 1, 2 and 4

48. A system consists of two elements connected in parallel and having the probability of functioning as 0.9 and 0.8. Then the stability of the system is

- (a) 0.72
- (b) 0.98
- (c) 0.52
- (d) 0.84

49. Product A takes 5 M/c hours and Product B takes 6 labour hours. The total time available for M/c hours is 36. The constraint equation for this is

- a)  $5X + 6Y = 36$
- b)  $5X + 6Y \neq 36$
- c)  $5X + 6Y \leq 36$
- d)  $5X + 6Y \geq 36$

50. A concatenated transformation is

- a) combination of transformations
- b) scaling transformation
- c) translation transformation
- d) shearing transformation

Question Booklet Series : **A** Question Booklet Sr. No. **062011**

**Ph.D. Entrance Test – 2014**  
**Engineering (Biotechnology Engineering)**  
**Paper-I**

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O.M.R. Answer Sheet Serial No.

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- Q.1 Synthetic seeds of mulberry developed by BARC India are
- A) Somatic embryos synthesized artificially
  - B) Mutated Genetic embryos for mulberry
  - C) Somatic embryos encapsulated in suitable matrix
  - D) Mutated Somatic embryos for mulberry
- Q.2 Cybrids can be obtained using which of the following
- A) Fusion of cytoplasm of two cells
  - B) Fusion of two nuclei to generate hybrid cell
  - C) fusion of prokaryotic and eukaryotic cells
  - D) Fusion of whole cell with enucleated cytoplasm
- Q.3 The transgenic petunia resistant to glyphosate have \_\_\_ gene transferred .
- A) 5-enol-pyruvyl-shikimat-3-phosphate synthase
  - B) 4-enol-pyruvyl-shikimat-3-phosphate synthase
  - C) 3-enol-pyruvyl-shikimat-3-phosphate synthase
  - D) 2-enol-pyruvyl-shikimat-3-phosphate synthase
- Q.4 The third amino acid in the peptidoglycan crosslinking chain is either diaminopimelic acid or lysine because this amino acid must
- A) Be positively charged for a salt bridge to form
  - B) Be hydrophilic
  - C) Have a free amino group for peptide bond formation
  - D) Have a large R-side chain to fill space in the cell wall
- Q.5 A culture of bacteria produces 5 generations in 2 hours .What is the generation time for this bacterium under those conditions.
- A) 15 minutes
  - B) 24 minutes
  - C) 30 minutes
  - D) 60 minutes
- Q.6 A brewery industry is facing a trouble with yeast culture. The Yeast culture are growing well on the maltose medium but are not producing alcohol. What is the most likely explanation?
- A) Oxygen in the medium
  - B) Carbondioxide in the medium
  - C) Yeast culture not capable of making alcohol
  - D) Maltose used in the medium not capable of producing alcohol.



- Q.7 A major portion of human genome is contributed by which type of the following sequences.
- A) EXONS
  - B) INTRONS
  - C) Dispersed repetitive sequences
  - D) Varies from one organism to another one
- Q.8 The term replicon describes.
- A) An enzyme complex that replicates DNA
  - B) The DNA sequences specified and replicated
  - C) Proof reading activity of DNA polymerase as unit
  - D) Any DNA sequences in a chromosomes
- Q.9 A cancer cell will show all these properties except
- A) Contact inhibition
  - B) Hyperplasia
  - C) Anaplasia
  - D) Metastasis
- Q.10 . Chloramphenicol a broad spectrum antibiotic is active against
- A) Gram positive bacteria only
  - B) Gram negative bacteria only
  - C) Some Gram positive and negative bacteria
  - D) All Gram positive and negative bacteria
- Q.11 At the end of mitotic telophase a cell contained 23 pairs of chromosomes, how many chromatids were present in metaphase
- A) 23
  - B) 46
  - C) 92
  - D) 184
- Q.12 The immunofluorescence technique can be applied for determining macromolecular distribution in cells by
- A) Using flurochromes specific for macromolecule
  - B) Using non-specific antibody against that molecule tagged with flurophore
  - C) Using specific antibody against that molecule tagged with flurophore
  - D) Using globally staining flurophore
- Q.13 P-element transposition is responsible for:
- A) hybrid dysgenesis
  - B) segmentation
  - C) parasegmentation
  - D) morulation

- Q.14 DNA footprinting technique uses which of the following enzymes
- A) DNA polymerase
  - B) RNA polymerase
  - C) DNA ligase
  - D) DNase I
- Q.15 You are asked to adopt an identification methodology of higher animal species through sequence variation of cytochrome c oxidase subunit I mitochondrial region. This strategy is termed as
- A) Barcoding
  - B) DNA sequencing
  - C) Organelle speciation
  - D) Mitochondrial blebbing
- Q.16 All of the following viruses are potential cloning vehicles for applications in mammalian cells except
- A) Simian virus 40
  - B) Adenovirus
  - C) Retrovirus
  - D) Baculovirus
- Q.17 The data sets that are most commonly used for generating a phylogenetic tree in a given set of organisms is based on all, except
- A) Habitat of organism
  - B) DNA sequences
  - C) Anatomical features
  - D) polypeptide sequences
- Q.18 Ultra filtration process can be used for all the following except
- A) Selective removal of salts
  - B) Selective removal of solvents
  - C) Fractionation of proteins
  - D) Harvesting of cells
- Q.19 In Medelian inheritance study of a pair of alleles it was found that dominant and recessive alleles expressed itself together, this can be termed as?
- A) Dominance
  - B) Codominance
  - C) Pseudodominance
  - D) Amphidominance

- Q.20 You are asked to isolate DNA from bacteria, which of the following enzymes would not be required by you?
- A. Lysozyme
  - B. Ribonuclease
  - C. Deoxyribonuclease
  - D. Protease
- Q.21 In order to reuse and recycle the enzymes in the bioprocesses which of the following reactions would be beneficial to you
- A. dehydration
  - B. Immobilisation
  - C. autoclaving
  - D. Pemeation
- Q.22 The unit of radioactive decay constant is
- A. Becquerel
  - B. milivolts
  - C. Ram
  - D. Ampere
- Q.23 You have been assigned to modify the enzymes for industrial purpose, which of the following process would you use
- A. mutagenesis
  - B. Antisense RNA
  - C. Global chemical inhibitor
  - D. Gene trapping
- Q.24 In a continuous culture the bacterial population is maintained in a \_\_\_ growth phase
- A. Lag phase
  - B. Log phase
  - C. Stationary phase
  - D. Senescense phase
- Q.25 Which of the following is used as biological indicator Spore Testing procedure
- A. *Bacillus stearothermophilus*
  - B. *Bacillus subtilis*
  - C. *Penecilium*
  - D. *Pischia pastoris*



- Q.26 In order to calibrate pH meter with glass electrodes which of the following standards are used?
- A. pH 0.1
  - B. pH 4.008
  - C. pH 14.001
  - D. pH 0.1, 4.008 and 14.001
- Q.27 The technique of Electroporation facilitates the introduction of foreign DNA into the target cell by
- A. Active transport across the cell wall
  - B. Passive transport across the cell wall
  - C. Changing the transmembrane proton pump
  - D. Changing the transmembrane electric potential
- Q.28 High value of Biochemical Oxygen Demand means
- A. Highly pure water
  - B. Highly contaminated water
  - C. Normal Water
  - D. Partially distilled water
- Q.29 To identify self DNA from non-self DNA, the non-self DNA would be
- A. Hypermethylated
  - B. Hypomethylated
  - C. Hyper phosphorylated
  - D. Hypophosphorylated
- Q.30 You are asked to separate two proteins in a cell lysate, which of the following technique would you use
- A. Yeast two hybrid system
  - B. Yeast one hybrid system
  - C. Serum based chromatography
  - D. Anti Serum based chromatography
- Q.31 Nick translations is brought about by which of the following.
- A. DNA Polymerase I
  - B. DNA polymerase III
  - C. Peptidyl transferase
  - D. Aminoacyl tRNA synthetase

Q.32 Defective mRNA synthesis of the terminal end in eukaryotic system compromised the level of protein synthesis under in vitro system. How would you solve this problem.

- A. By providing correct Kozak Sequence
- B. By adding correct polyA tail
- C. By adding correct homeodomain
- D. By adding chaperons

Q.33 Aeration in a bioreactor is provided by

- A. Impeller
- B. Baffles
- C. Sparger
- D. propellar

Q34. A novel sea organism was identified giving blue luminiscence. For observing the true expression of the gene responsible for this character which of the following strategies will you follow?

- A. Isolate the genomic DNA from the organism and directly injecting to bacteria, screen colonies for bioluminescence.
- B. Isolate the genomic DNA from the organism, treat with DNase I, followed by restriction endonuclease treatments and transform into eukaryotic cell such as yeast, screen colonies for bioluminescence.
- C. Isolate the mRNA from the organism, reverse transcribe and generate cDNA, transform the virus and screen colonies for bioluminescence.
- D. Isolate the mRNA from the organism, reverse transcribe and generate cDNA, insert into a plasmid vector and transform into eukaryotic cells such as yeast screen, colonies for bioluminescence.

Q35. In a DNA molecule guanine is 26 %. Percentage of adenine would be

- A. 32%
- B. 24%
- C. 56%
- D. 26%

Q.36 In biotechnology which of the followings is patentable

- A. An inventive step
- B. Commercially viable product
- C. Easy accessible product
- D. Different appearance to same item.

Q37. BLAST output lists the hits ranked by their E value. All of the following statements are true for E value, except?

- A) The values are ranked in ascending order.
- B) The lower the E value better is the match
- C) The closer to 0 the E value is ,the less likely it occurred by random chance
- D) The E values are ranked in descending order

Q.38 Photographic film badge monitoring devices are unable to detect

- A) Neutrino particles
- B) Beta particles
- C) Gamma rays
- D) X-rays

Q.39 Which of the following does not represent a receptor

- A) receptors are strictly membrane bound
- B) receptors transfer the outside signal to inside for a physiological effect
- C) receptors are both membrane bound and cytosolic
- D) receptors are glycoproteins.

Q.40 Hybrid –release translation (HRT) depends on the ability of mRNA to direct synthesis of proteins in

- A) Cell free translation systems
- B) Translation in the cell
- C) Translation in intact animals
- D) Translation in cell as well as cell free system

Q.41 Gene therapy for inherited diseases is being done by

- A) Germline therapy or gene injection
- B) Somatic cell therapy or gene injection
- C) Germline or somatic cell therapy both
- D) Germline , somatic cell and gene injection

Q.42 Biotechnology companies Calgene and ICI Seeds used which of the following techniques to genetically engineer tomatoes

- A) Gene knockouts
- B) Transgenesis
- C) Antisense technology
- D) Mutagenesis



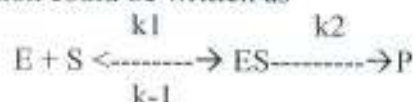
Q.43 cccDNA stands for

- A) Completely closed circular DNA
- B) Covalently closed circular DNA
- C) Completely covalent closed DNA
- D) Covalent closed centromeric DNA

Q44. You have planned to insert 20 kb fragment in  $\lambda$  phage. How many clones will be required to represent 95% probability of including gene of interest if the total genome size is  $2.8 \times 10^6$  kb.

- A.  $4.2 \times 10^5$  clones
- B.  $1.4 \times 10^5$  clones
- C.  $1.4 \times 10^4$  clones
- D.  $8.2 \times 10^6$  clones

Q45. Michaelis and Menten assumed that the overall reaction for an enzyme-catalyzed reaction could be written as



Using this reaction, the rate of breakdown of the enzyme-substrate complex can be described by the expression:

- A.  $k_1 ([E] - [ES])[S]$
- B.  $k-1 [ES] + k_2 [ES]$
- C.  $k_2 [ES]$
- D.  $k-1 [ES]$

Q46. Based on their functions T cells are classified into following except

- A. Cytotoxic T cells
- B. Helper T cells
- C. Suppressor T cells
- D. Syngenic T cells

Q47. The conversion of  $NAD^+$  to  $NADH$  is an example of reduction because

- A. the pyridine ring loses electrons (and a hydrogen).
- B. the pyridine ring gains electrons (and a hydrogen).
- C. the adenine ring loses electrons
- D. the adenine ring gains electrons.

Q48. What is the term used for the automated *in vitro* testing of large numbers of compounds using genetically modified cells?

- A. DNA based Microarrays
- B. High throughput screening
- C. Multiscreening
- D. Proteins chips

Q 49. An RNA molecule that is the reverse complement of a naturally occurring mRNA

- A. sn RNA
- B. hn RNA
- C. sno RNA
- D. Antisense RNA

Q50. During end of which cycle of PCR you would observe the right size product for the first time.

- A. 30<sup>th</sup> cycle
- B. 3<sup>rd</sup> cycle
- C. 2<sup>nd</sup> cycle
- D. 9<sup>th</sup> cycle

Question Booklet Series : **A** Question Booklet Sr. No.

063006

## Ph.D. Entrance Test – 2014

### Engineering (Civil Engineering: Construction Tech. & Management) Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

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*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

#### INSTRUCTIONS

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1. A structure has two degrees of indeterminacy. The number of plastic hinges that would be formed at complete collapse is
  - a) 0
  - b) 1
  - c) 2
  - d) 3
2. In case of two-way slab, the deflection of the slab is
  - a) Primarily a function of the long span
  - b) Primarily a function of the short span
  - c) Independent of the span, long or short
  - d) Mostly long span but sometime short span
3. A reinforced concrete beam of 10m effective span and 1m effective depth is supported on 500mm X 500mm columns. If the total uniformly distributed load on the beam is 10 MN/m, the design shear force for the beam is
  - a) 50 MN
  - b) 47.5 MN
  - c) 37.5 MN
  - d) 43 MN
4. A thick of 10mm diameter is subjected to a tensile force of 7850 N. What are the principal stresses and maximum shear stress?
  - a) 70 MPa, 50 MPa, 10MPa
  - b) 100 MPa, Zero, 50 MPa
  - c) 100 MPa, 50 MPa, 25 MPa
  - d) 100 MPa, Zero, Zero
5. Which one of the following statements is correct?  
An indeterminate building frame may be converted to a determinate one by assuming
  - a) Hinges at mid-height of columns
  - b) Hinges at the mid-span of the beams
  - c) Hinges at both mid-height of columns and mid-span of beams
  - d) One support as fixed at base and other support on rollers
6. Which one of the following statements is correct?  
Diagonal tension reinforcement is provided in a beam as
  - a) Longitudinal bars
  - b) Bent up bars
  - c) Helical reinforcement
  - d) 90° bend at the bends of main bars
7. What is the quantity of cement (in kg) and of dry sand (in cubic metre) respectively required for preparing 1 cubic metre of wet cement mortar of 1:5 proportion?
  - a) 270 and 1.00
  - b) 290 and 1.05
  - c) 290 and 1.00
  - d) 310 and 1.05

8. Slump and compaction factors are two different measures of workability of concrete. For a slump of 0 to 20 mm, what is the equivalent range of compaction factor?
  - a) 0.50-0.70
  - b) 0.70-0.80
  - c) 0.80-0.85
  - d) 0.85-0.92
9. What is the value of flexural strength of M 25 concrete?
  - a) 4.0 MPa
  - b) 3.5 MPa
  - c) 3.0 MPa
  - d) 1.75 MPa
10. Why are tie plates provided in laced columns?
  - a) To check the buckling of column as a whole
  - b) To check the buckling of the lacing flats
  - c) To check the buckling of the component columns
  - d) To check the distortion of the end cross sections
11. What is eutrophication of lakes primarily due to?
  - a) Multiplication of bacteria
  - b) Excessive inflow of nutrients
  - c) Increase in benthic organisms
  - d) Thermal and density currents
12. Which one of the following is the purpose of providing the downstream pile in a barrage?
  - a) To control failure due to piping by high value of exit gradient
  - b) To control failure due to scour
  - c) To stop failure due to sliding
  - d) To stop failure due to uplift pressure
13. A road surface is corrected by spreading a layer of dry sand in a thickness varying from 5 mm to 10 mm and rolling the surface by heavy rollers. Which one of the following maintenance works does it apply to?
  - a) Repair of ruts and patches
  - b) Repairing of blow ups
  - c) Repair of bleeding surface
  - d) Sealing of joints and cracks

14. Match List-I with List-II and select the correct answer using the code given below the lists:

List-I (Type of Construction)	List-II (Binder Content Generally Specified)
A. Bituminous macadam	1. 8-15%
B. Dense bituminous macadam	2. 3-3.5%
C. Bituminous concrete	3. 4-4.5%
D. Bitumen mastic	4. 4.5-6.0%

Code:

	A	B	C	D
a)	2	1	4	3
b)	4	3	2	1
c)	2	3	4	1
d)	4	1	2	3

15. A right-angled triangular channel, symmetrical in section about the vertical, carries a discharge of  $5\text{m}^3/\text{s}$  with a velocity of  $1.25\text{m/s}$ . What is the approximate value of the Froude number of the flow?
- a) 0.3  
b) 0.4  
c) 0.5  
d) 0.6
16. A river model is constructed at a horizontal scale of 1:1000 and a vertical scale of 1:1000. A model discharge of  $0.1\text{m}^3/\text{s}$  would correspond to a discharge in the prototype of what magnitude?
- a)  $10^2\text{m}^3/\text{s}$   
b)  $10^3\text{m}^3/\text{s}$   
c)  $10^4\text{m}^3/\text{s}$   
d)  $10^5\text{m}^3/\text{s}$
17. Which one of the following is the correct statement?  
A streamlined body is one for which the
- a) Skin friction is zero.  
b) Thickness of the body is less than  $1/100$  of its length.  
c) Corners are rounded off.  
d) Separation occurs, if at all, at the farthest downstream part of the body.
18. A machine in a steel plate fabricating industry is found to be producing a sound level of 50 dB. In the expansion plans one more such machine needs to be added. What will be the combined noise level?
- a) 80 – 100dB  
b) 101 – 150 dB  
c) 51 – 70 dB  
d) 40 – 50 dB



19. Consider the following statements:

On addition of lime to a clay soil, generally

1. M.D.D. and strength both increase.
2. M.D.D. decreases but strength increases.
3. M.D.D. and O.M.C. both increase.

Which of the statements given above is correct?

- a) 1 only
  - b) 2 only
  - c) 3 only
  - d) None of the above
20. What is the normal depth in a wide rectangular channel carrying  $0.5 \text{ m}^3/\text{s}$  discharge at a bed slope of 0.0004 and Manning's  $n=0.01$ ?
- a) 0.13 m
  - b) 0.32 m
  - c) 0.43 m
  - d) 0.50 m
21. The rainfall hyetograph shows the variation of which one of the following?
- a) Cumulative depth of rainfall with time
  - b) Rainfall depth with area
  - c) Rainfall intensity with time
  - d) Rainfall intensity with cumulative depth of rainfall
22. The duty of a crop is 432 hectares/cumec, when base period of the crop is 100 days. Delta for the crop will be
- a) 132
  - b) 200
  - c) 464
  - d) 864
23. In Ogee shaped spillway, discharge is proportional to
- a)  $H$
  - b)  $\sqrt{H}$
  - c)  $H^{3/2}$
  - d)  $H^{5/2}$
24. The moisture tension for a soil is 8 atmospheres. The soil is then at
- a) Permanent wilting point
  - b) Field capacity
  - c) Optimum moisture content
  - d) Equivalent moisture

25. A water treatment work treats  $6000 \text{ m}^3$  of water per day. If it consumes 20 kg chlorine per day, then chlorine dosage would be
- 2.33 mg/lit
  - 5mg/lit
  - 4 mg/lit
  - 3.33 mg/lit
26. Under natural conditions of flow an unpolluted river would contain
- More dissolved oxygen in summer than in winter
  - Less dissolved oxygen in summer than in winter
  - More or less the same amount of dissolved oxygen in winter and summer.
  - Least amount of dissolved oxygen during the floods.
27. Under Indian conditions, the average per capita contribution of BOD is
- 10 to 20 gm/d
  - 20 to 35 gm/d
  - 35 to 50 gm/d
  - 50 to 70 gm/d
28. If diameter of the main pipe is taken less than economic diameter, then
- Head loss will be high
  - Cost of pipe will be less
  - Both (a) and (b)
  - None of these
29. In a high-rate trickling filter, the problem of ponding can be solved by
- Flooding and raking
  - Chlorination and supply of air
  - Raking and chlorination
  - Flooding and supply of air
30. In aerobic conditions the microbial decomposition of organics results in the formation of
- Stable and objectionable end products
  - Unstable and objectionable end products
  - Unstable and acceptable end products
  - Stable and unobjectionable end products
31. What is the coefficient of friction needed if no super elevation is provided for a horizontal circular curve of radius 190 m and design speed of 65 kmph?
- 0.155
  - 0.165
  - 0.175
  - 0.185

32. For a constant value of coefficient of lateral friction, the value of required super elevation increases with
- Increase in both speed and radius of curve
  - Decrease in both speed and radius of curve
  - Increase in speed and with decrease in radius of curve
  - Decrease in speed and with increase in radius of curve
33. Which of the following pair is not correctly matched?
- | Quality      |   | G.I. Value |
|--------------|---|------------|
| a) Good      | - | 0-1        |
| b) Fair      | - | 2-4        |
| c) Poor      | - | 5-9        |
| d) Very poor | - | 10-35      |
34. The specific gravity of paving bitumen as per IS:73-1992 lies between
- 1.10 and 1.06
  - 1.06 and 1.02
  - 1.02 and 0.97
  - 0.97 and 0.92
35. Aggregate impact value indicates which of the following property of aggregates?
- Durability
  - Toughness
  - Hardness
  - Strength
36. Compensating errors in chaining are
- Proportional to the length of the line
  - Proportional to the square root of the length of the line
  - Inversely proportional to the square root of the length of the line
  - Inversely proportional to the length of the line.
37. Sag correction is always
- Positive
  - Negative
  - Zero
  - None of these
38. The best method of interpolation of contours in Direct method of contouring is by
- Computations
  - Interpolation
  - Estimation
  - None of these
39. Angle of intersection of a curve is the angle between
- Forward tangent and long chord
  - Back tangent and long chord
  - Back tangent and forward tangent
  - None of these



40. If unit cohesion of a saturated clay is  $1 \text{ kg/cm}^2$ , then net ultimate bearing capacity of a square footing in this clay will be approximately
- $2 \text{ t/m}^2$
  - $10 \text{ t/m}^2$
  - $15 \text{ t/m}^2$
  - $40 \text{ t/m}^2$
41. The void ratio and specific gravity of a soil are 0.65 and 2.72 respectively. The degree of saturation (in percent) corresponding to water content of 20% is
- 65.3
  - 20.9
  - 83.7
  - 54.4
42. Plate load test is useful to estimate
- Bearing capacity of foundation
  - Settlement of foundation
  - Both bearing capacity and settlement of foundation
  - Depth of foundation
43. In the Bernoulli equation, used in pipe flow, each term represents
- Energy per unit weight
  - Energy per unit mass
  - Energy per unit volume
  - Energy per unit flow length
44. A wide channel is 1 m deep and has a velocity of flow  $V$ , as 2.13 m/s. If disturbance is caused, an elementary wave can travel upstream with a velocity of
- 1.00 m/s
  - 2.13 m/s
  - 3.13 m/s
  - 5.26 m/s
45. What is the ratio of the lift coefficient to drag coefficient of an aerofoil section at stall?
- 1.5
  - 3
  - 15
  - 30
46. Identify FALSE statement from following:  
Specific speed of the pump increases with GATE
- Increase in shaft speed
  - Increase in discharge
  - Decrease in gravitational acceleration
  - Increase in head

47. Crude oil of kinematic viscosity 2.25 strokes flows through a 20 cm diameter pipe, the rate of flow being 1.5 litres/sec. the Reynolds number will be
- 624.29
  - 742.9
  - 424.4
  - 26.296
48. S-hydrograph is used to obtain unit hydro-graph of
- Shorter duration from longer duration
  - Longer duration from shorter duration
  - Both (a) and (b)
  - None of these
49. Specific capacity of a well is
- Constant over time after commissioning of the well
  - Increase with time after start of pumping
  - Decreases with time after start of pumping
  - May increase or decrease, depending upon a particular aquifer
50. Rainfall mass curve shows the variations of
- Rainfall intensity with time
  - Rainfall intensity with cumulative rainfall
  - Rainfall excess with time
  - Cumulative rainfall with time

## Ph.D. Entrance Test – 2014

### Subject: Laws

#### Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

Time: 60 minutes

Number of Questions: 50

Maximum Marks : 50

#### INSTRUCTIONS

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1. Any question a researcher wants to be answered can become
  - A) A hypothesis
  - B) A research problem
  - C) A research design
  - D) Conclusion and suggestion
2. The source that a researcher cannot use to prepare a bibliography is
  - A) Library
  - B) Books
  - C) Journals
  - D) Report/periodicals
3. In the standardized interview
  - A) Questions are put to selected standard persons
  - B) Different questions are put to all the respondents
  - C) Some questions are put to all the respondents
  - D) Different open ended questions are put to all the respondents
4. According to \_\_\_\_\_ 'Hypothesis is a proposition which can be put to test to determine its validity'. Fill in the blank in the above statement with the right option which is
  - A) Webster's New International Dictionary
  - B) Grinelle
  - C) Goode & Halt
  - D) George A. Lundberg
5. Sampling method is used by a researcher when
  - A) Information is to be collected from small area
  - B) Population to be studied is hetrogenous
  - C) It is possible to adopt census method
  - D) Hundred per cent accuracy is not required
6. As compared to 'non-doctrinal' research, 'Doctrinal research requires
  - A) Sufficient amount of money
  - B) Sufficient time
  - C) Empirical study
  - D) Good Library
7. Which of the following statements is 'Correct' with respect to "Survey".
  - A) There is direct contact with the people who are to be studied
  - B) It is suitable for research problem that requires the study in the historical retrospect
  - C) It requires small amount of money
  - D) It is not time consuming
8. Chairman of the Law Commission of India is
  - A) Hon'ble Mr. Justice D.K. Jain
  - B) Hon'ble Mr. Justice Ajit Prakash Shah
  - C) Hon'ble Mr. Justice R.M. Lodha
  - D) Hon'ble Mr. Justice T.S. Thakur
9. "Schedule" as a method of data collection does not require
  - A) Good amount of money
  - B) Well trained field workers
  - C) Sufficient time
  - D) Educated respondents
10. Which of the following is not a characteristic of a good questionnaire
  - A) Manageable size of the questionnaire
  - B) Clear and elaborate questions
  - C) Well arranged questions
  - D) Short and precise questions

11. Governor of a state holds office  
 A) For a term of five years  
 B) For a term of four years  
 C) For a term of six years  
 D) During the pleasure of the President
12. Telengana is  
 A) 27<sup>th</sup> State of India  
 B) 28<sup>th</sup> State of India  
 C) 29<sup>th</sup> State of India  
 D) 30<sup>th</sup> State of India
13. A judgement delivered by the Supreme Court recently in 2014 in NALSAR Vs. Union of India related to  
 A) Rights of children  
 B) Rights of women  
 C) Rights of rape victims  
 D) Rights of trans genders
14. Under the National Food Security Act, 2013, 'food grain' means  
 A) Rice  
 B) Wheat  
 C) Rice, wheat coarse grain  
 D) Rice, wheat, coarse grain or any combination thereof.
15. Criminal Law (Amendment) Act, 2013 provides for the amendment of  
 A) Indian Penal Code and Criminal Procedure Code  
 B) Criminal Procedure Code and Protection of Children from sexual offences Act 2012  
 C) Indian Evidence Act and Indian Penal Code  
 D) Indian Penal Code, Criminal Procedure Code, Indian Evidence Act, Protection of Children from sexual offences Act, 2012.
16. A Women who has been assaulted by a man with an intent to outrage her modesty can invoke which of the following section of Indian Penal Code  
 A) Sec. 352      B) Sec. 353      C) Sec. 354      D) Sec. 355
17. Law Minister of India is  
 A) Mr. Arun Jaitely  
 B) Mrs. Sushma Sawraj  
 C) Mr. Ravi Shankar Prasad  
 D) Sh. M. Venkaiah Naidu
18. Novarits A.G. Vs. Union of India, a much awaited judgement delivered by the Supreme Court in 2013 related to  
 A) Designs      B) Copyright      C) Patent      D) Trademark
19. "Aggrieved women" who has been subjected to any act of sexual harassment under the 'Sexual Harassment of women at workplace (Prevention and Redressal) Act, 2013 means  
 A) An employed women of any age  
 B) An employed women above the age of eighteen years  
 C) A women of any age  
 D) An employed women above the age of sixteen years
20. Chairman of the National Disaster Management Authority of Government of India is  
 A) President of India  
 B) Prime Minister of India  
 C) Home Minister of India  
 D) Minister of Environment and Forest of



- 21 "...When there are two competing human rights namely human rights for the religious minorities and the human rights for development, having regard to the economic and national interest of the country in the matter of admission of students, the latter should be allowed to prevail subject to protection of the basic minority rights". This was observed by the Supreme Court in the case of:
- A) *T.M.A.Pai Foundation v. State of Karnataka* (AIR 2003 SC 335).
  - B) *Islamic Academy of Education v. State of Karnataka* (AIR 2003 SC 3724).
  - C) *P.A.Inamdar v. State of Maharashtra* (AIR 2005 SC 3236).
  - D) *St. John's Teacher Training Institute (for women), Madurai v. State of Tamil Nadu* (AIR 1994 SC 43)
- 22 Doctrine of Legitimate Expectation was invoked by the Supreme Court in the case of:
- A) *Confederation of Ex-Servicemen Association v. Union of India* (AIR 2006 SC 2945).
  - B) *Debesh Chandra v. Union of India* (AIR 1970 SC 77).
  - C) *A.C.Jose v. Sivan Pillai* (AIR 1994 SC 921).
  - D) *Ranjit Thakur v. Union of India* (AIR 1987 SC 2388).
- 23 "Compelled Speech is a part of the fundamental right to free speech and expression," ruled the Supreme Court in the case of:
- A) *P.U.C.L. v. Union of India* (AIR 2004 SC 456).
  - B) *Union of India v. The Motion Picture Association* (AIR 1999 SC 2334).
  - C) *Union of India v. Association For Democratic Reforms* (AIR 2002 SC 2112).
  - D) *Life Insurance Corporation of India v. Prof. Manubhai D. Shah* (AIR 1993 SC 171).
- 24 In which one of the following cases, the Supreme court applied Article 39 (F) while deciding the issue regarding rehabilitation of child prostitutes and children of prostitutes:
- A) *Vishaljeet v. Union of India* (1990) 3 SCC 318.
  - B) *People's Union For Democratic Rights v. Union of India* (1982) 3 SCC 235.
  - C) *State of Punjab v. Ramdev Singh* (AIR 2004 SC 1290).
  - D) *Suchita Shrivastava v. Chandigarh Administration* (AIR 2010 SC 235).
- 25 In which of the following case, the Supreme court held that the Constitutional Amendments by which Articles 16 (4A) and 16 (4B) have been inserted, flow from Article 16(4) and do not violate the basic features of the Constitution:
- A) *Indra Sawhney v. Union of India* (AIR 1993 SC 447).
  - B) *Union of India v. Virpal Singh* (1995) 6 SCC 34.
  - C) *M. Nagaraj v. Union of India* (AIR 2007 SC 71).
  - D) *Ashok Kumar Thakur v. State of Bihar* (1995) 5 SCC 403.
- 26 The Constitution (94<sup>th</sup> Amendment) Act, 2006, which amended Article 164 of Constitution deals with:
- A) Number of ministers and their percentage in a State.
  - B) Number of ministers and their percentage in Lok Sabha.
  - C) Number of ministers and their percentage in Council of States.
  - D) Number of members and their percentage in Rajya Sabha.





37. Limited Liability Partnership Act received the assent of president on  
 A) 7 Jan, 2009 B) 9 Jan, 2009  
 C) 10 Jan, 2009 D) 7 Jan, 2008
38. Capital Market regulator is  
 A) RBI B) IRDA C) SEBI D) NSE
39. A foreigner is punishable for an offence committed  
 A) In India only B) On a vessel registered in India only  
 C) Both A and B above D) None of the above
40. Under Indian Penal Code, court of Justice means  
 A) A Judge B) A body of Judges  
 C) A judge to act Judicially alone D) None of the above
41. Death Penalty as a punishment is not provided Under Indian Penal Code for an offence  
 A) Under Section 376-A (Rapes/ Sexual/assault)  
 B) Section 305 (Abetment of suicide of child or insane person)  
 C) Dacoity 395  
 D) Kidnapping for ransom (364-A)
42. Mistake of fact is excused under  
 A) Section 76, 78 B) Section 76, 79  
 C) Section 77, 78 D) Section 78, 79
43. A instigates B to murder C. B. refuses to do so, what offence if any A has committed.  
 A) Conspiracy for murder B) Abetment for murder  
 C) Both A and B above D) None of the above
44. Match items of Group 'A' with Group 'B' and find the appropriate answer

Sr. No.	Group 'A'		Group 'B'
1.	State of Punjab Vs. Gurmit Singh AIR 1966 SC 1393	A)	Pre natal sex determination test
2.	D.K. Basu V. State of W.B. AIR 1997 SC 610	B)	Custodial violence is violation of Article 21 of Constitution
3.	Dhananjay Chatterjee V. Union of India 1988 4 SCC 456	C)	Trial in camera in rape cases
4.	Centre for Enquiry into health and allied themes V. Union of India AIR 2003 SC 3309	D)	Death Sentence
A)	2-A, 4-B, 3-D, 1-C	B)	1-C, 2-B, 3-D, 4-A
C)	1-B, 2-C, 3-D, 4-A	D)	3-A, 4-B, 2-D, 3-C

45. "I mean, then, by General Jurisprudence, the science concerned with the exposition of the principles, notions, and distinctions which are common to systems of law; understanding by systems law, the ampler and mature systems which, by reason of their amplitude and maturity, are pre-eminently pregnant with instruction" said.
- A) Holland      B) Dworkin      C) Austin      D) Bentham
46. "If the laws are too severe, the power of pardoning is a necessary corrective; but that corrective is itself an evil... If the punishment is necessary, it ought not to be remitted; if it is not necessary, the convict should not be sentenced to undergo it". remarked.
- A) Beccaria      B) Justice K. Iyer  
C) Bentham      D) Lombrosa
47. "The creative power of the courts is limited by existing legal material at their command. They find the material and shape it. the legislature may manufacture entirely new material." Said.
- A) Holmes      B) Gray      C) Cardozo      D) Allen
48. Who said, "Whether the possession of one thing will bring with it the possession of another that is thus connected with it depends upon the circumstances of the particular case".
- A) Holmes      B) Dias      C) Salmond      D) Savigny
49. "Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a system of liberty for all." observed.
- A) Kant      B) John Rawls      C) Dworkin      D) Pound
50. "Every legal system is oriented towards certain purposes which it seeks to implement. In this sense, every legal system is a 'purposeful enterprise". said.
- A) Ihering      B) Pound      C) Friedmann      D) Bentham



Question Booklet Series : **A** Question Booklet Sr. No. **051436**

## Ph.D. Entrance Test – 2014

Subject : **Faculty of Business Management & Commerce**

### Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

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2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
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12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. For the mid-values given below,  
25, 34, 43, 52, 61, 70  
The first class of the interval is:  
(A) 24.5-34.5  
(B) 25-34  
(C) 20-30  
(D) 20.5-29.5
2. In an exclusive type distribution, the limits excluded are:  
(A) lower limits  
(B) upper limits  
(C) either of the lower or upper  
(D) lower limits and upper limits both
3. Which of the following is a one-dimensional diagram?  
(A) Bar diagram  
(B) Pie-chart  
(C) Cylinder  
(D) A graph
4. The graph of the successive points of a distribution joined by straight lines in statistical terminology is known as:  
(A) frequency distribution  
(B) frequency curve  
(C) trend  
(D) cumulative distribution curve
5. Pie-chart represents the components of a factor by:  
(A) percentages  
(B) angles  
(C) sectors  
(D) circles
6. It is necessary to find cumulative frequencies in order to draw a/an:  
(A) histogram  
(B) frequency polygon  
(C) Ogive curve  
(D) column chart

7. Which of the following represents median?  
(A) First quartile  
(B) Fiftieth percentile  
(C) Sixth decile  
(D) None of the above
8. If each observation of a set is multiplied by 10, the mean of the new set of observations:  
(A) remains the same  
(B) is ten times the original mean  
(C) is one-tenth of the original mean  
(D) is increased by 10
9. If each value of a series is multiplied by 10, the median of the new set of observations is:  
(A) not affected  
(B) 10 times the original median value  
(C) one-tenth of the original median value  
(D) increased by ten
10. If the grouped data has open-end classes, one cannot calculate:  
(A) median  
(B) mode  
(C) mean  
(D) quartiles
11. The correct relationship between A.M., G.M. and H.M. is:  
(A)  $A.M. = G.M. = H.M.$   
(B)  $G.M. \geq A.M. \geq H.M.$   
(C)  $H.M. \geq G.M. \geq A.M.$   
(D)  $A.M. \geq G.M. \geq H.M.$
12. The value of the variable corresponding to the highest point of a frequency distribution curve represents:  
(A) mean  
(B) median  
(C) mode  
(D) none of the above
13. Mean deviation is minimum when taken from:  
(A) mean  
(B) median  
(C) mode  
(D) zero



14. Sum of squares of deviations is minimum when taken from:  
 (A) Mean  
 (B) Median  
 (C) Mode  
 (D) Zero
15. Which measure of dispersion has a different unit other than the unit of measurement of values:  
 (A) Range  
 (B) Mean deviation  
 (C) Standard deviation  
 (D) Variance
16. For a negatively skewed distribution, the correct relation between mean, median and mode is:  
 (A) Mean=median=mode  
 (B) median<mean<mode  
 (C) mean<median<mode  
 (D) mode<mean<median
17. For a set of values:  
 (A) mean deviation is always less than standard deviation  
 (B) mean deviation is always greater than standard deviation  
 (C) mean deviation is always equal to standard deviation  
 (D) none of the above
18. If A and B are two events, the probability of occurrence of either A or B is given as:  
 (A)  $P(A)+P(B)$   
 (B)  $P(A \cup B)$   
 (C)  $P(A \cap B)$   
 (D)  $P(A)P(B)$
19. The definition of statistical probability was originally given by:  
 (A) De Moivre  
 (B) Laplace  
 (C) Von-Mises  
 (D) Pascal
20. If A, B and C are three mutually exclusive events, the probability of their union is equal to:  
 (a)  $P(A)P(B)P(C)$   
 (b)  $P(A)+P(B)+P(C)-P(ABC)$   
 (c)  $P(A)+P(B)+P(C)$   
 (d)  $P(A)P(B)+P(B)P(C)+P(A)P(C)$

21. An urn contains 5 red, 4 white and 3 black balls. The probability of three balls being of different colours when the ball is replaced after each draw is equal to:  
(A)  $3/144$   
(B)  $4/144$   
(C)  $5/144$   
(D) 1
22. If X and Y are two random variables such that their expectations exist and  $P(X \leq Y) = 1$ , then  
(A)  $E(X) \leq E(Y)$   
(B)  $E(X) \geq E(Y)$   
(C)  $E(X) = E(Y)$   
(D) None of the above
23. The mean and variance of a binomial distribution are 8 and 4, respectively. Then,  $P(X=1)$  is equal to:  
(A)  $\frac{1}{2^{12}}$   
(B)  $\frac{1}{2^4}$   
(C)  $\frac{1}{2^6}$   
(D)  $\frac{1}{2^8}$
24. If for a binomial distribution,  $b(n,p)$ ,  $n=4$  and also  $P(X=2)=3P(X=3)$ , the value of p is:  
(A)  $\frac{9}{11}$   
(B) 1  
(C)  $\frac{1}{3}$   
(D) none of the above
25. A family of parametric distributions in which mean is equal to the variance is:  
(A) binomial distribution  
(B) gamma distribution  
(C) normal distribution  
(D) Poisson distribution
26. The distribution for which mode does not exist is:  
(A) normal distribution  
(B) t-distribution  
(C) continuous rectangular distribution  
(D) F-distribution

27. The odd-order moments of Student's t-distribution are:

- (A) infinite
- (B) zero
- (C) imaginary
- (D) none of above

28. When the degrees of freedom tend to infinity, t-distribution tends to:

- (A) normal distribution
- (B) F-distribution
- (C) Cauchy distribution
- (D) Chi-square distribution

29. Chi-square distribution is useful to test the:

- (A) independence of attributes
- (B) equality of several population correlation coefficients
- (C) equality of several population variances
- (D) all the above

30. F-distribution is applied for:

- (A) testing the equality of two population variances
- (B) testing the equality of two or more population means
- (C) testing the equality of several regression coefficients
- (D) all the above

31. Whether a test is one-sided or two-sided depends on:

- (A) alternative hypothesis
- (B) composite hypothesis
- (C) null hypothesis
- (D) simple hypothesis

32. A wrong decision about  $H_0$  leads to:

- (A) one kind of error
- (B) two kinds of error
- (C) three kinds of error
- (D) four kinds of error

33. Power of a test is related to:

- (A) type I error
- (B) type II error
- (C) type I and type II errors both
- (D) none of the above



34. Critical region of size  $\alpha$  which minimizes  $\beta$  amongst all critical regions of size  $\alpha$  is called:

- (A) powerful critical region
- (B) minimum critical region
- (C) best critical region
- (D) worst critical region

35. The statistic-  $\chi^2$  with usual notations in case of contingency table of order  $m \times p$  is given by the formula:

(A)  $\chi^2 = \sum_{i=1}^m \sum_{j=1}^p \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$  (✓)

(B)  $\chi^2 = \sum_{i=1}^m \sum_{j=1}^p \frac{O_{ij}^2 - E_{ij}^2}{E_{ij}}$

(C)  $\chi^2 = \sum_{i=1}^m \sum_{j=1}^p \left( \frac{O_{ij} - E_{ij}}{E_{ij}} \right)^2$

(D) all the above

36. The formula for the estimate of  $\beta$  in the regression equation  $Y = \alpha + \beta X + \varepsilon$  is:

(A)  $\text{Cov}(X, Y) / V(X)$

(B)  $r\sigma_y / \sigma_x$

(C)  $\sum (X_i - \bar{X})(Y_i - \bar{Y}) / \sum (X_i - \bar{X})^2$

(D) all the above

37. The lines of regression intersect at the point:

(A)  $(X, Y)$

(B)  $(\bar{X}, \bar{Y})$

(C)  $(0, 0)$

(D)  $(1, 1)$

38. The range of multiple correlation coefficient is:

(A) 0 to 1

(B) 0 to  $\infty$

(C) -1 to 1

(D)  $-\infty$  to  $\infty$

39. The range of partial correlation coefficient is:

(A) 0 to 1

(B) 0 to  $\infty$

(C) -1 to 1

(D)  $-\infty$  to  $\infty$

40. If the two lines of regression are  $x+2y-5=0$  and  $2x+3y-8=0$ , the means of X and Y are:  
(A)  $\bar{x} = -3, \bar{y} = 4$   
(B)  $\bar{x} = 2, \bar{y} = 4$   
(C)  $\bar{x} = 1, \bar{y} = 2$   
(D) none of the above
41. If the two lines of regression in a bivariate distribution are  $X+9Y=7$  and  $Y+4X=16$ , then  $\sigma_x : \sigma_y$  is:  
(A) 3:2  
(B) 2:3  
(C) 9:4  
(D) 4:9
42. If Karl Pearson's correlation coefficient between two variables is zero, it implies that:  
(A) two variables are independent  
(B) two variables are perfectly linearly related  
(C) the two variables are not linearly related  
(D) all the above
43. Ordinary sign test considers the difference of observed values from the hypothetical median value in terms of:  
(A) signs only  
(B) magnitudes only  
(C) sign and magnitude both  
(D) none of the above
44. In which scheme, even the biased estimators are used?  
(A) Double sampling  
(B) Stratified sampling with proportional allocation  
(C) Simple random sampling  
(D) Systematic sampling
45. Bias of an estimator can be:  
(A) Positive  
(B) Negative  
(C) Both positive and negative  
(D) Always zero
46. Out of the two types of errors testing, the more severe error is:  
(A) Type I error  
(B) Type II error  
(C) Both  
(D) None of above

47. Let  $\theta$  be an unknown parameter and  $T_1$  be an unbiased estimator of  $\theta$ .  
If  $Var(T_1) \leq Var(T_2)$ , for  $T_2$  to be any unbiased estimator, then  $T_1$  is known as:  
(A) Minimum variance unbiased estimator  
(B) Unbiased and efficient estimator  
(C) Consistent and efficient estimator  
(D) Unbiased, consistent and minimum variance estimator.
48. In sampling from normal population, when  $\sigma^2$  is known, sample mean is:  
(A) unbiased and consistent estimator of population mean  
(B) unbiased and not consistent estimator of population mean.  
(C) biased but consistent estimator of population mean.  
(D) neither unbiased nor consistent estimator of population mean.
49. The area of the standard normal curve beyond the lines  $z = \pm 2.96$  is:  
(A) 90%  
(B) 95%  
(C) 1%  
(D) 5%
50. Let  $X$  and  $Y$  are two variables such that  $aX+bY+c=0$ , then the correlation between  $X$  and  $Y$  is precisely:  
(A) Zero  
(B) Between 0 and 1  
(C) Between -1 and 1  
(D) None of the above



**Ph.D./M.Phil. Entrance Test – 2014**

**Subject : Music (Vocal & Instrumentation)**

**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

**INSTRUCTIONS**

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1. How many shrutis are in a saptak  
A) 20                      B) 21                      C) 22                      D) 23
2. The number of Thaats described by Pt. Bhatkhande  
A) 10                      B) 11                      C) 12                      D) 13
3. Dhatus in prabandha  
A) 2                      B) 3                      C) 4                      D) 5
4. Sadharani is  
A) Swara                      B) Tala                      C) Sthaya                      D) Giti
5. Presently Nishabatkriya is called  
A) Sam                      B) Tali                      C) Khali                      D) Vibhag
6. Pt. N.V. Patwardhan is  
A) Vocalist                      B) Sitarist                      C) Flutist                      D) Dancer
7. Madhya- Taar chalan is in raga  
A) Marwa                      B) Adana                      C) Bhopali                      D) Yaman
8. The time of raga shudh sarang  
A) Morning                      B) Evening                      C) Night                      D) Afternoon
9. The author of Raag Manjri  
A) Sharangdeva                      B) Pundrik Vitthal  
C) Shrikanth                      D) Bhatkhande
10. Who wrote sangeet makrand  
A) Narad                      B) Bharat                      C) Damodar                      D) Shrinivas
11. Which ghrana Pt. Ravi Sharma belongs to  
A) Senia                      B) Vishnupur                      C) Maihar                      D) Madhubani
12. Vadi-samvadi of raga puriya  
A) Ga-Ni                      B) Pa-Sa                      C) Ma-Sa                      D) Re-Pa
13. Matras in tala Deepchandi  
A) 1                      B) 12                      C) 13                      D) 14

(2)

14. Matras in the first Vibhag of tala Dhamar

- A) 4                      B) 5                      C) 6                      D) 7

15. Samvad in Shadaj Gram

- A) Sa-Ma                      B) Re-Pa                      C) Sa-Pa                      D) Ma-Ni

16. The number of Shrutis from Re to Pa

- A) 7                      B) 8                      C) 9                      D) 10

17. Shadav- Shadav Jati of raga

- A) Puriya Dhnashri                      B) Shudh Sarang  
C) Bhairavi                      D) Marwa

18. Angas in Prabhandha

- A) 5                      B) 6                      C) 4                      D) 2

19. In Karnatak music raga Bilawal is called

- A) Mayamalavgaul                      B) Nat bhairavi  
C) Harikambhoji                      D) Dhirshankrabharnam

20. The category of Bheri Vadya

- A) Tat                      B) Avnadh                      C) Ghan                      D) Sushir

21. What is Atisvaryya

- A) Swara                      B) Tala                      C) Raga                      D) Instrument

22. To which gharana Ajoy Chakarvati belongs to

- A) Kirana                      B) Agra                      C) Patiala                      D) Jaipur

23. Sham Chaurasi ghrana belongs to

- A) Vocal                      B) Instrumental                      C) Dance                      D) Drama

24. Ga Ma Dha Ni Dha Ma Ga Re Sa swaras of raga

- A) Rageshri                      B) Bageshri                      C) Bhimplasi                      D) Kafi

25. All shudh Swaras in raga

- A) Khamaj                      B) Shyam Kalyan  
C) Alhaiya- Bilawal                      D) Hansdhwani



(3)

26. Two madhyams are used in raga  
A) Deshkar B) Marubihag C) Todi D) Bhairav
27. Who described 15 varieties of Gamak  
A) Bharat B) Matang C) Sharangdev D) Ahobal
28. How many Sthai- Bhavas described by Bharat  
A) 5 B) 6 C) 7 D) 8
29. The author of Sangit Raj  
A) Kumbha B) Parshavdev C) Dattil D) Matang
30. What is Aatodya  
A) Rasa B) Alankar C) Raga D) Instrument
31. The number of Dhruva ganns described in ancient period  
A) 2 B) 3 C) 4 D) 5
32. What is Thaat of raga Multani  
A) Poorvi B) Todi C) Bhairavi D) Asawari
33. Western notes of Indian Saptak Sa Re Ga Ma Ra Dha Ni  
A) c d e f g a b B) f g a b e c d  
C) b f c g d b a D) d b c a f e g
34. Anukramnika is also called  
A) Synopsis B) Index C) Footnote D) Bibliography
35. In which gayan shailey different layakaris are used  
A) Gazal B) Geet C) Dhrupad D) Khyal
36. 'Dha Ni Sa Re Ga, Ma Re Sa' is the main phrase of raga  
A) Asawari B) Darbari Kanada  
C) Bageshri D) Rageshri
37. 'Pa, Ma Re Ga, Ma Ga Re Sa' used in raga  
A) Shyam Kalyan B) Multani  
C) Puriya Kalyan D) Puriya Dhnasari

(4)

38. Which is raga Ahir Bhairav

A) Ga- Ma Re Sa

B) Ni Sa Dha Ni Re, Ga Ma Re Ga Re Sa

C) Ma Ga Re Sa, Re Ni Sa Ma

D) Ni Sa Dha Ni Re, Sa, Ga Ma Re Sa

39. In which reign of India sculpture are mostly found

A) North

B) West

C) South

D) East

40. Dashpranas of tala are described in

A) Sangit Ratnakar

B) Rag Vibodh

C) Geet Govind

D) Brihaddeshi

41. How many Vibhags are in Ektala

A) 6

B) 7

C) 8

D) 9

42. In tala deepchandi khali is on matra

A) 1

B) 4

C) 8

D) 11

43. In tala what is Anudrut

A) Grah

B) Kriya

C) Jati

D) Anga

44. The instrument played by "Bhai Mardana"

A) Sarangi

B) Taus

C) Pakhawaj

D) Rabab

45. The number of tanas described in Natyashastra

A) 35

B) 49

C) 28

D) 84

46. Which instrument is played with "Gaz"

A) Sarangi

B) Sitar

C) Veena

D) Sarod

47. Which ghrana Pt. Vishnu Digambar Pluskar belongs to

A) Agra

B) Patiala

C) Gwalior

D) Delhi

48. The time of Abhinav Gupta

A) 9<sup>th</sup> century

B) 10<sup>th</sup> century

C) 11<sup>th</sup> century

D) 12<sup>th</sup> century

49. Sadarang Adarang are also known as

A) Heddu Hassu Khan

B) Nemat Khan- Feroz Khan

C) Kadir Baksh- Khutub Baksh

D) Alakh Dass- Maluk Dass

50. How many marg talas are in Natyashastra

A) 5

B) 6

C) 7

D) 8

x-x-x





42. ताम्र हींदुजरी के रानी कि क नाम पर होता है :

- (a) 1 (b) 4 (c) 8 (d) 11

43. ताम्र के अनुकूल रक्त है :

- (a) शुद्ध (b) विष्क (c) जगि (d) भोग

44. 'मई धरम' सौन-का कथ वजात का :

- (a) सारंगी (b) ताडक (c) धरमवज (d) रजत

45. नादमकाल के वर्णित तानों की संख्या है :

- (a) 35 (b) 49 (c) 24 (d) 84

46. 'शत' के सौन-का कथ वजात नाम है :

- (a) सारंगी (b) तितार (c) वीणा (d) लहेर

47. कां विष्क दिनाक पनुकर कि क वराने के संकेत है :

- (a) भाग्य (b) धरमक (c) इतिहास (d) दिल्ली

48. मभिजन गुण के समय :

- (a) 9-वीं शताब्दी (b) 10-वीं शताब्दी (c) 11-वीं शताब्दी (d) 12-वीं शताब्दी

49. सारंगी अवांत के कौर कथ कथ जात है :

- (a) देवू हस्तु रंग (b) देवत रंग - कीरत रंग (c) सारंगी वरक-धरम वरक (d) भाग्य वरक - धरम वरक

50. नादमकाल के किरी नाम ताम्र है :

- (a) 5 (b) 6 (c) 7 (d) 8

1. इर नामक कि रानी का अनुकूल रक्त :

- (a) 20 (b) 21 (c) 22 (d) 23

2. री-ताडक के किरी नाम का किरी नाम है :

- (a) 10 (b) 11 (c) 12 (d) 13

3. धरम कि रक्त :

- (a) 2 (b) 3 (c) 4 (d) 5

4. सारंगी रक्त :

- (a) 10 (b) 32 (c) 50 (d) 100

5. विष्क किरी नाम के किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) विष्क

6. री-ताडक के वरकवज है :

- (a) सारंगी (b) विष्क (c) धरम (d) भाग्य

7. मभिजन-अवत किरी नाम किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) भाग्य

8. रक्त रंग किरी नाम का किरी नाम है :

- (a) सारंगी (b) धरम (c) भाग्य (d) धरम वरक

9. रक्त रंग किरी नाम का किरी नाम है :

- (a) सारंगी (b) धरम (c) भाग्य (d) धरम वरक

10. सारंगी वरक वरक किरी नाम है :

- (a) सारंगी (b) धरम (c) भाग्य (d) धरम वरक

11. री-ताडक किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

12. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

13. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

14. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

15. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

16. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

17. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

18. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

19. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

20. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

21. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक

22. रक्त रंग किरी नाम का किरी नाम है :

- (a) भाग्य (b) धरम (c) भाग्य (d) धरम वरक





Question Booklet Series : **A** Question Booklet Sr. No. **053016**

## Ph.D. Entrance Test – 2014

**Subject : Indian Theatre**

**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. **There shall be no negative marking for wrong answers.**
6. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
9. For rough work only the blank sheet at the end of the Question Booklet be used.
10. The Answer Sheet is designed for computer evaluation. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e. not following the instructions completely, shall be of the candidate only.**
11. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**



PH.D ENTRANCE : 2014. INDIAN THEATRE  
QUESTIONS : 50. TIME : 60 MINUTES. MARKS : 50

Q1- One of the following Plays is not written by Luigi Pirandello

- a) Rules Of The Game
- b) Wild Duck
- c) Tonight We Improvise
- d) Right You Are (if you think so)

Q2- One of the following characters is not seen on stage in Adhe Adhure

- a) Jagmohan
- b) Manoj
- c) Singhania
- d) Kaale Suit Wala Admi

Q3- One of the following Country/Playhouse relation is correctly matched

- a) India/Globe
- b) England/Teatro Olympico
- c) Greece/Epidaurus
- d) Italy/Avar Vikrishta

Q4- Habib Tanvir based his production of Agra Bazar on the poetry of one of the following poets

- a) Nazir Akbarabadi
- b) Qamar Jalalabadi
- c) Jigar Muradabadi
- d) Akbar Allahabadi

Q5- Bengali theatre thespian Sombhu Mitra directed one of the mainstream Hindi feature film

- a) Bhuvan Shome with Utpal Dutt
- b) Amanush with Uttam Kumar
- c) Jagte Raho with Raj Kapoor
- d) Mrigaya with Mithun Chakravarty

Q6- One of the following Plays is not written by William Shakespeare

- a) King John
- b) King Lear
- c) King Oedipus
- d) Henry V

Q7- One of the following 3-D objects has six faces

- a) Pyramid
- b) Cylinder
- c) Sphere
- d) Cube

Q8- One of the following Plays that is centred on Sri Guru Nanak Dev is written by the Punjabi playwright Gurdial Singh Phull

- a) Jin Sach Palley Hoi
- b) Gagan Mai Thaal
- c) Boley So Nihaal
- d) Taati Vao Na Lagai

Q9- One of the following is not an Urdu writer

- a) Rajinder Singh Bedi
- b) Krishan Chander
- c) Upendra Nath Ashq
- d) Fiqar Taunsavi

Q10- In one of the following, 'Vivek' serves strong dramatic purpose

- a) Jatra
- b) Tamasha
- c) Swang
- d) Nautanki

Q11- One of the following mainstream Hindi film produced by Shashi Kapoor is based on Shudraka's famous Play 'Mrichhkatikam'

- a) Upkar
- b) Utsav
- c) Angulimaal
- d) Siddharth

Q12- 'Aharya' as discussed in 'Natya Shastra' deals with the art of

- a) Stage Decoration
- b) Acting
- c) Music
- d) Meditation

Q13- One of the following Play/Character is not correctly matched

- a) Ashadh Ka Ek Din/Nikshep
- b) Tughlaq/Sardar Ratansingh
- c) Gagan Mai Thaal/Babar
- d) Aathvan Sarg/Lalita Gauri

Q14- One of the Following is a famous Playwright

- a) Raja Ravi Varma
- b) Raja Mehndi Ali Khan
- c) Raja Mahendravikram Varman
- d) Raja Maan Singh

Q15- How many Plays were written by Munshi Prem Chand

- a) One
- b) Eight
- c) Twelve
- d) Twenty



Q16- One of the following Jewellery-pieces does not match its ornamental position on the body

- a) 'Mekhala' (a stringed girdle) worn around the Waist
- b) 'Kundala' (hanging rings) worn on the Ear-lobes
- c) 'Nupur' ( stringed tinklets) worn around the Neck
- d) "Valaya' ( Bangles/Wristbands) worn on the Wrists

Q17- Punjabi Play 'Raja Lakhdatta Singh' is authored by one of the following writers

- a) Lala Kirpa Sagar
- b) Bhai Vir Singh
- c) Dhani Ram Chatrik
- d) I. C. Nanda

Q18- The Greek term 'deus-ex-machina' has acquired one of the following theatrical connotation

- a) Entry of an unexpected character in the text to resolve a situation
- b) Announcing the Play from the dais
- c) Organizing the stage-machinery for different scenes
- d) Using an effect-machine to show thunder/lightening on stage

Q19- Following lines appear in one of Shakespeare's Plays given below

"We are such stuff'

As dreams are made on, and our life

Is rounded with a sleep"

- a) Hamlet
- b) The Tempest
- c) As You Like It
- d) Twelfth Night

Q20- One of the following equations of additive lighting is correct

- a) Red + Green = Yellow
- b) Red + Green = Blue
- c) Red + Green = Magenta
- d) Red + Green = White

Q21-One of the following combinations of elements is most widely accepted as essential for a theatrical performance

- a) Actor, Audience, Space, Script
- b) Actor, Director, Designer, Script
- c) Actor, Director, Script, Audience
- d) Actor, Script, Director, Music director

Q22- One of the following Plays deals with 'women empowerment'

- a) Andher Nagari Chaupat Raja
- b) Kesro
- c) Bhagvad Ajjuke
- d) Hanush

Q23- 'Moyian Saar Na Kai' and 'Punjab Wich Ikko Mard, Rani Jinda' are written respectively by the following Playwrights

- a) Sant Singh Sekhon and Dr Harcharan Singh
- b) Sant Singh Sekhon and Balwant Gargi
- c) Dr Harcharan Singh and Gursharan Singh
- d) Balwant Gargi and Gursharan Singh

Q24- Who wrote 'Bharat Durdasha' that was banned by the British rulers

- a) Munshi Prem Chand
- b) Saadat Hasan Manto
- c) Bharatendu Harishchandra
- d) Jai Shankar Prasad

Q25- Which one of the following Establishments has instituted All India Awards exclusively for the Backstage Artists of Theatre

- a) National School Of Drama, New Delhi
- b) Nandikar , Kolkata
- c) Modern Stage Service, New Delhi
- d) Ranga Mandal , Bhopal

Q26- One of the following has not produced any Street Theatre Plays

- a) Gursharan Singh
- b) Safdar Hashmi
- c) Badal Sircar
- d) Mohan Maharishi

Q27- Punjabi poet Shiv Kumar Batalavi has written a Play in verse 'Loona' re-interpreting one of the popular folk-tales listed below

- a) Dulla Bhatti
- b) Puran Bhagat
- c) Sassi Punnu
- d) Sohni Mahiwal

Q28-One of the following plays does not have Indo-Pak partition as backdrop

- a) Aur Kitne Tukde
- b) Jis Lahore Nahi Vekhya Oh Jammya Hi Nahi
- c) Charan Dass Chor
- d) Karma Wali



Q29- Panjab University's Indian Theatre hosted UNESCO's International Folk Theatre Workshop in 1976. Thespian Zohra Sehgal and Kirron Kher participated and acted in the Production along with other theatre-persons from France, Iran, Nepal, Sri Lanka and Afghanistan.

Tick the correct Production from among the following

- a) 'Hayavadan' by Amal Allana and Nissar Allana
- b) 'Mirza Sahiban' by Balwant Gargi and Mahendra
- c) 'Kanak Di Balli' by BV Karanth and Bansi Kaul
- d) 'Roop Basant' by Joy Michael and Mahendra

Q30- One of the following statements is opposed to the concept of Epic Theatre of Bertolt Brecht

- a) Compels audience to make decisions
- b) Audience is confronted with arguments
- c) Man is unchangeable
- d) Man is changeable and can make changes

Q31- "I can take any empty space and call it a bare stage. A man walks across this empty space whilst someone else is watching him, and this is all that is needed for an act of theatre to be engaged"

One of the following theatre-practitioner has said the above lines

- a) Jerzy Grotowsky
- b) Peter Brook
- c) Vsevolod Meyerhold
- d) Elia Kazan

Q32- The present Globe Theatre, rebuilt by a devotee of Shakespeare, was opened in 1997. Mark the correct year, when it was opened first

- a) 1499
- b) 1599
- c) 1699
- d) 1799

Q33- Eugene Ionesco in his Play 'Rhinoceros' pictures the erosion of sensitivity in society. Pick up another play of Ionesco in the following list

- a) Miss Julia
- b) The Maids
- c) The Lesson
- d) Tartuffe

Q34- Ibsen is "...a profound poetic dramatist—the best since Shakespeare"

One of the following Plays is not written by Henrik Ibsen

- a) The Master Builder (1892)
- b) Little Eyolf (1894)
- c) An Ideal Husband (1895)
- d) When We Dead Awaken (1899)

Q35- Plot of a well-structured Play has eight ladder-like steps. Six of them are listed here—1) Exposition. 2) Inciting point. 3) Point of attack. 4)\*-----  
5) Discovery. 6) Crisis. 7)\*\*-----, 8) Denouement.

One of the following set of words should fill-in the blanks at 4)\* and 7)\*\*

- a) \*Complication      \*\*Climax
- b) \*Simplification    \*\*Climax
- c) \*Complication      \*\* Confusion
- d) \*Simplification    \*\*Confusion

Q36- One of the following Character/Play is not matched correctly

- a) Krogstad/ A Doll's House
- b) Polly Peachum/ Three Penny Opera
- c) Jocasta/ Antigone
- d) Creon/ Oedipus



Q37- "The result is freedom from the time lapse between the inner impulse and outer reaction in such a way that the impulse is already an outer reaction. Impulse and action are concurrent ; the body vanishes, burns and the spectator sees a series of invisible impulses"

Above lines have been taken from one of the books listed below.

- a) Towards a Poor Theatre
- b) Theatre and its Double
- c) The Empty Space
- d) An Actor Prepares

Q38- One of the following Greek playwrights has written 123 plays like 'Antigone', 'Ajax', 'Electra' and others

- a) Aeschylus (525-456 B.C.)
- b) Sophocles (496-406 B.C.)
- c) Euripides (480-406 B.C.)
- d) Aristophanes (448-380 B.C.)

Q39- "The Novel is a lawful wife, but the Stage is a noisy, flashy and insolent mistress." The Stage is "....the gallows on which the dramatists are hanged." The above feelings are directly/indirectly expressed by one of the most successful playwright. Who he is among the ones written below

- a) George Bernard Shaw
- b) Oscar Wilde
- c) Anton Chekhov
- d) Garcia Lorca

Q40- Anti-war play-scripts are available to us since Aristophanes' PEACE, Bhasa's URUBHANGA, Brecht's MOTHER COURAGE to the ANDHA-YUG written by Dharamvir Bharati.

Who among the following wrote BURY THE DEAD in 1936

- a) Irwin Shaw
- b) Arthur Miller
- c) Bernard Shaw
- d) Eugene O'Neill



Q41- Who among the following has written the Sanskrit play 'Padmaprabhritaka' –the Gift that is Lotus

- a) Shudraka
- b) Var Ruchi
- c) Ishwar Dutt
- d) Shyamalak

Q42- .....:“You know what my beloved subjects call me? Mad Muhammad! Mad Muhammad !! How can I become wise again ?”

.....:“Your Majesty, there was a time when you believed in love, in peace, in God. Now you won't let your subjects pray. You hang them on suspicion. Why this bloodshed? Please stop it.”

Above dialogue takes place between two persons in Tughlaq. Pick-up the correct pair from the following

- a) Tughlaq and Ziauddin Barani
- b) Tughlaq and Shihabuddin
- c) Tughlaq and Step Mother
- d) Tughlaq and Aziz

Q43- One of the following Plays is not written by Ajmer Singh Aulakh

- a) Satt Bigane
- b) Bigane Bohad Di Chhaan
- c) Udaas Lok
- d) Anney Nishanchi

Q44- Swadesh Deepak's 'Court Martial' repeatedly staged for the last more than twenty years was premiered in Delhi on 1<sup>st</sup> January, 1991. Who among the following directed it

- a) Ram Gopal Bajaj
- b) B. V. Karanth
- c) Ranjit Kapoor
- d) Satish Kaushik

Q45- Characters Devi Dharini, Iravati, Bakulvalika, Kaumudika and Nipunika figure in one of the following Plays

- a) Malvikagnimitram
- b) Mattavilasm
- c) Abhigyan Shakuntalam
- d) Vikramorvashiam

Q46- Veteran stage actor, director and filmstar Balraj Sahni many times presented and acted in Gargi's 'Kanak Di Balli'. He loved portraying one of the following characters

- a) Jhandu
- b) Maghar
- c) Naraina
- d) Bachna

Q47- The 2<sup>nd</sup> chapter (Dwitya Adhyaya) of the world-famous authoritative treatise on theatre arts 'Natya Shastra' deals with one of the following aspects

- a) Art of Acting
- b) Art of Theatre Architecture
- c) Art of Playwriting
- d) Art of Dancing

Q48- Identify the Play from the list given below. The Play that has been made into a film by Satyajit Ray. That has been directed and acted on stage many times by Sombhu Mitra. Stanislavsky found playing the protagonist in this Play most interesting & spellbinding.

- a) An Enemy of the People
- b) Cherry Orchard
- c) Six Characters in search of an Author
- d) The Importance of being Earnest

Q49- One of the following Plays is not written by Agha Hashra Kashmiri popularly known as Shakespeare of Urdu

- a) Rustam Sohrab
- b) Aankh Ka Nasha
- c) Azar Ka Khwab
- d) Seeta Banvaas

Q50- Sight Lines in a Theatre Auditorium are

- a) Architectural considerations so as to ensure each spectator to have full view of the stage from every seat of the auditorium
- b) Rope-lines used to raise or lower the curtains in the auditorium
- c) Lines from the script spoken by actors maintaining the eye-contact with the audiences
- d) Acoustic properties of a well-designed auditorium

- o o o -





29. जिस प्रकार प्रतिनिधिपण के अभाव में अल्बर्ट टॉल्स्टॉय ने 1910 में मुद्रित, की अंतरराष्ट्रीय कोक, फिटर प्रतिष्ठा की। नाटककार जोहान ब्रस्ट्रॉम और फिटर 'रैड' ने प्रॉफ, डीसा, जेफन, लीलांक और अनादिपुत्रा के अंग फिटर स्टाइलों के साथ मंग दिया और अन्वित्तियां।

निम्नांकित में से सही चयन करें और विकल्प का विवरण दें।

- (a) 'सामान्य अंतर्गत' और फिटर अंतर्गत का 'हस्तगत'।
- (b) वेनिस मावली और ग्रेडों का 'निर्वाक प्रतिष्ठा'।
- (c) क्राफ्ट और वेडी की का 'समाप्त, ही नरली'।
- (d) अन्वित्तियां प्रत्यक्ष और ग्रेडों का 'रक्त गहरी'।

30. एक शब्द प्रयोग करने के अभाव में अल्बर्ट टॉल्स्टॉय के विचार हैं :

- (a) शब्दों को निर्वाक लेने के लिए सज्जत करना है।
- (b) शब्दों का लक्षण शब्दों से होता है।
- (c) प्रत्यक्ष प्रतिष्ठा है।
- (d) प्रत्यक्ष प्रतिष्ठा है और प्रतिष्ठा का समाप्त है।

31. 'I can take any empty space and call it a bare stage. A man walks across the empty space without anyone else is watching him, and he is all that is needed for an act of theater to be engaged.'  
(a) 'हीली' प्रोटोपस्थी (b) फीटर बुद्ध  
(c) कोलोनोड डेमरसेन्स (d) एलिया करण

32. अन्वित्तियां के अन्तर्गत, जो प्रत्यक्ष और अन्वित्तियां, अन्वित्तियां, 1952 में प्रवेश किया गया था। इस के संबंध में सही शब्द चुनें और विकल्प दें।  
(a) 1949 (b) 1951 (c) 1953 (d) 1955

33. प्रतीति को प्रयोग करने 'Stimulus' के अन्तर्गत में प्रयोग के अन्तर्गत में विकृत करता है। निम्नांकित प्रतीति में से जो प्रयोग के निम्नी द्वारा नाटक के लिए करे :  
(a) The Master Builder (b) The House of the Dead (c) The Death of Ivan Ilyich (d) The Merchant of Venice

34. 'अन्वित्तियां' :- '... a profound poetic dramatist — the best since Shakespeare.'  
कोन ना नाटक, डीसा, अन्वित्तियां का निष्कर्ष हुआ नहीं है :  
(a) The Master Builder (1892)  
(b) The House of the Dead (1894)  
(c) The Death of Ivan Ilyich (1895)  
(d) The Merchant of Venice (1899)

35. अन्वित्तियां नाटक के अन्तर्गत, सब सही-सही शब्द चुनें। इन में से सही दो चुनें (दो) चुनें।  
(a) Exposition, (b) Inciting point, (c) Point of attack, (d) ... (e) Discovery, (f) Climax, (g) ... (h) Denouement.

निम्नांकित में से एक विकल्प चुनें और (a) और (b) चुनें के लिए सही चुनें। यह विकल्प चुनें।

- |                                  |                            |
|----------------------------------|----------------------------|
| (a) $\frac{1}{2}$ Completion     | $\frac{1}{2}$ Climax       |
| (b) $\frac{1}{2}$ Simplification | $\frac{1}{2}$ — — — Climax |
| (c) $\frac{1}{2}$ Completion     | $\frac{1}{2}$ Confusion    |
| (d) $\frac{1}{2}$ Simplification | $\frac{1}{2}$ Confusion    |

36. एक वाक्य/शब्द का प्रयोग सही नहीं है :  
(a) King Lear / A doll's house  
(b) Paddy Penchum / Three Penny Opera  
(c) Trucote / Antigone  
(d) Oedipus / Oedipus

37. 'The result is freedom from the dual aspects between the inner impulse and outer reaction as well as being the impulse is already an outer reaction. Impulse and action are concurrent.' The body, mind, and the spectator sees a series of inevitable impulses.  
अन्वित्तियां प्रतिक्रिया में सही शब्द चुनें।

- (a) Towards a New Drama
- (b) Theatre and its Double
- (c) The Empty Space
- (d) An Actor Prepares

38. जिस प्रकार अन्वित्तियां ने 1933 अन्वित्तियां हैं सही 'Impulse' 'Reaction' अन्वित्तियां :

- (a) Aristotle (323-322 B.C.)
- (b) Aristotle (492-406 B.C.)
- (c) Aristotle (492-406 B.C.)
- (d) Aristotle (492-322 B.C.)

39. 'The result is freedom from the dual aspects between the inner impulse and outer reaction as well as being the impulse is already an outer reaction. Impulse and action are concurrent.' The body, mind, and the spectator sees a series of inevitable impulses.  
अन्वित्तियां प्रतिक्रिया में सही शब्द चुनें।

- (a) Aristotle (323-322 B.C.)
- (b) Aristotle (492-406 B.C.)
- (c) Aristotle (492-406 B.C.)
- (d) Aristotle (492-322 B.C.)

40. अन्वित्तियां प्रतिक्रिया में 'Peace' के अन्तर्गत में सही शब्द चुनें।  
(a) 'The Master Builder' और 'The Merchant of Venice'  
(b) 'The House of the Dead' और 'The Death of Ivan Ilyich'  
(c) 'The Merchant of Venice' और 'The House of the Dead'

- (a) 'The Merchant of Venice' और 'The House of the Dead'
- (b) 'The House of the Dead' और 'The Merchant of Venice'
- (c) 'The House of the Dead' और 'The Merchant of Venice'
- (d) 'The Merchant of Venice' और 'The House of the Dead'

41. अन्वित्तियां नाटक 'अन्वित्तियां' - यह विकल्प चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

42. '... if you know what my beloved call me I had not known? Had not you can I become a man again?'  
--- 'your beloved, have you a time you believed in love, in peace, in God, in man?'  
--- 'You anticipate my long time only the beloved. Please stop it.'

अन्वित्तियां अन्वित्तियां के सही शब्द चुनें।  
(a) अन्वित्तियां और अन्वित्तियां अन्वित्तियां  
(b) अन्वित्तियां और अन्वित्तियां  
(c) अन्वित्तियां और अन्वित्तियां  
(d) अन्वित्तियां और अन्वित्तियां

43. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

44. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

45. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

46. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

47. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

48. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां

49. अन्वित्तियां अन्वित्तियां में सही-सही शब्द चुनें।  
(a) अन्वित्तियां (b) अन्वित्तियां (c) अन्वित्तियां (d) अन्वित्तियां









(a) ਸਿਰਫ਼ ਦੁਸ਼ਮਣ ਬਾਮ (b) ਸਿਰਫ਼ ਸ਼ਾਹੀਦ  
 (c) ਸ਼ਾਂਤੀ ਪ੍ਰੇਮੀ (d) ਸ਼ਾਹੀਦੀ ਪ੍ਰੇਮੀ

ਮਿਫਤੀਲੀਲਾ 29 'peace' ਕੇ ਅਰਥ ਹੈ 'ਉਤਸ਼ਾਹ', ਅਤੇ 29 'shahid' (b) 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ'।

'any in hand' ਦਾ ਅਰਥ ਹੈ '1736 ਵਿਚ ਇਸ ਨੇ ਭਰਿਆ ਸੀ'।

(a) ਸਿਰਫ਼ ਬਾਮ (b) ਸਿਰਫ਼ ਸ਼ਾਹੀਦ  
 (c) ਦੁਸ਼ਮਣ ਬਾਮ (d) ਉਤਸ਼ਾਹ ਕੇ ਅਰਥ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'ਸ਼ਾਹੀਦੀਲਾ' - the last that he takes - ਦਾ  
 ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

---: "you know what my beloved subject called me?   
 mad muslim! mad muslim! how can I   
 become mad again?"

---: "your majesty, there was a time when you   
 believed in love, in peace, in God. now you won't let   
 your subjects pray. you hang them on suspicion. hang   
 the innocent. please stop it!"

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਅਤੇ ਸ਼ਾਹੀਦੀ ਦਾ ਅਰਥ  
 (b) ਸ਼ਾਂਤੀ ਅਤੇ ਸ਼ਾਹੀਦੀ  
 (c) ਸ਼ਾਂਤੀ ਅਤੇ ਸ਼ਾਹੀਦੀ  
 (d) ਸ਼ਾਂਤੀ ਅਤੇ ਸ਼ਾਹੀਦੀ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ

ਮਿਫਤੀਲੀਲਾ ਦਾ 'shahid' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਹੀਦੀ' ਦਾ ਅਰਥ ਹੈ 'ਸ਼ਾਂਤੀ'।

(a) ਸ਼ਾਂਤੀ ਦਾ (b) ਸ਼ਾਂਤੀ ਦਾ  
 (c) ਸ਼ਾਂਤੀ ਦਾ (d) ਸ਼ਾਂਤੀ ਦਾ



Question Booklet Series : **A** Question Booklet Sr. No. 052046

## Ph.D. Entrance Test – 2014

Subject : History of Arts/Fine Arts

### Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

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*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. **There shall be no negative marking for wrong answers.**
6. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
9. For rough work only the blank sheet at the end of the Question Booklet be used.
10. The Answer Sheet is designed for computer evaluation. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e. not following the instructions completely, shall be of the candidate only.**
11. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**



1. The Realistic Manifesto published in 1920 discusses
  - A) Photo-Realism
  - B) Orphism
  - C) Constructivism
  - D) Surrealism
2. The Parthenon is located in
  - A) Naples
  - B) Athens
  - C) Delphi
  - D) Florence
3. The east doors of the Florence Baptistry are by
  - A) Filippo Brunelleschi
  - B) Antonio Rossellino
  - C) Lorenzo Ghiberti
  - D) Paolo Uccello
4. The first Impressionist exhibition was held in the year
  - A) 1863
  - B) 1874
  - C) 1882
  - D) 1887
5. Vastu Shastra is a text on
  - A) Painting
  - B) Sculpture
  - C) Architecture
  - D) Music
6. Niharranjan Ray is the author of
  - A) The Transformation of Nature in Art
  - B) An Approach to Indian Art
  - C) The Hindu View of Art
  - D) The Essence of Indian Art
7. The correct match among the following is
  - A) F. N. Souza – Between the Spider and the Lamp
  - B) Satish Gujral – The Death of a Pope
  - C) Ramkinker Baij – Galaxy of Musicians
  - D) Benode Bihari Mukherjee – Benaras Ghats
8. The art historian among the following is
  - A) B. N. Goswamy
  - B) Anish Kapoor
  - C) Bharti Kher

D) Arpana Caur

9. The Planographic technique among the following is

- A) Serigraphy
- B) Wood-cut
- C) Aquatint
- D) Dry Point

10. The Armory Show, 1913 was held in

- A) Paris
- B) New York
- C) Zurich
- D) London

11. The subject-matter of the paintings in the Sittannavasal Cave is

- A) Buddhist
- B) Vaishnava
- C) Shaiva
- D) Jain

12. The Sigiriya Caves are located in

- A) Cambodia
- B) Java
- C) Sri Lanka
- D) Burma

13. A Vihara is a

- A) Temple
- B) Monastery
- C) Scriptoria
- D) University

14. The rock-cut shrine among the following is the

- A) Kailasha temple, Ellora
- B) Dasavtara temple, Deogarh
- C) Mahabodhi temple, Bodh Gaya
- D) Brihadesvara temple, Tanjore

15. Fresco Secco is a technique of

- A) Mural painting
- B) Stained glass
- C) Printmaking
- D) Sculpting

16. The Renaissance began in the city-state of

- A) Siena

- B) Florence
- C) Rome
- D) Venice

17. The sculpture entitled 'The Ecstasy of St. Teresa' is by

- A) Michelangelo
- B) Verrocchio
- C) Donatello
- D) Bernini

18. The Pahari miniature painter among the following is

- A) Mansur
- B) Nihal Chand
- C) Manaku
- D) Bishandas

19. The term Manuscript means

- A) A hand written book
- B) An album of paintings
- C) A cloth scroll of paintings
- D) A painted sculpture

20. The author of the Ain-I Akbari is

- A) Miskin
- B) Abul Hasan
- C) Abu'l Fazl
- D) Aqa Riza

21. The Kalpasutra is a

- A) Hinayana text
- B) Jain text
- C) Mahayana text
- D) Shakta text

22. The heroine who is angry with her nayaka and remonstrates is the

- A) Vipralabhada nayika
- B) Svadhinapatika nayika
- C) Khandita nayika
- D) Abhisarika nayika

23. The author of the Rasikapriya is

- A) Mulla Daud
- B) Jayadeva
- C) Kalidasa
- D) Bhanudatta

24. The 'Chaurapanchasika' is a



- A) Recipe book
- B) Treatise on weapons
- C) Love poem
- D) Text on astronomy

25. Raja Sawant Singh was a patron of painting in

- A) Bundi
- B) Kota
- C) Malwa
- D) Kishangarh

26. The Shore temple is located in

- A) Mamallapuram
- B) Thanjavur
- C) Kanchipuram
- D) Chennai

27. The sculpture of the 'Standing Buddha from Takht-i- Bahi' is an example of art from

- A) Mathura
- B) Amaravati
- C) Sarnath
- D) Gandhara

28. Brahmi, Kutila and Devanagari are types of

- A) Scripts
- B) Fonts
- C) Pictographs
- D) Hieroglyphs

29. Constantinople was the ancient name of

- A) Istanbul
- B) Venice
- C) Daphne
- D) Moscow

30. The correct match among the following is

- A) Manet – Oath of the Horatii
- B) Monet – The Death of Sardanapalus
- C) Daumier – The Third Class Carriage
- D) Cezanne – Bedroom at Arles

31. The art movement that derives from Cubism is

- A) Neo-Impressionism
- B) Realism
- C) Expressionism
- D) Futurism

32. The Louvre is located in
- A) Paris
  - B) Versailles
  - C) Calais
  - D) Ormans
33. In the 19<sup>th</sup> century a Government School of Art was established first at
- A) Chennai
  - B) Mumbai
  - C) Kolkata
  - D) Lahore
34. The landscape painter among the following is
- A) Jacques Louis David
  - B) Joseph William Turner
  - C) Theodore Gericault
  - D) Francisco Goya
35. The stylus is an instrument used in
- A) Writing
  - B) Lithography
  - C) Embroidery
  - D) Weaving
36. The complimentary colours are
- A) Red and Green
  - B) Blue and Green
  - C) Red and Purple
  - D) Yellow and Orange
37. The Colosseum is located in
- A) Padua
  - B) Milan
  - C) Rome
  - D) Naples
38. Technical treatises on painting are called
- A) Natya shastras
  - B) Pratimalakshana shastras
  - C) Alamkara shastras
  - D) Shilpa shastras
39. The correct chronological order is
- A) Mannerism, Rococo, Baroque
  - B) Rococo, Baroque, Mannerism
  - C) Mannerism, Baroque, Rococo

D) Baroque, Mannerism, Rococo

40. Sfumato is a term employed in

- A) Painting
- B) Sculpture
- C) Printing
- D) Pottery

41. The Angkor Wat was originally dedicated to

- A) Shiva
- B) Vishnu
- C) Gautama Buddha
- D) Maitreya Buddha

42. Phad painting is from

- A) Maharashtra
- B) Bihar
- C) Punjab
- D) Rajasthan

43. Lalit Kala Akademi, New Delhi was established in the year

- A) 1947
- B) 1954
- C) 1960
- D) 1965

44. The print series entitled 'Wounds' is by

- A) Chittaprosad
- B) Anupam Sud
- C) Somnath Hore
- D) Krishna Reddy

45. Bharat Bhawan is located in

- A) Bhopal
- B) Varanasi
- C) Patna
- D) New Delhi

46. The documentary film 'Through the Eyes of a Painter' is by

- A) M. F. Husain
- B) Paritosh Sen
- C) Arpita Singh
- D) F. N. Souza

47. Visva-Bharati University is located in

- A) Murshidabad



- B) Lucknow
- C) Kolkata
- D) Santiniketan

48. The sculpture entitled 'Yaksha from Parkham' is in the collection of the archaeological museum in

- A) New Delhi
- B) Mathura
- C) Patna
- D) Chennai

49. The technique of Pointillism has been employed by

- A) Ingres
- B) Courbet
- C) Delacroix
- D) Seurat

50. The Progressive Group, Calcutta was formed in

- A) 1943
- B) 1948
- C) 1957
- D) 1961

Question Booklet Series : **A** Question Booklet Sr. No. 049051

## Ph.D./M. Phil. Entrance Test – 2014

Subject : Physical Education

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

Time: 60 minutes

Number of Questions: 50

Maximum Marks : 50

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
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3. Do not make any identification mark on the Answer Sheet or Question Booklet.
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1. Research that involves the manipulation of treatments to establish cause effect relationship is:  
A) Descriptive research                      C) Experimental research  
B) Qualitative research                      D) Analytical research.
2. The anticipated outcome of a study or experiment is called:  
A) Findings                                      C) Hypothesis  
B) Synthesis                                    D) Limitation.
3. The questionnaire, Interview, Normative Survey, Case Study, Developmental Studies and Correlation Studies is:  
A) Analytical research                      C) Experimental research.  
B) Descriptive research                    D) Qualitative research
4. Source of data in which previous research is evaluated and summarized is called:  
A) Secondary source                      C) Easy source  
B) Primary source.                          D) Literary source
5. A choice the researcher makes to effect a workable research problem is called:  
A) Delimitations                              C) Assumption  
B) Limitation.                                  D) Definition
6. An estimate of the variability of the scores of a group around the mean is:  
A) Standard deviation                      C) Standard score  
B) Standard error.                          D) Standard tool
7. A rejection of the null hypothesis when it is true is known:  
A) Type I error                                C) Type II error  
B) Alpha.                                        D) Beta
8. A statistical technique to assess differences between three groups is:  
A) Z-test                                        C) ANOVA  
B) t-test                                         D) ANCOVA.
9. Internal and external criticism technique is used in:  
A) Experimental Research                  C) Historical Research  
B) Survey type of Research                D) Philosophical Research.
10. What is the median of the following set of scores?  
18, 6, 12, 10, 14  
  
A) 10    C) 12  
B) 14    D) 18.



11. Receives the critical part of the experiment (the independent variable)
- A) Experimental group                      C) Experimenter bias  
B) Control group.                            D) Experiment
12. provides a baseline for comparison, does not receive critical treatment (independent variable)
- A) Generalize                                C) Control group  
B) Experimental group                      D) Correlation.
13. Design for research in which neither the experimenter nor the subjects know who is in the experimental or control group.
- A) Variables.                                C) Sampling error  
B) Correlation                                D) Double-blind design
14. A statistic ( $r$ ) that summarizes the strength and direction of a relationship between two variables.
- A) Correlation coefficient                  C) Correlational studies  
B) Correlation.                                D) Operational definition
15. Which of the following is NOT a method to assess body composition?
- A) hydrostatic weighing                    C) carbohydrate dilution  
B) bioelectrical impedance analysis    D) dual energy x-ray absorptiometry.
16. An observation technique in which one person is studied in depth in the hope of revealing universal principles.
- A) Correlation.                                C) culture  
B) theory                                        D) case study
17. Gathers data in numerical form .
- A) Quantitative research                    C) Participant covert  
B) Questionnaire survey.                    D) Qualitative research
18. Variable the experimenter measures.
- A) Independent variable (IV).              C) Independent measures design  
B) Co-variables                                D) Dependent variable (DV)
19. Asking respondents' to use a response scale to record their answer on a questionnaire
- A) Likert scale                                C) Time sampling  
B) Interview.                                 D) Pilot study
20. A directional hypothesis in which the direction of results is predicted .
- A) Alternative hypothesis.                  C) Null hypothesis  
B) Hypothesis                                 D) One-tailed hypothesis

- 21 Thinking that does not blindly accept arguments and conclusions. Rather, it examines assumptions, discerns hidden values, evaluates evidence, and assesses conclusions.
- A) replication C) critical thinking  
B) correlation D) clinical psychology.
- 22 Technique that provides a statistical test as to the significance of the discrepancy between observed and the expected results
- A) Thi-suare C) Eee-square  
B) Chai-square D) Yates-square
- 23 Responding, receiving, valuing, and organizing are all categories of the:
- A) Cognitive domain C) Affective domain  
B) Ethical domain D) Physical domain.
- 24 Assessment that occurs at the conclusion of the programme is called:
- A) Formative. C) Productive  
B) Objective D) Summative
- 25 The occurrence of chronic disease is NOT due to which of the following health risk factors:
- A) Smoking C) Obesity.  
B) High-protein diet D) Stress
- 26 Which factor does NOT contribute to cardiovascular disease?
- A) Lack of physical activity C) High-carbohydrate diet  
B) Poor nutrition D) Tobacco.
- 27 Body awareness, spatial awareness, qualities of movement, and relationships are all categories of:
- A) Motor development. C) Effective skills  
B) Fundamental movement skills D) Movement concepts
- 28 Some of the sociological factors that have an impact on an individual's movement are the following EXCEPT:
- A) Self-confidence C) Socioeconomic background  
B) Gender roles. D) Membership in a group
- 29 Bending, turning, and pushing are examples of:
- A) Locomotor skills. C) Body awareness.  
B) Nonlocomotor skills D) Manipulative skills
- 30 The question, "How did urbanization influence the development of sports in India?" would most likely be studied by a(n):
- A) Sport philosopher C) Sport Historian  
B) Sport Psychologist D) Sports physiologist.

- 31 Physical education and sports were held in high esteem during this country's "Golden Age":  
A) Rome. C) China  
B) Sweden D) Greece
- 32 This approach to education stressed the development of the total person; "a sound mind in a sound body."  
A) Essentialism. C) Pragmatism  
B) Idealism D) Humanism
- 33 Biomechanists usually work in the following areas EXCEPT:  
A) Specialize in a particular sport. C) Direct research to rehabilitation concerns  
B) Posture analysis D) Nutrition analysis
- 34 All of the following are terms related to kinetics EXCEPT:  
A) Stability C) Gravity  
B) Force. D) Friction
- 35 Coronary heart disease, hypertension, osteoporosis, chronic back pain, and obesity are examples of:  
A) Hypokinetic diseases C) Terminal diseases  
B) Acute diseases. D) Genetic diseases
- 36 Knox test is a skill test for  
A) Hockey C) Volleyball.  
B) Basketball D) Tennis
- 37 Which of the following is not one of the five components of health-related fitness?  
A) speed C) muscular endurance  
B) body composition. D) flexibility
- 38 Which of the following is not a symptom of anorexia nervosa:  
A) Dry skin C) reduced bone mass.  
B) dental problems D) brittle nails
- 39 Panny cup test is associated with  
A) Volleyball C) Basketball  
B) Football D) Hockey.
- 40 Balance is directly proportional to the  
A) Area of the base of support C) Area of the acceleration application  
B) Area of the force application. D) Area of the momentum



- 41 Which is the validity, when the degree to which a given test compares or correlates with another test that has an established validity:
- A) Concurrent. C) Curricular  
B) Criterion related D) Construct
- 42 Which is the Dynamic strength test:
- A) Leg lift test. C) Hand grip test  
B) Cable tensiometer test D) Leg press test
- 43 Which is not static strength endurance test:
- A) Straight arm hang C) Bench Press test  
B) Chest Raise and Hold D) Sit and Hold.
- 44 Which test measures power:
- A) Rogers test. C) Cooper's test  
B) Squat thrust test D) Margaria Kalamam
- 45 Which is not agility test:
- A) Standing long jump C) Side step  
B) ShuttleRun. D) Right Boomerang
- 46 Endomorphy is very much pronounced in:
- A) Sprinters C) Distance runner.  
B) Throwers D) Jumpers
- 47 TEE stands for:
- A) thermic energy effect. C) thermic effect of energy  
B) total energy effect D) total energy expenditure
- 48 Pushing on an immovable object is an example of which type of training?
- A) Isotonic exercise C) Isokinetic exercise.  
B) Isometric exercise D) Concentric exercise
- 49 What is the main storage site for storage fat:
- A) Around internal organs C) in the trunk.  
B) beneath the skin D) in the bone marrow
- 50 A gymnast and a high jumper are most likely examples of:
- A) a mesomorph and an endomorph C) a mesomorph and an ectomorph  
B) an ectomorph and an endomorph D) an ectomorph and an ectomorph.

Question Booklet Series : **A** Question Booklet Sr. No. **025336**

## Ph.D./M.Phil. Entrance Test – 2014

Subject : English

Paper-I

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Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

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**Number of Questions: 50**

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1. Michel Foucault is the author of
 

A) <i>Introduction to Poetics</i>	B) <i>Writing and Difference</i>
C) <i>Mythologies</i>	D) <i>The History of Sexuality</i>
2. Francis Fukuyama's *The End of History and the Last Man* argues that:
 

A) The media tends to serve and further the agendas of the dominant, elite groups in the society	B) Capitalist democracies are replete with poverty, class difference and racial tension
C) In the future, the primary axis of conflict will be along cultural and religious lines	D) Liberal Democracy is the ultimate form of government
3. Frantz Fanon belonged to:
 

A) France	B) Algeria
C) Martinique	D) Ghana
4. Who among the following is not a Postcolonial Critic?
 

A) Aijaz Ahmad	B) Robert J. C. Young
C) Helen Tiffin	D) John McLeod
5. Alain Badiou belongs to which nationality?
 

A) Slovenia	B) France
C) Tunisia	D) United States of America
6. What form of verse does Dante's *Inferno* utilize?
 

A) Sonnet	B) Alexandrine
C) Heroic couplet	D) Terza rima
7. Who, out of the following, is associated with the Tel Quel group?
 

A) Gayatri Spivak	B) Betty Friedan
C) Julia Kristeva	D) Elaine Showalter
8. Who wrote *The Name of the Rose*?
 

A) Umberto Eco	B) Jalal ad-Din Muhammad Rumi
C) Joanne Greenberg	D) Jane Yolen
9. The term 'psycholinguistics' was coined by?
 

A) Noam Chomsky	B) Norman Fairclough
C) Jacob Robert Kantor	D) Ferdinand de Saussure
10. Who among the following does not belong to the Progressive Writers Association?
 

A) Prem Chand	B) Faiz Ahmad Faiz
C) Sadat Hasan Manto	D) Namdeo Dhasal



11. How would you account for the academic contribution of Richard Hoggart?
- A) He laments the loss of close-knit communities and their replacement by the emergent manufactured mass culture.  
 B) He elaborates on the rights of women in 20th century Britain.  
 C) He has written extensively on the impact of imperialism on third world culture  
 D) He has invented the concept of cultural materialism
12. Coleridge's Romanticism was deeply influence by:
- A) Kant  
 B) Hegel  
 C) Plato  
 D) Marx
13. Which of the following became the most popular Romantic poetic form, following on Wordsworth's claim that poetic inspiration is contained within the inner feelings of the individual poet as 'the spontaneous overflow of powerful feelings'?
- A) The lyric poem written in the first person  
 B) The sonnet  
 C) The political tract  
 D) The ode
14. Who said famously: 'To define is to kill. To suggest is to create.'?
- A) Stephane Mallarme  
 B) Charles Baudelaire  
 C) Edgar Allan Poe  
 D) Paul Verlaine
15. *White Mythologies* is a book by
- A) Aijaz Ahmad  
 B) Frantz Fanon  
 C) Robert J. C. Young  
 D) Aime Cesaire
16. Whom did Eribon describe as a 'tortured adolescent', who, after 1960, became a 'radiant man relaxed and cheerful', rather like some kind of dandy:
- A) Jacques Derrida  
 B) Roland Barthes  
 C) Michel Foucault  
 D) Terry Eagleton
17. Nawal El Saadawi hails from
- A) Libya  
 B) Jordan  
 C) Lebanon  
 D) Egypt
18. 'A Lover from Palestine' is written by:
- A) Mahmoud Darwish  
 B) Edward Said  
 C) Khaled Hosseini  
 D) A theory which believes that man is the centre of the universe
19. 'Under Western Eyes' is an essay written by
- A) Chandra Talpade Mohanty  
 B) Helene Cixous  
 C) Luce Irigaray  
 D) Mary E. John

20. According to Aristotle, the worst plot is:  
 A) Episodic  
 B) Double  
 C) Complex  
 D) Organic
21. Who, among the following, has articulated the theory of the 'social imaginary':  
 A) Lentricchia  
 B) Lacan  
 C) Appadurai  
 D) Ambedkar
22. *The Postmodern Condition* is a book by  
 A) Roman Jakobson  
 B) Jean-Francois Lyotard  
 C) Jean Baudrillard  
 D) Frederic Jameson
23. Who directed that his gravestone should be 'any colour, so long as it's grey':  
 A) Samuel Beckett  
 B) Bertolt Brecht  
 C) Federico Garcia Lorca  
 D) John Osborne
24. The correct way of citing references in a research paper would be:  
 A) Berger, John. *Into Their Labours* (London: Granta, 1992).  
 B) John Berger. *Into Their Labours* (London: Granta, 1992).  
 C) John Berger's *Into Their Labours* (Granta: London, 1992).  
 D) *Into Their Labours*, by John Berger. London: Granta, 1992.
25. Hamish Hamilton is the name of a/an:  
 A) author  
 B) book  
 C) bookshop  
 D) publisher
26. Research students in India ordinarily use the following as a reference guide while writing a thesis:  
 A) MHRA style sheet  
 B) The Chicago Manual of Style  
 C) PMLA style sheet  
 D) APA style sheet
27. Three dots (. . .) in an academic paper are called:  
 A) Periods  
 B) Full stops  
 C) Full points  
 D) Ellipses
28. While comparing epic and tragedy, Aristotle believes:  
 A) Epic is superior to tragedy  
 B) Tragedy is superior to epic  
 C) Both tragedy and epic are equal  
 D) Epic and tragedy have nothing in common
29. Which German Jew killed himself consuming morphine because he was not allowed to escape to the United States during Nazi occupation of France?  
 A) Arthur Koestler  
 B) Theodor Adorno  
 C) Walter Benjamin  
 D) Max Horkheimer

30. 'A thought to Donne was an experience; it modified his sensibility.' Who said this?  
 A) William Empson  
 B) T. S. Eliot  
 C) Sigmund Freud  
 D) Helen Gardner
31. Who called Shakespeare the Mona Lisa of literature?  
 A) John Ruskin  
 B) Oscar Wilde  
 C) W. B. Yeats  
 D) T. S. Eliot
32. Who, among the following, have founded the school of Cultural Studies?  
 A) T. S. Eliot and F. R. Leavis  
 B) I. A. Richards and William Empson  
 C) Richard Hoggart and Raymond Williams  
 D) Jacques Derrida and Michel Foucault
33. Who is the author of *Empire*?  
 A) Chalmers Johnson  
 B) Joseph Stiglitz  
 C) Michael Hardt and Antonio Negri  
 D) Eric Hobsbawm
34. Who has written *Capitalism: A Ghost Story*?  
 A) Arundhati Roy  
 B) Medha Patkar  
 C) Sanjaya Baru  
 D) Samir Amin
35. Barthes' 'Death of the Author' was written in:  
 A) 1965  
 B) 1968  
 C) 1969  
 D) 1958
36. Who has critiqued Saussure's *Course in General Linguistics*?  
 A) Foucault  
 B) Barthes  
 C) Paul de Man  
 D) Derrida
37. Who, out of the following people, is not a member of the Bloomsbury Group:  
 A) John Maynard Keynes  
 B) Lytton Strachey  
 C) D. H. Lawrence  
 D) Mulk Raj Anand
38. *On the Sublime* is written by:  
 A) Milton  
 B) Longinus  
 C) Horace  
 D) Plato
39. Eugene O'Neill's first play was:  
 A) *The Hairy Ape*  
 B) *The Iceman Cometh*  
 C) *Long Day's Journey into Night*  
 D) *The Emperor Jones*
40. Who is the author of *Open Veins of Latin America*?  
 A) Eduardo Galeano  
 B) Hugo Chavez  
 C) Simon Bolivar  
 D) Fidel Castro



41. Which character in Faulkner's *The Sound and the Fury* is a born idiot?  
 A) Jason  
 B) Caddy  
 C) Quentin  
 D) Benjy
42. Sylvia Plath is known as a Confessional poet. Who else among the following belongs to the same category?  
 A) Robert Browning  
 B) John Berryman  
 C) Robert Lowell  
 D) Kamla Das
43. A. K. Ramanujan's 'Three Hundred *Ramayanas*' begins with the story of  
 A) Indra's seduction of Ahalya  
 B) Rama's ring falling off into the netherworld  
 C) Rama's conversation with Viswamitra  
 D) The disappearance of Lakshmana
44. How do we refer to Amitav Ghosh's trilogy of which *Sea of Poppies* is the first part?  
 A) The Deptford Trilogy  
 B) The Ibis Trilogy  
 C) The Nova Trilogy  
 D) The Century Trilogy
45. Who is the author of *Maddaddam*?  
 A) Carrie Synder  
 B) Alice Munro  
 C) Yann Martel  
 D) Margaret Atwood
46. Which of the following can find its way into an absurd novel?  
 A) Hope  
 B) Abstract ideas  
 C) Concrete detail  
 D) Philosophical doctrine
47. Which Muslim feminist wrote *The Trouble with Islam Today*?  
 A) Irshad Manji  
 B) Ayaan Hirsi Ali  
 C) Reza Aslan  
 D) Tariq Ramadan
48. Can you indicate which of the following books is the odd one out?  
 A) *Reading Lolita in Tehran*  
 B) *Lipstick Jihad*  
 C) *The Reluctant Fundamentalist*  
 D) *The Enchantress of Florence*
49. Which of the following books has not faced censorship in India?  
 A) *The Hindus: An Alternative History* by Wendy Doniger  
 B) *Three Hundred Ramayans* by A. K. Ramanujan  
 C) *Shalimar the Clown* by Salman Rushdie  
 D) *Such a Long Journey* by Rohinton Mistry
50. Which of the following is an ardent supporter of the globalization movement?  
 A) Naomi Klein  
 B) Thomas Friedman  
 C) Vandana Shiva  
 D) Arundhati Roy

Question Booklet Series : **A** Question Booklet Sr. No. **050096**

## Ph.D. Entrance Test – 2014

### Subject : Community Education and Development Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

#### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. **There shall be no negative marking for wrong answers.**
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9. For rough work only the blank sheet at the end of the Question Booklet be used.
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11. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**



## Objective Type Paper

1. WEF stands for:
  - A. World Economic Forum
  - B. World Education Forum
  - C. World Environment Forum
  - D. World Ecological Forum
2. The three quantifiable indicators of Human Development Index are:
  - A. Health Education & Employment
  - B. Health, Education & Communication
  - C. Health Wealth & Education
  - D. Health, Family & Education
3. For the employment in mass media to be inclusive, which of the following is not required:
  - A. Affirmative action
  - B. Progressive Environment
  - C. Empowerment
  - D. Stereotype
4. Transactional Analysis (TA) was developed by:
  - A. John Dewey
  - B. B.S. Bloom
  - C. Eric Berne
  - D. Abraham Maslow
5. What is the motto of UGC?
  - A. Gyan-Vigyan-Dimuktaye
  - B. Dimuktaye-Vigyan-Gyan
  - C. Vigyan-Gyan-Dimuktaye
  - D. All of the above
6. What were the objectives of imparting education during the British period?
  - A. Teaching the Vedas
  - B. Teaching Science and Literature
  - C. Teaching Moral Science
  - D. Teaching the 3R's
7. The concept of Emotional Intelligence is given by:
  - A. Peter Ducker
  - B. Daniel Coleman
  - C. Einstein
  - D. Rousseau



8. How is "We Feeling" defined, as a characteristic of a group?
  - A. Self-centeredness
  - B. Anonymity
  - C. Dependability
  - D. Alienation
9. Who was the Chairperson of the Kothari Commission?
  - A. A.S. Kothari
  - B. C.S. Kothari
  - C. B.S. Kothari
  - D. D.S. Kothari
10. The RTI Act extends to the whole of India except in the State of:
  - A. Assam
  - B. Jammu & Kashmir
  - C. Arunachal Pradesh
  - D. Uttaranchal
11. "Education doesn't bring about social change rather the social change results into an educational change", a Sociologist.
  - A. McDougal
  - B. Durkhiem
  - C. Aristotle
  - D. Dewey
12. By Community we mean a Group of people with:
  - A. Same caste, class, religion or profession
  - B. People with similar aim
  - C. Similar aim and atleast one factor as common among caste, class, religion, profession or belief
  - D. None of the above
13. Teaching how to respect elders and talk to them is an example of:
  - A. Social Cohesion
  - B. Social Change
  - C. Socialization
  - D. Social Adjustment
14. Which of the following is not a factor for social change in India?
  - A. Caste
  - B. Regionalism
  - C. Language
  - D. Census

15. Children of some minority communities are unable to fully participate in Indian educational institutions because:
- A. Minority communities have not been spending on education of their children
  - B. There is exclusion process in educational institutions
  - C. Minority communities lack faith in Indian Education System
  - D. Indian Educational institutions do not have required infrastructure
16. If a researcher conducts a research on finding out which administrative style contributes more to institutional effectiveness, this will be an example of:
- A. Basic Research
  - B. Action Research
  - C. Applied Research
  - D. Fundamental Research
17. De limitation of a problem means:
- A. What of research
  - B. Why of research
  - C. How of research
  - D. Drawing a boundary around it.
18. The Case Study is the study of a:
- A. Single group
  - B. Single individual
  - C. Single community or family
  - D. Single unit done intensively to bring out the processes and dynamics underlying its problems and functioning
19. Which is the technique of investigation involving face to face conversation?
- A. Questionnaire
  - B. Interview
  - C. Observation
  - D. Sociometry
20. What are the types of data according to nature?
- A. Qualitative
  - B. Quantitative
  - C. Both of the above
  - D. None of the above
21. Which of the following is desirable in a questionnaire?
- A. Emotionally toned questions
  - B. Too broad questions
  - C. Too many ideas in one question
  - D. Questions which will elicit valid and reliable answers.

22. Why is research in education important for teachers?
- A. It adds to their academic qualifications
  - B. It makes them wiser
  - C. It makes them better teachers
  - D. It enables them to make best possible judgements about what should be taught and how.
23. If a population on which a study is based is such that all its units can be reached, it is termed as:
- A. Target population
  - B. Accessible population
  - C. Homogeneous population
  - D. Heterogeneous population
24. The title of the Report of Education Commission (1964-66) is:
- A. Learning without Burden
  - B. An Enlightened And Humane Society
  - C. Education and the people of India
  - D. Education and National Development
25. Intelligence Quotient is computed by which formula:
- A.  $\frac{M.A.}{100} \times C.A.$
  - B.  $\frac{C.A.}{100} \times M.A.$
  - C.  $\frac{M.A.}{C.A.} \times 100$
  - D.  $\frac{C.A.}{M.A.} \times 100$
26. Beginning with the 'Family' which of the following constitutes correctly sequenced hierarchy of social groups:
- A. Nation-race-class-tribe-family
  - B. Family-class-race-tribe-nation
  - C. Family-tribe-race-class-nation
  - D. Family-race-class-tribe-nation
27. Reading readiness test does not measure the following function:
- A. Visual Discrimination
  - B. Verbal Comprehension
  - C. Number Computation
  - D. Letter Recognition



28. Which of the following activities strictly come under the management of teaching-learning activity?
- Recruitment of Teachers
  - Preparation of time-table
  - Equipping the classrooms
  - Appointing attending staff
29. A democratic teacher is one who:
- Understands the socio-economic background of his students
  - Is affectionate even to poorly performing students
  - Tolerates non-relevant questions from the students
  - Tolerates even mischievous and aggressive behavior in students.
30. Which of the following is not categorized as a probability sampling method:
- Simple random sampling
  - Quota Sampling
  - Stratified sampling
  - Systematic sampling
31. There are two types of definition of society. These are:
- Structural and Interactional
  - Functional and Structural
  - Evolutionary and Diffusive
  - Structural and Evolutionary
32. Trait is:
- Social trend at present
  - Social trend of the past
  - The smallest unit of culture
  - The smallest unit of personality
33. A cluster of related traits is called :
- Culture norms
  - Culture complex
  - Cultural collectivity
  - Cultural uniformity
34. Interaction between members or groups with different culture is known as:
- Touch of culture
  - Cultural diffusion
  - Culture contact
  - Acculturation
35. A form of social interaction where-in two or more persons work together to gain a common end is called:
- Association
  - Cooperation
  - Group formation
  - Competition

36. A stable society is a pre-requisite for:
- A. Bureaucracy
  - B. Culture
  - C. An integrated personality
  - D. Family
37. Lack of relationship with other culture is called:
- A. Isolation
  - B. Insularity
  - C. Separation
  - D. Polarity
- 38 "Man is a social animal". Who said this?
- A. Aristotle
  - B. Freud
  - C. MacIver
  - D. Rousseau
39. In matrilineal families the bridegroom resides with the family of the wife. This system is not prevalent in which of the following tribes:
- A. Khasi
  - B. Khasa
  - C. Jaintia
  - D. Garo
40. The Naga tribes of Assam are divided into:
- A. Khels
  - B. Intiperu
  - C. Kul
  - D. Gotra
41. Which of the following ego states is characterized by rationality, logic and un-emotional thinking?
- A. Child Ego
  - B. Parent Ego
  - C. Adult Ego
  - D. Male Ego
42. Children coming from disturbed homes suffer from:
- A. Toxic stress
  - B. Benign stress
  - C. Malignant stress
  - D. Emotional stress
43. Name the tool used by library through which any researcher can make request for research material?
- A. Scopus
  - B. Inlibnet
  - C. J-gate
  - D. Pro-Quest

44. The main objective of assessment is:
- A. Evaluation
  - B. Identification of learning gaps
  - C. Appraisal on qualitative aspects only
  - D. Appraisal on quantitative aspects only
45. One of the major objectives of school guidance counseling should be:
- A. Encourage behaviour change among students
  - B. Teaching guidance and counselling programs in schools
  - C. Utilizing cultural diversities for the benefit of all in the school
  - D. Encourage embracing diversities in students
46. One of the programs of United Nations is:
- A. Economic Social Development
  - B. Education for Sustainable Development
  - C. Economic and Sustainable development
  - D. Education for Social Development
47. Which one is the most important factor of human instincts?
- A. Hard Work
  - B. Destiny
  - C. Attitude
  - D. All of the above
48. Inclusive Education aims at promoting:
- A. Segregation
  - B. Isolation
  - C. Behaviour Modification
  - D. Education for All
49. Sociometry of classroom management includes:
- A. Teacher-Learner relations
  - B. Learner-Learner Relations
  - C. Teacher-Teacher Relations
  - D. All of the above
50. At the national level, the role of reviewing educational development, determining the changes required to improve the system, and monitoring implementation of the school complex is of the:
- A. N.C.E.R.T.
  - B. C.B.S.E.
  - C. C.A.B.E.
  - D. I.G.N.O.U



Question Booklet Series : **A** Question Booklet Sr. No. **027046**

## M.Phil. Entrance Test – 2014

Subject : **Sanskrit**

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate \_\_\_\_\_

**Time: 60 minutes**

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1. वेदत्रय्यां परिगण्यन्ते-
 

A) ऋग्वेदयजुर्वेदाथर्ववेदाः	B) ऋग्वेदायुर्वेदसामवेदाः
C) ऋग्वेदयजुर्वेदसामवेदाः	D) ऋग्वेदयजुर्वेदायुर्वेदाः
2. शांखायनशाखासम्बद्धो वेदो वर्तते-
 

A) सामवेदः	B) ऋग्वेदः
C) शुक्लयजुर्वेदः	D) धनुर्वेदः
3. शुक्लयजुर्वेदीयब्राह्मणमस्ति-
 

A) वंशब्राह्मणम्	B) गोपथब्राह्मणम्
C) षड्विंशब्राह्मणम्	D) शतपथब्राह्मणम्
4. गन्धर्ववेदः सम्बद्धः-
 

A) ऋग्वेदेन	B) अथर्ववेदेन
C) सामवेदेन	D) यजुर्वेदेन
5. वैदिकसंवादो वर्तते-
 

A) यम-नचिकेतासंवादः	B) सोम-सरमासंवादः
C) राम-रावणसंवादः	D) यम-यमीसंवादः
6. उरुक्रमो देवः कः ?
 

A) इन्द्रः	B) विष्णुः
C) रुद्रः	D) अग्निः
7. 'ऋतावरी' कस्याः विशेषणम् ?
 

A) पृथिवी	B) अदितिः
C) उषस्	D) दितिः
8. 'सरमा' खलु का ?
 

A) देवशुनी	B) अप्सरा
C) देवी	D) नदी
9. त्रिष्टुप् छन्दसि अक्षराणि भवन्ति-
 

A) 40	B) 44
C) 32	D) 36

10. यास्काचार्येण देवताः स्वीकृताः-  
 A) द्वे  
 B) चतस्रः  
 C) त्रयस्त्रिंशत्  
 D) तिस्रः
11. सांख्यानुसारमविकृतिः का ?  
 A) अहंकारः  
 B) महत्  
 C) संस्कृतिः  
 D) मूलप्रकृतिः
12. सांख्यदर्शने भ्रमस्वरूपम् अस्ति-  
 A) सत्ख्यातिः  
 B) असत् ख्यातिः  
 C) सदसत्ख्यातिः  
 D) अन्यथाख्यातिः
13. अहंकारस्य प्रकृतिरस्ति-  
 A) पुरुषः  
 B) पंचमहाभूतानि  
 C) महत्  
 D) तन्मात्राणि
14. अज्ञानस्यान्तर्भावः कस्मिन् भवति ?  
 A) विपर्यये  
 B) सिद्धौ  
 C) अशक्तौ  
 D) तुष्टौ
15. सच्चिदानन्दानन्ताद्वयं ब्रह्म एव-  
 A) अवस्तु  
 B) वस्तु  
 C) अध्यारोपः  
 D) अपवादः
16. अभावः कतिविधः ?  
 A) 2  
 B) 4  
 C) 6  
 D) 8
17. संस्कारमात्रजन्यज्ञानम्-  
 A) स्मृतिः  
 B) अनुभवः  
 C) उपमानम्  
 D) अनुमानम्
18. प्रत्यक्षज्ञानहेतुः इन्द्रियार्थसंनिकर्षः कतिविधः ?  
 A) द्विविधः  
 B) त्रिविधः  
 C) सप्तविधः  
 D) षड्विधः



19. तुष्टिः कतिविधा ?  
 A) सप्तविधा  
 B) अष्टविधा  
 C) नवविधा  
 D) दशविधा
20. सादृश्यज्ञानं करणम् अस्ति-  
 A) अनुमितेः  
 B) उपमितेः  
 C) चाक्षुषप्रत्यक्षस्य  
 D) शाब्दबोधस्य
21. 'भूपतिः' शब्दस्य 'धि' संज्ञा केन सूत्रेण भवति ?  
 A) शेषो घ्यसखि  
 B) घेर्ङिति  
 C) पतिः समास एव  
 D) द्वन्द्वे धि
22. सुबन्ततिङन्तयोः का संज्ञा ?  
 A) सर्वनाम संज्ञा  
 B) पदसंज्ञा  
 C) सवर्णसंज्ञा  
 D) प्रातिपदिकसंज्ञा
23. 'अभितः' इति पदस्य योगे का विभक्तिः ?  
 A) तृतीया  
 B) चतुर्थी  
 C) प्रथमा  
 D) द्वितीया
24. 'असत्यम्' इत्यत्र कः समासः ?  
 A) बहुव्रीहिः  
 B) नत्र् तत्पुरुषः  
 C) द्वन्द्वः  
 D) अख्ययीभावः
25. कण्ठोष्ठ्यवर्णः कः ?  
 A) ऐ  
 B) ख  
 C) ब  
 D) औ
26. उकारपवर्गयोः उच्चारणस्थानं किम् ?  
 A) ओष्ठौ  
 B) कण्ठतालुः  
 C) दन्तौष्ठम्  
 D) कण्ठोष्ठम्
27. दन्त्यवर्णः अस्ति-  
 A) ब  
 B) ग  
 C) ध  
 D) च

28. 'चित्रगुः' इत्यत्र समासो वर्तते-  
 A) तत्पुरुषः  
 B) द्विगुः  
 C) बहुव्रीहिः  
 D) अव्ययीभावः
29. ग्रासमैन-यते 'बभार' इत्यस्य मूलरूपं किम् आसीत् ?  
 A) बबार  
 B) भभार  
 C) बोभार  
 D) भबार
30. योगात्मकभाषा अस्ति-  
 A) सूडानी  
 B) चीनी  
 C) स्यामी  
 D) तुर्की
31. मेघदूते कैलासपर्यन्तं मेघस्य सहयात्रिणः सन्ति-  
 A) दिङ्नागाः  
 B) बलाकाः  
 C) चातकाः  
 D) राजहंसाः
32. रघुवंशस्य मंगलाचरणे वन्दना वर्तते-  
 A) विष्णोः  
 B) ब्रह्मणः  
 C) जगतः  
 D) शिवस्य
33. किरातार्जुनीयस्य 'किरातः' कः ?  
 A) शिवः  
 B) ब्रह्मा  
 C) विष्णुः  
 D) इन्द्रः
34. दमयन्तीमभिलक्ष्य नलगुणगानं करोति-  
 A) मयूरः  
 B) शुकः  
 C) हंसः  
 D) पिकः
35. दशकुमारचरिते राजवाहनस्य जनकः कः ?  
 A) चित्रहंसः  
 B) राजहंसः  
 C) हंसराजः  
 D) चित्ररथः
36. शूद्रकः पूर्वजन्मनि कः आसीत् ?  
 A) चन्द्रापीडः  
 B) कपिञ्जलः  
 C) वैशम्पायनः  
 D) पुण्डरीकः

37. पुण्डरीकस्य जननी आसीत्-  
 A) महाश्वेता B) पत्रलेखा  
 C) विलासवती D) लक्ष्मी
38. पुण्डरीकस्य अनन्यमित्रमस्ति-  
 A) शूद्रकः B) चित्ररथः  
 C) वैशम्पायनः D) कपिञ्जलः
39. शकुन्तला-दुष्यन्तयोः विवाहः कथ्यते-  
 A) आर्षविवाहः B) दैवविवाहः  
 C) गान्धर्वविवाहः D) ब्राह्मविवाहः
40. मुद्राराक्षसे यमपटचरः निपुणकः कः ?  
 A) राक्षसचरः B) चाणक्यचरः  
 C) मलयकेतुचरः D) चन्द्रगुप्तकञ्चुकी
41. भामहस्य काव्यशास्त्रीयग्रन्थो वर्तते-  
 A) काव्यकौतुकम् B) काव्यादर्शः  
 C) काव्यमीमांसा D) काव्यालंकारः
42. रससम्प्रदायप्रवर्तकः आचार्यः कः ?  
 A) विश्वनाथः B) मम्मटः  
 C) वामनः D) भरतमुनिः
43. विश्वनाथमते लक्षणाद्याः भेदाः सन्ति-  
 A) विंशतिः B) अशीतिः  
 C) चत्वारिंशत् D) दश
44. उपादानलक्षणा का ?  
 A) जहत्स्वार्था B) अजहत्स्वार्था  
 C) रूढिमूला D) प्रयोजनमूलातात्पर्या
45. रसः नैवास्ति-  
 A) भयानकः B) करुणः  
 C) बीभत्सः D) उत्साहः



46. जुगुप्सा कस्य स्थायिभावः ?  
 A) वीरस्य  
 B) बीभत्सस्य  
 C) अद्भुतस्य  
 D) रौद्रस्य
47. रूपकं कतिविधम् ?  
 A) षड्विधम्  
 B) अष्टविधम्  
 C) द्वादशविधम्  
 D) दशविधम्
48. रूपकम् अस्ति-  
 A) प्रस्थानम्  
 B) सट्टकम्  
 C) हल्लीशः  
 D) ईहामृगः
49. 'प्राप्त्याशा' नाम वर्तते-  
 A) अवस्थाविशेषस्य  
 B) सन्धिविशेषस्य  
 C) रूपकविशेषस्य  
 D) अनुभवविशेषस्य
50. शृङ्गाररसः -  
 A) चतुर्विधः  
 B) पञ्चविधः  
 C) द्विविधः  
 D) त्रिविधः
-

Question Booklet Series : **A** Question Booklet Sr. No.

**Ph.D. Entrance Test – 2014**  
**Subject : Tibetan/Buddhist Studies**  
**Paper-I**

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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*Signature of the Candidate*

**Time: 60 minutes**      **Number of Questions: 50**      **Maximum Marks : 50**

**INSTRUCTIONS**

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
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12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. How Sarnath is related with the Shakyamuni the Buddha?
 

A) As his birth place	B) As his place of awakening
C) His place of meditation	D) Place where he delivered first sermon
2. What the word 'Bodhi' means;
 

A) Awakening	B) Capability
C) Powerful	D) Scholarship
3. What is the thematic content of the Buddhist Avadan literature related with?
 

A) Travelogue of the Shakyamuni.	B) Birth stories of Shakyamuni's earlier lives.
C) Teachings on moral values.	D) Discourses on religious matters.
4. The Buddha Shakyamuni was born in;
 

A) Kashi.	B) Bodhgaya.
C) Kapilvastu.	D) Sarnath.
5. In the first Sangiti who had compiled Suttapitaka through recitation;
 

A) Ananda	B) Kashyapa
C) Upali	D) Sariputra
6. How the best the Four Noble Truth can be explained?
 

A) It is the Four Sights that motivated Siddharth to renounce palace.
B) It is also called Caturmaharajas in Buddhism.
C) It is about the suffering, its cause, its cessation and path leading to cessation.
D) All the above.
7. Where did the Shakyamuni attained Mahaparinirvana?
 

A) Bodhgaya	B) Sarnath
C) Kushinagar	D) Lumbini
8. The Buddha is also known as;
 

A) The Tathagata.	B) The Sugata.
C) The Bhaishjayaguru.	D) All the above.
9. The Literary holding of the Theravada Buddhist tradition is known as;
 

A) Agam Sutra	B) Pali Tipitak
C) Prajnapamitasutras.	D) None above.
10. The king Ashoka ruled his kingdom from his capital city named.
 

A) Vaishali.	B) Rajgriha.
C) Patliputra.	D) Saket.



(2)

11. What is the Law of Dependent Origination in the Buddhist teachings;  
A) The law of Causality  
B) The theory of Nothingness  
C) The Middle way  
D) All the above.
12. Who amongst the following is Not a Mahayanist Buddhist master?  
A) AcharyaNagarjuna  
B) AcharyaAsanga  
C) AcharyaBasubandhu  
D) AcharyaBuddhaghosh
13. In which mahayana Buddhist text Nagarjuna elaborated the concept of Shunyata ?  
A) Mulamadhyamakakarika  
B) Lankavatarasura  
C) Vimshatikakarika  
D) Sandhinimochanasutra.
14. How do you understand "personality" in Buddhist tradition?  
A) As Happiness and Sorrow  
B) As Merit and Demerit  
C) As Matter and Mind  
D) As Wholesome and unwholesome action
15. The Buddhist look at the phenomenal objects of the samsara ?  
A) As impermanent  
B) Non-substantial  
C) As suffering  
D) All the above.
16. Who is Not one of the Chinese travellerswho came to visited Buddhist India?  
A) Itsing  
B) Fashiang  
C) Xuantsang  
D) Li Peng
17. The fundamental principle of Madhyamika tradition can be explained in terms of;  
A) Shunyata  
B) Cittamatra  
C) Tathagatagarbh  
D) Dharamkaya.
18. To lead a moderate life the Shakyamuni Buddha has preached ;  
A) Long and tedious path  
B) Eightfold path  
C) Middle path  
D) Both b) and c)
19. The contemplative form Buddhism which is popularin China is the;  
A) Ch'an Buddhism  
B) Zen Buddhism  
C) Tantrik Buddhism  
D) Non above
20. Who amongst the following is Not a great Buddhist master of Vijnanavada Buddhism?  
A) Basubandhu  
B) Dignag  
C) Nagarjuna  
D) All the above
21. Who was the religious king responsible for introduction of Buddhism in Tibet?  
A) ThiRalpacan  
B) Thothori  
C) ThiSrongdetsan  
D) SrongtsanGampo.

(3)

22. The pre-Buddhist religion which was prevalent in Tibet was known as:  
A) Bonchos  
B) Lhaehos  
C) Mutegs pa  
D) Nangpa'ichos
23. The meaning of the word "Lhasa" the capital city of the Tibet is known as?  
A) Land of Lamas  
B) Land of devils  
C) Land of gods  
D) Land of deads.
24. Who wrote "My Land and My People"?  
A) Tenzin Gyatsho  
B) Jinnet Gyatsho  
C) Urgyan Thinley  
D) Chogyum Lungpa
25. The holy lake Mansarovar and Mount Kailash is located in ;  
A) Nepal  
B) Sikkim  
C) Ladakh  
D) Tibet.
26. Tibetan Buddhist Literature is known as:  
A) Sutra and Tantra  
B) Vinaya and Abhidharma  
C) Tripitaka  
D) Kanjur and Tenjur.
27. The first monastic institution established in Tibet was:  
A) Samye  
B) Norboolinka.  
C) Jokhang  
D) Depung
28. Who is the author of the book " Buddha and his Dhamma" ?  
A) Babasaheb Ambedkar  
B) The Dalai Lama  
C) Padmasambhava  
D) Rahul Sankritayayana
29. Who wrote the text called the BhawanaKrama (sgom rim) ?  
A) Kamalshila  
B) Asanga  
C) Vasubandhu  
D) Vimalakirti
30. What is the literary meaning of the term "mandala".  
A) Get into the middle  
B) Schematic pattern of ideas  
C) Symbolic palace  
D) None above
31. Who was acarya Shantarakshita?  
A) Indian Buddhist master who went Tibet.  
B) The author of Tattavasamgrha.  
C) An acarya from Nalanda  
D) All the above.

32. Tawang Buddhist religious complex is situated in the state of ;  
 A) Arunachal Pradesh B) Himachal Pradesh  
 C) Andhra Pradesh D) Uttara Pradesh
33. The religious tradition that prevails in the Tibet is also known as ?  
 A) Guhyamantrayana B) Vajrayana  
 C) Tantrayana D) All above
34. Which is Not one of the four major Buddhist traditions of Tibet?  
 A) Sakya B) Kagyud C) Gelug D) Milug
35. JetsunMilarepa is also known as the ;  
 A) A great Tibetan yogi B) National poet of Tibet  
 C) Disciple of Marpalotsaba D) All the above
36. In which year the Dalai Lama first came to India?  
 A) 1962 B) 1956 C) 1990 D) 1991
37. Who was the person responsible for creating Tibetan writing system?  
 A) Tsonkhapa B) ThonmiSambhota  
 C) Devavidya D) Tai Situ
38. Who was the last ruler of the Tibetan Kingdom:  
 A) SrongtsanGampo B) Raipacan  
 C) Langdarma D) Sadnaleg
39. How many Buddhist shrinesRinchenZangpo constructed in the West Tibet.?  
 A) 108 B) 109 C) 208 D) 209
40. The Tibetan Buddhist canonical texts are largely translated from the language:  
 A) Bhoti B) Sanskrit C) Pali D) Prakrit
41. What was the name of the Chinese princess who marriedSrongtsanGampo?  
 A) Wenchen B) Bhrikuti C) Xixia D) Suwin
42. What do you understand by the term 'Trisharana' ?  
 A) Anitya, anatama and dukh. B) Past, present and future.  
 C) Buddha, Dharam and Sangha D) None above.
43. Which form of Tibetan writing script is used in Tibetan Kanjur and Tenjur  
 A) U-med B) Lantsa C) Vartu D) U-can



44. The guardian deity of the Samye monastery is known as:
- |                 |          |
|-----------------|----------|
| A) YarlhaShampo | B) Pebar |
| C) Tsan         | D) Gegpo |
45. Who had translated Dhammapada in Tibetan language?
- |                    |               |
|--------------------|---------------|
| A) GedunChapel     | B) G. Roerich |
| C) AtishaDipankara | D) Dalai Lama |
46. Name the monk who killed the last king Langdarma.
- |                      |                 |
|----------------------|-----------------|
| A) GebaRabsal        | B) Tsondui      |
| C) LhalungPalgiDorje | D) LegpaiSherab |
47. The first ruler of Tibet was:
- |                   |                   |
|-------------------|-------------------|
| A) ThonmiSambhota | B) Thisrongdetsan |
| C) SrongtsanGampo | D) NyathiTsanpo   |
48. The Buddhist text the Atisha wrote at the request royal monk for Tibetans is:
- |                     |                      |
|---------------------|----------------------|
| A) Bhavanakarama    | B) Bodhipathapradipa |
| C) Tattavasamgaraha | D) Vimalalekha       |
49. The Dalai Lama is the personification of the presiding deity of Tibet called:
- |              |                    |
|--------------|--------------------|
| A) Manjushri | B) Manjughosa      |
| C) Vajrapani | D) Avalokiteshwara |
50. The Tibetan government in exile is located at:
- |               |           |               |           |
|---------------|-----------|---------------|-----------|
| A) Dharamsala | B) Shimla | C) Siddhabadi | D) Solan. |
|---------------|-----------|---------------|-----------|

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Question Booklet Series : **A** Question Booklet Sr. No.**Ph.D./M.Phil. Entrance Test – 2014****Subject : Punjabi****Paper-I****Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure**In Words*

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O.M.R. Answer Sheet Serial No.

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1. ਭਾਸ਼ਾ ਦੀ ਛੋਟੀ ਤੋਂ ਛੋਟੀ ਅਰਥ ਦਿਕਾਈ ਹੈ :
  - A) ਧੁਨੀਗ੍ਰਾਮ
  - B) ਸ਼ਬਦ
  - C) ਅੱਖਰ
  - D) ਰੂਪਗ੍ਰਾਮ
2. ਵੈਦਿਕ ਭਾਸ਼ਾ ਦੀਆਂ ਧੁਨੀਆਂ ਹਨ :
  - A) 50
  - B) 52
  - C) 55
  - D) 60
3. "ਸਫੋਟ ਸਿਧਾਂਤ" ਕਿਸ ਨਾਲ ਸੰਬੰਧਤ ਹੈ :
  - A) ਭਰਤਮੁਨੀ
  - B) ਪਾਣਿਨੀ
  - C) ਭਰਤਰੀਹਰੀ
  - D) ਪੰਤਜਲੀ
4. ਮਹਾਂਪ੍ਰਾਣ ਧੁਨੀ ਹੈ :
  - A) /ਖ/
  - B) /ਚ/
  - C) /ਦ/
  - D) /ਬ/
5. ਭਾਸ਼ਾ ਦੇ ਚਾਰ ਪੱਧਰ ਹਨ :
  - A) ਧੁਨੀ+ਰੂਪ+ਵਿਆਕਰਣ+ਸ਼ਬਦਜੋੜ
  - B) ਧੁਨੀ+ਰੂਪ+ਵਾਕ+ਅਰਥ
  - C) ਧੁਨੀ+ਅਰਥ+ਸੰਚਾਰ+ਵਿਆਕਰਣ
  - D) ਧੁਨੀ+ਸ਼ਬਦ+ਵਿਆਕਰਣ+ਅਰਥ
6. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਚ ਵਿਅੰਜਨ ਚਿੰਨ੍ਹ ਹਨ ?
  - A) 30
  - B) 29
  - C) 27
  - D) 35



7. ਆਰਥੋਗਰਾਫੀ ਤੋਂ ਭਾਵ ਹੈ :
- A) ਧੁਨੀਆਤਮਕ ਅਧਿਐਨ
  - B) ਅੱਖਰ ਲਿਖਣ ਪ੍ਰਣਾਲੀ
  - C) ਵਾਕ ਲਿਖਣ ਪ੍ਰਣਾਲੀ
  - D) ਸ਼ਬਦ ਲਿਖਣ ਪ੍ਰਣਾਲੀ
8. ਪੰਜਾਬੀ ਵਿਚ ਸਭ ਤੋਂ ਛੋਟਾ ਗਾਇਆ ਜਾਣ ਵਾਲਾ ਕਾਵਿ-ਰੂਪ ਹੈ:
- A) ਟੱਪਾ
  - B) ਮਾਹੀਆ
  - C) ਹੋਅਰਾ
  - D) ਕੀਰਨਾ
9. "ਸੰਸਕ੍ਰਿਤੀ : ਸਿਧਾਂਤ ਤੇ ਵਿਹਾਰ" ਪੁਸਤਕ ਦਾ ਕਰਤਾ ਹੈ :
- A) ਨਾਹਰ ਸਿੰਘ
  - B) ਜਸਵਿੰਦਰ ਸਿੰਘ
  - C) ਗੁਰਬਖਸ਼ ਸਿੰਘ ਫਰੈਂਕ
  - D) ਟੀ. ਆਰ. ਵਿਨੋਦ
10. "ਦੇਤ ਕਥਾ" ਦਾ ਅਧਾਰ ਹੈ
- A) ਇਤਿਹਾਸ
  - B) ਅਰਧ ਇਤਿਹਾਸ
  - C) ਮਿਥਿਹਾਸ
  - D) ਧਰਮ
11. "ਛਟੀ" ਦੀ ਰਸਮ ਦਾ ਸੰਬੰਧ ਹੈ ।
- A) ਬੱਚੇ ਦੇ ਜਨਮ ਨਾਲ
  - B) ਔਰਤ ਨਾਲ
  - C) ਗਰਭਵਤੀ ਔਰਤਾਂ ਨਾਲ
  - D) ਮਾਂ ਨਾਲ
12. "ਮਾਂ ਜੀਮੀ ਨਾ ਪੁੱਤ ਬਨੇਰੇ ਤੇ" ਕੀ ਹੈ ?
- A) ਬੁਝਾਰਤ
  - B) ਅਖਾਣ
  - C) ਲੋਕੋਕਤੀ
  - D) ਮੁਹਾਵਰਾ
13. ਸਭਿਆਚਾਰ ਅਤੇ ਸੰਸਕ੍ਰਿਤੀ ਸੰਕਲਪ ਹਨ :
- A) ਸਮਾਨਆਰਥਕ
  - B) ਵਿਰੋਧਮੂਲਕ
  - C) ਭਿੰਨਤਾਮੂਲਕ
  - D) ਸੰਬਾਦਕ

14. ਸਭਿਆਚਾਰ ਵਿਚ ਪਰਿਵਰਤਨ ਆਉਂਦਾ ਹੈ:  
A) ਤੇਜ਼ੀ ਨਾਲ  
B) ਸੰਭਵ ਨਹੀਂ  
C) ਹੌਲੀ-ਹੌਲੀ  
D) ਕੋਈ ਵੀ ਨਹੀਂ
15. ਭਾਈ ਗੁਰਦਾਸ ਦੀ ਕਿਹੜੀ ਵਾਰ ਨੂੰ "ਭਗਤਾਂ ਦੀ ਵਾਰ" ਕਿਹਾ ਜਾਂਦਾ ਹੈ।  
A) ਪਹਿਲੀ  
B) ਸੱਤਵੀਂ  
C) ਗਿਆਰਵੀਂ  
D) ਪੰਦਰਵੀਂ
16. ਗੁਰੂ ਗਰੰਥ ਸਾਹਿਬ ਵਿਚ ਕਿੰਨੇ ਰਾਗ ਰਾਗਨੀਆਂ ਦਾ ਪ੍ਰਯੋਗ ਹੋਇਆ ਹੈ।  
A) 33  
B) 29  
C) 32  
D) 31
17. ਚੰਡੀ ਦੀ ਵਾਰ ਦੀਆਂ ਪੌੜੀਆਂ ਹਨ।  
A) 54  
B) 52  
C) 56  
D) 58
18. "ਜਪੁ-ਪਰਮਾਰਥ" ਦਾ ਰਚਨਾਕਾਰ ਹੈ:  
A) ਭਾਈ ਅੰਡਣਸਾਹ  
B) ਭਾਈ ਮਨੀ ਸਿੰਘ  
C) ਸੋਢੀ ਮਿਹਰਬਾਨ  
D) ਭਾਈ ਸੰਤੋਖ ਸਿੰਘ
19. ਗੁਰੂ ਨਾਨਕ ਕਾਲ ਦੇ ਸੂਫੀ ਕਵੀਆਂ ਦਾ ਜੁੱਟ ਹੈ !  
A) ਸ਼ਾਹ ਹੁਸੈਨ, ਫਰਦ ਫਕੀਰ, ਸੁਲਤਾਨ ਬਾਹੂ  
B) ਸੁਲਤਾਨ ਬਾਹੂ, ਸ਼ਾਹ ਸ਼ਰਫ, ਬੁੱਲੇ ਸ਼ਾਹ  
C) ਸ਼ਾਹ ਹੁਸੈਨ, ਸੁਲਤਾਨ ਬਾਹੂ, ਸ਼ਾਹ ਸ਼ਰਫ  
D) ਸ਼ਾਹ ਹੁਸੈਨ, ਸ਼ਾਹ ਸ਼ਰਫ, ਅਲੀ ਹੈਦਰ
20. ਬੁੱਲੇ ਸ਼ਾਹ ਸੂਫੀਆਂ ਦੇ ਸਿਲਸਿਲੇ ਨਾਲ ਸਬੰਧਤ ਹੈ :  
A) ਸੁਹਰਾਵਾਦੀ  
B) ਕਾਦਰੀ  
C) ਚਿਸ਼ਤੀ  
D) ਮੌਲਵੀਆ

21. ਹੇਠ ਲਿਖਿਆ ਵਿਚੋਂ ਗੁਰੂ ਨਾਨਕ ਕਾਲ ਦਾ ਕਿੱਸਾ ਚੁੱਟ ਹੈ :
- A) ਦਮੋਦਰ, ਪੀਲੂ, ਹਾਸਮ, ਹਾਡਿਜਬਰਖੁਦਾਰ
  - B) ਦਮੋਦਰ, ਪੀਲੂ, ਹਾਡਿਜਬਰਖੁਦਾਰ, ਅਹਿਮਦ
  - C) ਦਮੋਦਰ, ਅਹਿਮਦਯਾਰ, ਅਮਾਮਬਸਸ, ਹਾਸਮ
  - D) ਦਮੋਦਰ, ਵਾਰਿਸਸ਼ਾਹ, ਅਹਿਮਦਯਾਰ, ਪੀਲੂ
22. ਸੰਰਚਨਾਤਮਕ ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਦਾ ਆਧਾਰ ਹੈ :
- A) ਲਾਂਗ ਤੇ ਪੈਰੋਲ
  - B) ਭਾਸ਼ਾਈ ਵਿਆਕਰਣ
  - C) ਇਕਾਲਕਤਾ ਤੇ ਦੁਕਾਲਕਤਾ
  - D) ਭਾਸ਼ਾਈ ਸੰਰਚਨਾ
23. ਰਸ ਨਿਸ਼ਪਤੀ ਦਾ ਆਧਾਰ ਹੈ :
- A) ਵਕ੍ਰਕਤੀ, ਰੀਤੀ, ਅੰਚਿਤਯ ਦਾ ਸੰਜੋਗ
  - B) ਵਿਭਾਵ, ਅਨੁਭਾਵ ਤੇ ਉਦੀਪਨ ਦਾ ਸੰਜੋਗ
  - C) ਵਿਭਾਵ, ਅਨੁਭਾਵ ਤੇ ਵਿਲੰਬਣ ਦਾ ਸੰਜੋਗ
  - D) ਵਿਭਾਵ, ਅਨੁਭਾਵ ਤੇ ਵਿਭਚਾਰੀ ਭਾਵ ਦਾ ਸੰਜੋਗ
24. ਪੰਜਾਬੀ ਮਾਰਕਸਵਾਦੀ ਆਲੋਚਨਾ ਪ੍ਰਣਾਲੀ ਦੇ ਵਿਦਵਾਨਾਂ ਦਾ ਸਹੀ ਚੁੱਟ ਹੈ:
- A) ਅਤਰ ਸਿੰਘ, ਤੇਜਵੰਤ ਸਿੰਘ ਗਿੱਲ, ਤਰਲੋਕ ਸਿੰਘ ਕੰਵਰ
  - B) ਟੀ ਆਰ. ਵਿਨੋਦ, ਕੇਸਰ ਸਿੰਘ ਕੇਸਰ, ਸੁਤਿੰਦਰ ਸਿੰਘ ਨੂਰ
  - C) ਜਸਵੀਰ ਸਿੰਘ ਆਹਲੂਵਾਲੀਆ, ਨਜਮ ਹੁਸੈਨ ਸੱਯਦ, ਹਰਿਭਜਨ ਸਿੰਘ
  - D) ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਕਿਸਨ ਸਿੰਘ, ਰਵਿੰਦਰ ਸਿੰਘ ਰਵੀ
25. ਸਾਹਿਤ ਸਮੀਖਿਆ ਦਾ ਪ੍ਰਯੋਜਨ ਹੈ :
- A) ਸਾਹਿਤ ਪਾਠ
  - B) ਸਾਹਿਤ ਵਿਗਿਆਨ
  - C) ਸਾਹਿਤ ਵਿਸ਼ਲੇਸ਼ਣ
  - D) ਸਾਹਿਤ ਇਤਿਹਾਸ
26. "ਅਭਿਧਾ" ਅਤੇ "ਲਕਸ਼ਣਾ" ਸੰਬੰਧਤ ਹਨ ।
- A) ਰਸ ਨਾਲ
  - B) ਅਲੰਕਾਰ ਨਾਲ
  - C) ਧੁਨੀ ਨਾਲ
  - D) ਰੀਤੀ ਨਾਲ
27. ਅਰਸਤੂ ਅਨੁਸਾਰ ਟ੍ਰੈਜਿਡੀ ਕਿਸ ਤੋਂ ਬਿਨ੍ਹਾਂ ਸੰਭਵ ਨਹੀਂ ਹੈ ।
- A) ਚਰਿਤਰ ਚਿਤਰਨ
  - B) ਸੰਗੀਤ
  - C) ਵਾਰਤਾਲਾਪ
  - D) ਕਾਰਜ



28. ਚੌਮਸਕੀ ਨੇ ਕਿਹੜਾ ਸੰਕਲਪ ਦਿੱਤਾ।  
A) ਇਕਾਲਕ ਤੇ ਦੁਕਾਲਕ  
B) ਲਾਂਗ ਤੇ ਪੈਰੋਲ  
C) ਜੈਨੇਟਿਕ ਸੰਰਚਨਾਵਾ  
D) ਯੋਗਤਾ ਤੇ ਨਿਡਾਓ
29. ਪੰਜਾਬੀ ਗਜ਼ਲ ਦਾ ਮੋਢੀ ਮੰਨਿਆ ਜਾਂਦਾ ਹੈ :  
A) ਮਨਸਾ ਰਾਮ ਦੁਖੀ  
B) ਸਾਧੂ ਸਿੰਘ ਹਮਦਰਦ  
C) ਕਰਤਾਰ ਸਿੰਘ ਬੱਲਖਣ  
D) ਮੀਆਂ ਮੁਹੰਮਦ ਬਖਸ਼
30. ਹੇਠ ਲਿਖਿਆਂ ਵਿਚੋਂ ਕਿਹੜਾ ਠੀਕ ਹੈ:  
A) ਜੁਝਾਰਵਾਦੀ : ਜਸਬੀਰ ਸਿੰਘ ਆਹਲੂਵਾਲੀਆ  
B) ਪ੍ਰਯੋਗਵਾਦੀ : ਅਵਤਾਰ ਪਾਸ਼  
C) ਸੁਹਜਵਾਦੀ : ਸੇਰੋਖ ਸਿੰਘ ਧੀਰ  
D) ਰਹੱਸਵਾਦੀ : ਭਾਈ ਵੀਰ ਸਿੰਘ
31. ਪੰਜਾਬੀ ਦੇ ਕਿਸ ਲੇਖਕ ਨੂੰ ਸਰਸਵਤੀ ਪੁਰਸਕਾਰ ਮਿਲਿਆ ਹੈ :  
A) ਹਰਿਭਜਨ ਸਿੰਘ  
B) ਐਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ  
C) ਗੁਰਦਿਆਲ ਸਿੰਘ  
D) ਹਰਭਜਨ ਹਲਵਾਰਵੀ
32. 1990 ਤੋਂ ਬਾਅਦ ਦੇ ਪੰਜਾਬੀ ਨਾਵਲਾਂ ਦਾ ਜੁੱਟ ਹੈ :  
A) ਹੋਣੀ ਮਨੁੱਖੀ ਸਭਿਅਤਾ ਦੀ, ਕੌਰਵ ਸਭਾ, ਅੱਗ ਦਾ ਗੀਤ  
B) ਕਟਹਿਰਾ, ਅੰਨਦਾਤਾ, ਤਾਂਡਵ  
C) ਸਤਲੁਜ ਬਹਿਦਾ ਰਿਹਾ, ਰੋਹੀ ਬੀਆਬਾਨ, ਜੰਗੀ ਕੈਦੀ  
D) ਦੁੱਲ੍ਹੇ ਦੀ ਢਾਬ, ਲਹੂ ਦੀ ਲੋਅ, ਯੁੱਧ-ਨਾਦ
33. ਨਾਵਲ ਵਿਚ ਪ੍ਰਮੁੱਖਤਾ ਹੈ:  
A) ਕਾਵਿ ਦੀ  
B) ਬਿਰਤਾਂਤ ਦੀ  
C) ਪ੍ਰਯੋਜਨ ਦੀ  
D) ਭਾਸ਼ਾ ਦੀ
34. ਆਂਚਲਿਕ ਨਾਵਲ ਦਾ ਮੁੱਖ ਲੱਛਣ ਹੈ:  
A) ਖਾਸ ਖਿੱਤਾ, ਖਾਸ ਉਪਭਾਸ਼ਾ,  
B) ਖਾਸ ਖਿੱਤਾ, ਖਾਸ ਇਤਿਹਾਸ  
C) ਖਾਸ ਖਿੱਤਾ, ਖਾਸ ਸਮਾਜ-ਸਭਿਆਚਾਰ  
D) ਖਾਸ ਖਿੱਤਾ, ਖਾਸ ਨਾਇਕ

35. "ਸਮਾਜ, ਸੱਤਾ ਤੇ ਸਮਕਾਲੀ ਨਾਵਲ" ਪੁਸਤਕ ਦਾ ਕਰਤਾ ਹੈ :  
A) ਟੀ.ਆਰ.ਵਿਨੋਦ  
B) ਜੋਰੀਦਰ ਸਿੰਘ ਰਾਹੀ  
C) ਸੁਰਿੰਦਰ ਕੁਮਾਰ ਦਵੇਸ਼ਵਰ  
D) ਸੁਰਿੰਦਰ ਸਿੰਘ ਦੁਸਾਂਝ
36. ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ ਦਾ ਪਹਿਲਾ ਕਹਾਣੀ ਸੰਗ੍ਰਹਿ ਹੈ :  
A) ਸਮਾਚਾਰ  
B) ਅੱਧੀ ਵਾਟ  
C) ਸਿਆਣਪਾਂ  
D) ਕਾਮੇ ਤੇ ਯੋਧੇ
37. ਪ੍ਰਗਤੀਵਾਦੀ ਕਹਾਣੀਕਾਰਾਂ ਦਾ ਜੁੱਟ ਹੈ :  
A) ਸੁਜਾਨ ਸਿੰਘ, ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਨਾਨਕ ਸਿੰਘ  
B) ਕਰਤਾਰ ਸਿੰਘ ਦੁੱਗਲ, ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ, ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼  
C) ਅਜੀਤ ਕੌਰ, ਵਰਿਆਮ ਸੰਧੂ, ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ  
D) ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ, ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ, ਸੁਜਾਨ ਸਿੰਘ
38. ਕਹਾਣੀ ਲਈ ਸਾਹਿਤ ਅਕਾਦਮੀ ਦਾ ਪੁਰਸਕਾਰ ਮਿਲਿਆ :  
A) ਅਜੀਤ ਕੌਰ  
B) ਰਾਮ ਸਰੂਪ ਅਣਖੀ  
C) ਜਸਵੰਤ ਦੀਦ  
D) ਮੋਹਨ ਭੰਡਾਰੀ
39. ਹਰਚਰਨ ਸਿੰਘ ਦਾ ਪਹਿਲਾ ਨਾਟਕ ਹੈ :  
A) ਕਮਲਾ ਕੁਮਾਰੀ  
B) ਰਾਜਾ ਪੋਰਸ  
C) ਅਨਜੋੜ  
D) ਸੋਭਾ ਸ਼ਕਤੀ
40. ਨਾਟਕ ਵਿਚ ਦੇਸਕਾਲ ਜਾਂ ਵਾਤਾਵਰਣ ਦਾ ਅਰਥ ਹੈ :  
A) ਨਾਟਕੀ ਕਾਰਜ ਦਾ ਸਮਾਂ ਤੇ ਸਥਾਨ  
B) ਨਾਟਕੀ ਪੇਸ਼ਕਾਰੀ ਦਾ ਸਮਾਂ ਤੇ ਸਥਾਨ  
C) ਨਾਟਕਕਾਰ ਦਾ ਦੇਸ਼ ਤੇ ਰਚਨਾਕਾਲ  
D) ਰੰਗਮੰਚ ਦਾ ਵਾਤਾਵਰਣ
41. "ਲੋਕ ਨਾਟਕ" ਰਚਨਾ ਹੈ :  
A) ਬਲਵੰਤ ਗਾਰਗੀ  
B) ਸੰਤ ਸਿੰਘ ਸੇਖੋਂ  
C) ਅਜਮੇਰ ਸਿੰਘ ਔਲਖ  
D) ਆਤਮਜੀਤ

42. "ਸਵੈ-ਜੀਵਨੀ" ਹੁੰਦੀ ਹੈ :  
A) ਸਮਾਜ ਕੇਂਦਰਿਤ  
B) ਆਤਮ ਕੇਂਦਰਿਤ  
C) ਸਾਹਿਤ ਕੇਂਦਰਿਤ D) ਪਾਤਰ ਕੇਂਦਰਿਤ
43. ਪੰਜਾਬੀ ਦਾ ਪਹਿਲਾ ਸਫ਼ਰਨਾਮਾ ਹੈ  
A) ਪਤਾਲ ਦੀ ਧਰਤੀ  
B) ਮੇਰਾ ਵਲਾਇਤੀ ਸਫ਼ਰਨਾਮਾ  
C) ਮੇਰਾ ਰੂਸੀ ਸਫ਼ਰਨਾਮਾ  
D) ਮਲਾਇਆ ਦੀ ਯਾਤਰਾ
44. ਸ਼ਰਧਾ ਰਾਮ ਫਿਲੌਰੀ ਨੇ ਦੋ ਵਾਰਤਕ ਪੁਸਤਕਾਂ ਲਿਖੀਆਂ :  
A) ਸਿੱਖਾਂ ਦੇ ਰਾਜ ਦੀ ਵਿਥਿਆ, ਸੁੱਖੀ ਪਰਿਵਾਰ  
B) ਸਿੱਖਾਂ ਦੇ ਰਾਜ ਦੀ ਵਿਥਿਆ, ਪੰਜਾਬੀ ਬਾਤ-ਚੀਤ  
C) ਪੰਜਾਬੀ ਬਾਤ-ਚੀਤ, ਧਰਮ ਤੇ ਸਦਾਚਾਰ  
D) ਪੰਜਾਬੀ ਬਾਤ-ਚੀਤ, ਧਰਮ ਮਨੁੱਖ
45. "ਖੋਜ ਦਰਪਣ" ਸਾਹਿਤ ਖੋਜ ਤੇ ਆਲੋਚਨਾ ਦਾ ਰਸਾਲਾ ਛਾਪਦੀ ਹੈ :  
A) ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ  
B) ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ  
C) ਪੰਜਾਬੀ ਸਾਹਿਤ ਅਕਾਦਮੀ  
D) ਦਿੱਲੀ ਸਾਹਿਤ ਅਕਾਦਮੀ
46. ਰੁਮਾਂਸ ਵਿੱਚ ਕਾਵਿ-ਬੱਧ ਕੀਤੀਆਂ ਜਾਂਦੀਆਂ ਹਨ :  
A) ਨਿਰੋਲ ਇਸਕ ਕਹਾਣੀਆਂ  
B) ਇਸਕ, ਯੁੱਧ, ਸੁਰਬੀਰਤਾ ਤੇ ਪਰਾਸਰੀਰਕ ਪਾਤਰਾਂ ਦੀਆਂ ਕਥਾਵਾਂ  
C) ਸੁਰਬੀਰਤਾ ਦੇ ਕਾਰਨਾਮੇ  
D) ਧਾਰਮਿਕ ਯੋਧਿਆਂ ਦੇ ਪ੍ਰਸੰਗ
47. "ਭੁੱਲ੍ਹਾ" ਨਾਟਕ ਲੇਖਕ ਦੀ ਰਚਨਾ ਹੈ :  
A) ਨਜ਼ਮ ਹੁਸੈਨ ਸੰਯਦ  
B) ਡਾਕਟਰ ਜਮਾਨ  
C) ਇਸਹਾਕ ਮੁਹੰਮਦ  
D) ਸਾਹਿਦ ਨਦੀਮ
48. "ਪ੍ਰੀਤਲੜੀ" ਮਾਸਿਕ ਰਸਾਲੇ ਦਾ ਬਾਨੀ ਸੰਪਾਦਕ ਸੀ :  
A) ਪੁਨਮ  
B) ਗੁਰਬਖਸ਼ ਸਿੰਘ ਪ੍ਰੀਤਲੜੀ  
C) ਨਵਤੇਜ ਸਿੰਘ  
D) ਕੰਈ ਨਹੀਂ
49. ਪਰਵਾਸੀ ਲੇਖਕਾਂ ਦਾ ਜੁੱਟ ਹੈ :  
A) ਇੰਦਰ ਸਿੰਘ ਮਾਮੋਸ਼, ਬਲਜੀਤ ਕੌਰ ਬੱਲੀ, ਚੰਦਨ ਨੇਹਰੀ, ਕੈਲਾਸ਼ ਪੁਰੀ  
B) ਬਚਿਤ ਕੌਰ, ਸਵਰਨ ਚੰਦਨ, ਕੇਵਲ ਕਲੰਟੀ, ਮਨਮੋਹਨ  
C) ਅਵਤਾਰ ਬਲਿੰਗ, ਦਰਸਨ ਸਿੰਘ ਧੀਰ, ਹਰਜੀਤ ਅਟਵਾਲ, ਨਰਿੰਜਨ ਤਸਨੀਮ  
D) ਸਵਰਨ ਚੰਦਨ, ਦਰਸਨ ਸਿੰਘ ਧੀਰ, ਗਘਬੀਰ ਚੰਡ, ਵਨੀਤਾ
50. "ਜਉ ਤਉ ਪ੍ਰੇਮ ਖੇਲਣ ਕਾ ਚਾਉ॥ ਸਿਰੁ ਧਰਿ ਤਲੀ ਗਲੀ ਮੋਰੀ ਆਉ॥" ਕਿਸ ਦੀ ਰਚਨਾ ਹੈ।  
A) ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ  
B) ਡਗਤ ਕਬੀਰ  
C) ਗੁਰੂ ਨਾਨਕ ਦੇਵ  
D) ਡਗਤ ਰਵਿਦਾਸ



Question Booklet Series : **A** Question Booklet Sr. No. **028111**

## Ph.D. Entrance Test – 2014

Subject : Hindi

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

--	--	--	--	--	--

*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. **There shall be no negative marking for wrong answers.**
6. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
9. For rough work only the blank sheet at the end of the Question Booklet be used.
10. The Answer Sheet is designed for computer evaluation. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e. not following the instructions completely, shall be of the candidate only.**
11. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. जहाँ वैचित्र्य कथन की इच्छा से किन्हीं सर्वनाम आदि के द्वारा वस्तु का गोपन किया जाता है, वहाँ कौन सी वकता होती है?
 

(A) विशेषण वकता	(B) संवृत्ति वकता
(C) वृत्ति वकता	(D) उपचार वकता
2. इनमें से किस भाषा का विकास भागधी अपभ्रंश से नहीं हुआ है-
 

(A) बंगला भाषा	(B) असमी भाषा
(C) उड़िया भाषा	(D) मराठी भाषा
3. तोता राम किस काल-खंड के रचनाकार थे ?
 

(A) भारतेंदु युग के	(B) द्विवेदी युग के
(C) छायावाद युग के	(D) प्रगतिवाद युग के
4. 'हिंदी, हिंदू, हिंदुस्तानी' का नारा किन्होंने दिया था ?
 

(A) पंडित मदन मोहन मालवीय ने	(B) पंडित प्रताप नारायण मिश्र ने
(C) आचार्य महावीर प्रसाद द्विवेदी ने	(D) पंडित बालकृष्ण भट्ट ने
5. इनमें कौन-सी रचना चम्पूकाव्य है ?
 

(A) सकेत	(B) गुरुकुल
(C) पंचवटी	(D) यशोधरा
6. इनमें 'ठेठ हिंदी का ठाट' के लेखक कौन है ?
 

(A) किशोरीदास वाजपेयी	(B) रामविलास शर्मा
(C) अयोध्या सिंह उपाध्याय 'हरिऔध'	(D) रामधारी सिंह दिनकर
7. इनमें 'विराम चिह्न' कहानी के लेखक हैं-
 

(A) सूर्यकांत त्रिपाठी 'निराला'	(B) जयशंकर प्रसाद
(C) भगवती प्रसाद वाजपेयी	(D) प्रेमचंद

8. इनमें समस्या नाटककार किन्हें कहा जाता है ?
- (A) उदयशंकर भट्ट को (B) मोहन राकेश को  
(C) लक्ष्मीनारायण मिश्र को (D) लक्ष्मीनारायण लाल को
9. इनमें कौन-सी रचना विधा की दृष्टि से एकांकी है ?
- (A) अंधेर नगरी (B) मादा कैक्टस  
(C) आधे अधूरे (D) अडे के छिलके
10. जहाँ प्रस्तुत के वर्णन से अप्रस्तुत की प्रतीति हो तो वहाँ कौन-सा अलंकार होता है ?
- (A) समासोक्ति (B) अतिशयोक्ति  
(C) वकोक्ति (D) निर्दर्शना
11. अलोपीदीन किस कहानी का पात्र है ?
- (A) शतरंज के खिलाड़ी (B) नमक का दरोगा  
(C) सद्गति (D) बड़े घर की बेटी
12. इनमें कौन-सी रचना नाटक है ?
- (A) कानों में कँगना (B) कलम का मजदूर  
(C) संग्राम (D) सुखदा
13. इनमें लौकिक साहित्य है -
- (A) खुमान रासो (B) वीसलदेव रासो  
(C) चर्यापद (D) जयचंद प्रकाश
14. चल्लभाचार्य का दार्शनिक मत है -
- (A) अद्वैत (B) द्वैत  
(C) शुद्धाद्वैत (D) द्वैताद्वैत



15. 'जूठन' के रचयिता हैं-
- (A) मोहनदास नैमिषराय (B) ओमप्रकाश वाल्मीकि  
(C) डॉ० धर्मवीर (D) कैलाश दहिया
16. कौरवी किस उपभाषा की बोली है ?
- (A) पश्चिमी हिंदी उपभाषा की (B) पूर्वी हिंदी उपभाषा की  
(C) पहाड़ी हिंदी उपभाषा की (D) बिहारी हिंदी उपभाषा की
17. इनमें से नारी विमर्श की लेखिका हैं-
- (A) सुभद्रा कुमारी चौहान (B) झॉंसी की रानी लक्ष्मी बाई  
(C) रत्नावली (D) गन्नू भंडारी
18. इनमें चैतन्य महाप्रभु के शिष्य हैं-
- (A) हितहरिवंश गोस्वामी (B) जगन्नाथ गोस्वामी  
(C) नरोत्तमदास (D) रूप गोस्वामी
19. इनमें निबंध संग्रह है-
- (A) संग्रह की एक रात (B) ठेले पर हिमालय  
(C) आत्मजयी (D) उन्मुक्त
20. इनमें 'अष्टाध्यायी' के रचयिता हैं-
- (A) भर्तृहरि (B) पतंजलि  
(C) पाणिनि (D) अष्टावक्र
21. इनमें गद्य साहित्य है-
- (A) वर्षरत्नाकर (B) पतंजलि  
(C) कीर्तिपताका (D) हस्मीररासो

22. इनमें प्रेमख्यान काव्य है-

- (A) भक्तमाल (B) अवधविलास  
(C) युगलशतक (D) ज्ञानदीप

23. इनमें अष्टछाप के कवि हैं-

- (A) नरोत्तमदास (B) चतुर्भुजदास  
(C) ध्रुवदास (D) नेहीनागरीदास

24. 'चरित्रहीन' किस भाषा का उपन्यास है ?

- (A) पंजाबी भाषा का (B) उड़िया भाषा का  
(C) बंगला भाषा का (D) हिंदी भाषा का

25. इनमें सही कम कौन- सा है ?

- (A) विद्यापति : उज्ज्वल नीलमणि (B) हृदय राम : अवध विलास  
(C) सेनापति : रामायण महानाटक (D) रामानंद : रामरक्षास्तोत्र

26. महात्मा गाँधी के जीवन से किस उपन्यास का संबंध है ?

- (A) पहला गिरमिटिया का (B) निर्मला का  
(C) देहाती दुनिया का (D) झूठा सच का

27. शैलेश मटियानी मूलतः क्या हैं ?

- (A) निबंधकार (B) कथाकार  
(C) नाटककार (D) पत्रकार

28. अप्पय्य दीक्षित का संबंध किस संप्रदाय से है ?

- (A) वक्रोक्ति संप्रदाय से (B) ध्वनि संप्रदाय से  
(C) अलंकार संप्रदाय से (D) रीति संप्रदाय से

29. विवेक किस नाटक का पात्र है ?

- (A) चंद्रगुप्त का (B) कर्बला का  
(C) भारत दुर्दशा का (D) कामना का

30. "सादर कहहिं सुनहिं बुध ताही । मधुकर सरिस संत गुनग्राही ॥"  
इस चौपाई में कौन-सा अलंकार है ?

- (A) रूपक (B) उपमा  
(C) श्लेष (D) यमक

31. प्रेमचंद ने कुल कितने नाटक लिखे ?

- (A) तीन (B) चार  
(C) पाँच (D) छह

32. 'आवारा मसीहा' किनके जीवन पर आधारित है ?

- (A) बकिमचंद्र चट्टोपध्याय (B) तारा शंकर बंदोपाध्याय  
(C) शरत्चंद्र चट्टोपध्याय (D) सुनीति कुमार चाटुर्ज्या

33. इनमें सही क्रम कौन-सा है ?

- (A) महादेवी शर्मा : टूटा तारा (B) रामवृक्ष बेनीपुरी : तूफानों के बीच  
(C) श्रीराम शर्मा : मील के पत्थर (D) माखनलाल वतुर्वेदी : समय के पाँव

34. इनमें सही क्रम कौन-सा है ?

- (A) शिवरानी देवी : कलम का मजदूर (B) अमृतराय : कलम का सिपाही  
(C) उमेशचंद्र मिश्र : माखन लाल चतुर्वेदी (D) रामविलास शर्मा:महाप्राण निराला

35. इनमें व्यंग्यकार कौन-से हैं ?

- (A) प्रेम जनमेजय (B) राजेंद्र यादव  
(C) रवीन्द्र कालिया (D) शिव नारायण



36. इनमें सही कम कौन-सा है ?

- (A) नाभादास : श्रीहरिभक्ति रसामृतसिंधु
- (B) लाल कवि : मूल गोसाईं चरित
- (C) पद्माकर : हिम्मत बहादुर विरुदावली
- (D) केशवदास : छत्रप्रकाश

37. विधा की दृष्टि से 'पुनर्नवा' क्या है ?

- (A) कहानी
- (B) कविता
- (C) नाटक
- (D) उपन्यास

38. अबिगत गति कछु कहत न आवै । ज्यों गुँगै मीठे फल को रस  
अंतरगत हीं भावै ॥- के रचयिता इनमें से कौन हैं ?

- (A) मीराबाई
- (B) सूददास
- (C) नंददास
- (D) कबीरदास

39. 'फूलों ने पंखुरियाँ खोलीं ।'-में कौन-सा विचलन है ?

- (A) कारक विचलन
- (B) क्रिया विचलन
- (C) ध्वनि विचलन
- (D) मानक विचलन

40. चौपाई में कुल कितनी मात्राएँ होती हैं ?

- (A) बारह
- (B) चौदह
- (C) सोलह
- (D) अठारह

41. इनमें ऐतिहासिक उपन्यास है-

- (A) सेवा सदन
- (B) तमस
- (C) मुर्दे का टीला
- (D) मुरदाघर

42. उपमेय को छिपाकर उपमान के साथ उसकी अभेद प्रतीति करना कौन-सा अलंकार है ?

- (A) उत्प्रेक्षा  
(B) दीपक  
(C) असंगति  
(D) अतिशयोक्ति

43. इनमें 'राघवपांडवीयम्' के रचयिता कौन हैं ?

- (A) धनंजय  
(B) कविराज  
(C) बाणभट्ट  
(D) जगन्नाथ

44. 'मेरा डर मुझे चर रहा है' किनकी पंक्ति है ?

- (A) अज्ञेय की  
(B) धूमिल की  
(C) मुक्तिबोध की  
(D) केदारनाथ सिंह की

45. कामता प्रसाद 'गुरु' का योगदान किस क्षेत्र में है ?

- (A) कहानी के क्षेत्र में  
(B) यात्रावृत्तांत के क्षेत्र में  
(C) व्याकरण के क्षेत्र में  
(D) गुरुकुल शिक्षा के क्षेत्र में

46. 'परंपरा और वैयक्तिक प्रतिभा' प्रसिद्ध निबंध के रचयिता हैं -

- (A) टी० एस० इलियट  
(B) आई० ए० रिचर्ड्स  
(C) क्रोचे  
(D) देरिदा

47. 'इथथे अलगी बथ मेरी हो थकती है । थेक्थपियर को थलाम ।'-  
किनकी पंक्तियाँ हैं ?

- (A) निर्मल वर्मा की  
(B) अज्ञेय की  
(C) रामवृक्ष बेनीपुरी की  
(D) राहुल सांकृत्यायन की

48. 'अन्नूरी' की रचयिता हैं -

(A) ममता कालिया

(B) मन्नू भंडारी

(C) मृदुला गर्ग

(D) मुजुल भगत

49. 'अजगर करे न चाकरी पंछी करे न काम' के रचयिता हैं -

(A) कबीरदास

(B) धरनीदास

(C) मलूकदास

(D) रैदास

50. 'बिखरी अलकें ज्यों तर्क जाल' - में कौन - सा विचलन है ?

(A) कारक विचलन

(B) क्रम विचलन

(C) क्रिया विचलन

(D) ध्वनि विचलन



Question Booklet Series : **A** Question Booklet Sr. No. **031005**

## Ph.D. Entrance Test – 2014

Subject : **French**

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

--	--	--	--	--	--

*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. **There shall be no negative marking for wrong answers.**
6. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
9. For rough work only the blank sheet at the end of the Question Booklet be used.
10. The Answer Sheet is designed for computer evaluation. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e. not following the instructions completely, shall be of the candidate only.**
11. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. *De l'amour*, essai psychologique, est publié en 1822 par :
 

A. Sainte-Beuve	B. George Sand
C. Benjamin Constant	D. Stendhal
2. « On ne naît pas femme : on le devient ». C'est une formulation canonique de
 

A. Julia Kristeva	B. Simone de Beauvoir
C. Gabrielle Roy	D. Antonine Maillet
3. L'Académie française est fondée en 1635 par :
 

A. Le cardinal de Richelieu	B. Mazarin
C. Valentin Conrart	D. Anne d'Autriche
4. Le sonnet est composé successivement de :
 

A. deux quatrains et deux tercets	B. deux tercets et deux quatrains
C. trois quatrains et un distique	D. un distique et trois quatrains
5. Écrit en 1760, *La Religieuse* est un roman de :
 

A. Robert Challe	B. Choderlos de Laclos
C. L'abbé Prévost	D. Diderot
6. L'histoire littéraire range sous le nom de « rhétoriciens » un certain nombre de poètes du :
 

A. XIV <sup>e</sup> siècle	B. XV <sup>e</sup> siècle
C. XVI <sup>e</sup> siècle	D. XVII <sup>e</sup> siècle
7. L'**Unanimisme** est une doctrine littéraire créée par :
 

A. Jules Romains	B. Georges Duhamel
C. Teilhard de Chardin	D. André Suarès
8. Amandine Lucie Aurore Dupin est le vrai nom de :
 

A. Françoise Sagan	B. Mme Juliette Récamier
C. Marguerite Duras	D. George Sand
9. *Du côté de chez Swann* est le premier volume :
 

A. de l'œuvre <i>A la recherche du temps perdu</i>	B. de <i>La Comédie humaine</i>
C. du cycle des <i>Rougon-Macquart</i>	D. de la série des <i>Thibault</i>
10. Le terme *behaviorism* apparaît pour la première fois dans un texte de :
 

A. John Broadus Watson	B. Charles Bally
C. Antoine Meillet	D. Émile Benveniste
11. La prosodie, c'est l'étude :
 

A. de l'accent et de la durée des phonèmes	
B. du langage considéré du point de vue du sens	
C. de la vie des signes au sein de la vie sociale	
D. de l'arbitraire du signe	
12. La théorie de la double articulation du langage a été mise en avant par :
 

B. Georges Mounin	B. Albert Sechehaye
C. Roman Jakobson	D. André Martinet



13. Qui a annoncé le fameux principe : « dans la langue, il n'y a que des différences » ?  
 A. Maurice Grammont  
 B. Maurice Leroy  
 C. Bertil Malmberg  
 D. Ferdinand de Saussure
14. La notion de *compétence linguistique* comme une virtualité a été introduite par :  
 A. Francis Debyser  
 B. Louis Porcher  
 C. Edward Sapir  
 D. Noam Chomsky
15. **Repartons** se compose de :  
 A. 2 monèmes  
 B. 3 monèmes  
 C. 4 monèmes  
 D. 5 monèmes
16. Un roman épistolier est :  
 A. un roman feuilleton  
 B. Un roman portant sur des éléments religieux  
 C. Un roman composé de correspondances par lettres entre les personnages  
 D. un roman inspiré d'une biographie
17. Un alexandrin est un vers de  
 A. 6 syllabes  
 B. 8 syllabes  
 C. 10 syllabes  
 D. 12 syllabes
18. Laquelle de ces pièces n'a pas été écrite par Jean Racine ?  
 A. Les Plaideurs  
 B. Phèdre  
 C. Andromaque  
 D. Nicomède
19. Qui a créé le personnage de Panurge ?  
 A. Guillaume Budé  
 B. François Rabelais  
 C. Honoré d'Urfé  
 D. Marguerite de Navarre
20. Les jardins du palais de Versailles sont le chef-d'œuvre de :  
 A. André Le Nôtre  
 B. Le Vau  
 C. Le Brun  
 D. Hardouin-Mansart
21. L'**allitération** est la répétition :  
 A. d'une ou de plusieurs consonnes dans une suite de mots rapprochés  
 B. d'une même voyelle dans un groupe de mots  
 C. de termes superflus  
 D. d'une même expression ou d'un même mot
22. « Je veux être Chateaubriand ou rien », écrivait en 1816 :  
 A. Lamartine  
 B. Hugo  
 C. Vigny  
 D. Théophile Gautier
23. Le premier chef-d'œuvre de Stendhal, c'est :  
 A. *Armance*  
 B. *Lamiel*  
 C. *Le Rouge et le Noir*  
 D. *Lucien Leuwen*



24. Le **Naturalisme** est défini par :
- A. Daudet  
C. Henri Céard  
B. Paul Alexis  
D. Zola
25. Qui est l'auteur de la célèbre trilogie *Marius-Fanny-César* ?
- A. Paul Claudel  
C. Marcel Pagnol  
B. Jean Cocteau  
D. Jean Giraudoux
26. *Syntactic Structures* (1957), traduit en français sous le titre **Structures syntaxiques**, Seuil, 1969, est un ouvrage de :
- A. N. Ruwet  
C. M. Gross  
B. J. Dubois  
D. Noam Chomsky
27. Combien y a-t-il de consonnes sourdes en français ?
- A. 3  
C. 5  
B. 4  
D. 6
28. Dans combien de parties du discours peuvent se ranger les mots de français ?
- A. 6  
C. 8  
B. 7  
D. 9
29. « Car le mot, qu'on le sache, est un être vivant », chantait en 1855 :
- A. Ernest Renan  
C. Hippolyte Taine  
B. Sully Prudhomme  
D. Victor Hugo
30. *La Princesse de Clèves* est un roman de :
- A. Antoine Furetière  
C. Mme de La Fayette  
B. Madeleine de Scudéry  
D. Paul Scarron
31. *L'Art poétique* (1674) nous présente le corps même de la doctrine de :
- A. Saint-Amant  
C. Théophile de Viau  
B. François de Malherbe  
D. Nicolas Boileau
32. « Quand vous serez bien vieille, au soir, à la chandelle... », est l'incipit d'un sonnet de :
- A. Du Bellay  
C. Etienne Jodelle  
B. Pontus de Tyard  
D. Pierre de Ronsard
33. *Défense et Illustration de la langue française* (1549) est une œuvre signée par :
- A. Joachim du Bellay  
C. Ronsard  
B. Sebillet  
D. La Péruse
34. Le premier roman de Sartre, c'est :
- A. *La Nausée*  
C. *L'Être et le Néant*  
B. *Les Chemins de la liberté*  
D. *Le Mur*
35. L'auteur du roman-dossier intitulé : *Les Jeunes Filles*, c'est :
- A. Henry de Montherlant  
C. Jean Dutourd  
B. François Mauriac  
D. Michel Déon

36. *Le Bateau ivre* est un célèbre poème de :
- |                     |               |
|---------------------|---------------|
| A. Rimbaud          | B. Verlaine   |
| C. Saint-John Perse | D. Baudelaire |
37. *Le Discours de la Méthode*, qui est la première grande œuvre philosophique et scientifique en français, est publié par :
- |                |               |
|----------------|---------------|
| A. Descartes   | B. Pascal     |
| C. Saint-Simon | D. La Bruyère |
38. « l'homme est né libre et partout il est dans les fers », a dit :
- |                |             |
|----------------|-------------|
| A. Malesherbes | B. Rousseau |
| C. D'Alembert  | D. Sedaine  |
39. *Le Soulier de satin* ou *Le pire n'est pas toujours sûr* est l'œuvre capitale de :
- |                   |                    |
|-------------------|--------------------|
| A. Ionesco        | B. Claudel         |
| C. Antonin Artaud | D. Armand Salacrou |
40. Le chef d'une école, le Nouveau Roman, c'est :
- |                  |                      |
|------------------|----------------------|
| A. Robbe-Grillet | B. Marguerite Duras  |
| C. Claude Ollier | D. Nathalie Sarraute |
41. Le Mont-Saint-Michel se trouve :
- |                        |                 |
|------------------------|-----------------|
| A. Au Pays de la Loire | B. En Normandie |
| C. En Ile-de-France    | D. En Bretagne  |
42. Les paroles de la Marseillaise furent composées par :
- |                    |                     |
|--------------------|---------------------|
| A. Rouget de Lisle | B. André Chénier    |
| C. Jacques Delille | D. Écouchard-Lebrun |
43. Qui a fondé l'Académie Goncourt ?
- |                      |                       |
|----------------------|-----------------------|
| A. Léon Daudet       | B. Edmond de Goncourt |
| C. Jules de Goncourt | D. Octave Mirebeau    |
44. Le terme de **francophonie** apparut pour la première fois en :
- |         |         |
|---------|---------|
| A. 1880 | B. 2000 |
| C. 2005 | D. 2010 |
45. Parmi ces quatre écrivains, lequel fut président de la république du Sénégal (1960-1980) ?
- |                          |                      |
|--------------------------|----------------------|
| A. Léopold Sédar Senghor | B. Tahar Ben Jelloun |
| C. Aimé Césaire          | D. Milan Kundera     |
46. Combien y a-t-il de phonèmes vocaliques en français ?
- |       |       |
|-------|-------|
| A. 5  | B. 6  |
| C. 16 | D. 17 |
47. Le tombeau de Napoléon Bonaparte se trouve :
- |                  |                      |
|------------------|----------------------|
| A. aux Invalides | B. au Panthéon       |
| C. au Louvre     | D. à la Conciergerie |

48. Dans la phrase « La soupe se mange chaude », le verbe pronominal a l'aspect :
- A. habituel
  - B. inchoatif
  - C. terminatif
  - D. ponctuel
49. « Ne rien mettre dans cette case » se traduit :
- A. Don't put anything in this case
  - B. Put nothing in this box
  - C. You are not to put anything in this box
  - D. This space is for official use only.
50. Le Théâtre de l'Opéra, siège de l'*Académie nationale de musique et de danse*, fut élevé par :
- A. Charles Garnier
  - B. Paul Baudry
  - B. Marc Chagall
  - D. Alfred Aberdam

\*FIN\*



Question Booklet Series : **A** Question Booklet Sr. No. **030016**

## Ph.D. Entrance Test – 2014

Subject : Urdu

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figure*

*In Words*

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O.M.R. Answer Sheet Serial No.

--	--	--	--	--	--

*Signature of the Candidate*

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. **There shall be no negative marking for wrong answers.**
6. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
9. For rough work only the blank sheet at the end of the Question Booklet be used.
10. The Answer Sheet is designed for computer evaluation. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e. not following the instructions completely, shall be of the candidate only.**
11. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
12. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/ noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so would be expelled from the examination.
13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

- 1- اردو کو سب سے پہلے بحیثیت زبان، کس ادیب نے استعمال کیا۔  
 (A) میر تقی میر (B) مصحفی (C) غالب (D) حالی
- 2- اردو زبان پنجاب میں پیدا ہوئی یہ نظر یہ سب سے پہلے کس نے پیش کیا؟  
 (A) شاہ ہاشمی (B) محمد حسین آزاد (C) محمود شیرانی (D) احتشام حسین
- 3- اردو کا پہلا باقاعدہ شاعر کون ہے؟  
 (A) ملا وطنی (B) ولی دکنی (C) قلی قطب شاہ (D) فضل
- 4- فورٹ ولیم کالج کہاں قائم ہوا؟  
 (A) دہلی (B) حیدرآباد (C) لکھنؤ (D) کلکتہ
- 5- اردو برج بھاشا سے نکلی ہے یہ نظر یہ کس کا ہے؟  
 (A) محمد حسین آزاد (B) محمود شیرانی (C) میر تقی میر (D) مصحفی
- 6- "موازنہ" نیس و ویر" کس کی کتاب ہے؟  
 (A) مولانا حالی (B) مولانا محمد حسین آزاد (C) مولانا شبلی نعمانی (D) مولانا وحید الدین
- 7- "اردو پنجاب اور سکھ شعرا" کے مصنف کا نام کیا ہے؟  
 (A) ڈاکٹر زینت اللہ (B) ڈاکٹر ناصر نقوی (C) ڈاکٹر زینت اللہ (D) ڈاکٹر گائوت سنگھ
- 8- رسالہ "تہذیب الاخلاق" کس نے جاری کیا؟  
 (A) محمد حسین آزاد (B) حالی (C) سر سید احمد خاں (D) رشید احمد صدیقی
- 9- "باغ و بہار" کس نے لکھی؟  
 (A) میرامن (B) حالی (C) ڈپٹی نذیر احمد (D) مولوی ذکا اللہ
- 10- مثنوی "سحرالبیان" کس کی لکھی ہوئی ہے؟  
 (A) میر حسن (B) میر تقی میر (C) اقبال (D) دریا بھنگر نسیم
- 11- ان میں سے مرزا ہادی رسوا کی تخلیق کون سی ہے؟  
 (A) توبتہ انصوح (B) چاندنی بیگم (C) امراؤ جان (D) گنودان
- 12- غزل کو نیم وحشی صنف کس نقاد نے کہا ہے؟  
 (A) کلیم الدین احمد (B) محمد حسن (C) طس الرحمن فاروقی (D) احتشام حسین
- 13- تنقید کس زبان کا لفظ ہے؟  
 (A) پشتو (B) ترکی (C) فارسی (D) عربی



14- اردو زبان کا پہلا اخبار کون سا تھا؟

(A) اعظم الاخبار (B) اودھ پنچ (C) سید الاخبار (D) اردو اخبار

15- ہمارے اردو کس کو کہا جاتا ہے؟

(A) سر سید احمد خاں (B) عبدالحق (C) مصحفی (D) مولانا حالی

16- سودا شاعری کی کس صنف کے لیے مشہور ہیں؟

(A) مرثیہ (B) قصیدہ (C) مثنوی (D) غزل

17- "اردو شاعری پر ایک نظر" کس کی تصنیف ہے؟

(A) مولانا حالی (B) رشید احمد صدیقی (C) مولوی عبدالحق (D) کلیم الدین

18- مولانا آزاد نیشنل اردو یونیورسٹی کہاں ہے؟

(A) کلکتہ (B) لکھنؤ (C) حیدرآباد (D) دہلی

19- "پریشرتکھ" کس کا مشہور افسانہ ہے؟

(A) راجندر سنگھ بیدی (B) جوگندر پال (C) احمد ندیم قاسمی (D) بلونت سنگھ

20- "انہیں شامی" کس کی کتاب ہے؟

(A) گوپی چند نارنگ (B) گیان چند بھین (C) مسعود حسن رضوی (D) فضل امام

21- مندرجہ ذیل میں فیض احمد فیض کا کون سا مجموعہ ہے؟

(A) تمنائیاں (B) زنداں نامہ (C) غزل (D) آگنائی

22- "آتش گل" کس کا شعری مجموعہ ہے؟

(A) مجروح سلطان پوری (B) جوش ملیح آبادی (C) جگر مراد آبادی (D) سردار جعفری

23- "گنج ہائے گراں مایہ" کس کی تصنیف ہے؟

(A) آل احمد سرور (B) رشید احمد صدیقی (C) راجندر سنگھ بیدی (D) حالی

24- "اودھ پنچ" کے ایڈیٹر کون تھے؟

(A) عبدالحق (B) سجاد حسین (C) سجاد ظہیر (D) محمد حسن

25- پنجاب کے کس اردو شاعر کو پدم بھوشن ایوارڈ ملا؟

(A) جوش ملیح آبادی (B) ڈاکٹر ناشر نقوی (C) ڈاکٹر سردار انجم (D) ڈاکٹر زینت اللہ

26- علامہ اقبال کو سرکارِ خطاب کس سن میں ملا؟

(A) 1913 (B) 1913 (C) 1933 (D) 1935ء

27- کس ادیب نے مراٹھے کو مکالمے کا درجہ دیا؟

(A) مرزا غالب (B) سر سید احمد خاں (C) مہدی اقلادی (D) خلیق انجم

28- جدید نظم کی ابتداء کس سے ہوتی ہے؟

(A) مرزا حاتم (B) نظیر اکبر آبادی (C) حالی (D) اقبال



- 29- "اورینٹل کالج" پنجاب میں کہاں ہے؟  
 (A) امرتسر (B) لاہور (C) لدھیانہ (D) ملتان
- 30- اردو میں تصوف کا شاعر کے کہا جاتا ہے؟  
 (A) میر تقی میر (B) خواجہ میر درد (C) میر انیس (D) مرزا غالب
- 31- اردو کے کس شاعر نے رومانی تحریک کو فروغ دیا؟  
 (A) ابن انشا (B) اختر شیرانی (C) مومن خاں مومن (D) بانو
- 32- شاعر انقلاب کے کہا جاتا ہے؟  
 (A) اقبال (B) جوش ملیح آبادی (C) فیض احمد فیض (D) ساحر لدھیانوی
- 33- "روانی کنگھی کی کہانی" کس کی کتاب ہے؟  
 (A) مصحفی (B) افضل (C) رسوا (D) انشا اللہ خاں انشاء
- 34- "قصہ چہار رویش" کے مصنف کون ہیں؟  
 (A) امیر خسرو (B) شیخ سعدی (C) حافظ (D) خیام
- 35- پنجاب کے کس شاعر کو ابو الفصاحت کہا گیا؟  
 (A) علامہ اقبال (B) جوش ملیح آبادی (C) اودے سنگھ شائق (D) ساحر سیالکوٹی
- 36- بہادر شاہ ظفر کے استاد کا نام؟  
 (A) ذوق (B) غالب (C) سودا (D) مومن
- 37- ملاوچی کی "سب رس" کا سن اشاعت کیا ہے؟  
 (A) ۱۵۲۶ (B) ۱۶۳۶ (C) ۱۷۰۶ (D) ۱۸۵۷ء
- 38- اردو میں ترقی پسند تحریک کا آغاز کس بن عیسوی میں ہوا؟  
 (A) ۱۹۳۶ (B) ۱۹۳۷ (C) ۱۹۸۰ (D) ۱۹۱۳ء
- 39- ناول "بازار حسن" کے مصنف کون ہیں؟  
 (A) نذیر احمد (B) سجاد ظہیر (C) پریم چند (D) کرشن چندر
- 40- قرآن اربعین حیدر کس اہم ناول کی مصنف ہیں؟  
 (A) توبیتا انصوح (B) سوز وطن (C) آگ کا دریا (D) شریف زادہ
- 41- اردو کا پہلا ڈراما کون سا ہے؟  
 (A) رادھا کہتیا (B) اندر سہیا (C) خانہ جنگی (D) امراؤ جان
- 42- مثنوی "دریائے عشق" کس کی لکھی ہوئی ہے؟  
 (A) ابن نشاظمی (B) میر تقی میر (C) واجد علی شاہ (D) میر حسن

- 43- قصیدے میں کتنے حصے ہوتے ہیں؟  
(A) ایک (B) دو (C) تین (D) چار
- 44- شاعر مشرق کسے کہا جاتا ہے؟  
(A) اقبال (B) جوش (C) فراق (D) فیض
- 45- فیض احمد فیض کی سن ولادت کیا ہے؟  
(A) ۱۹۰۳ء (B) ۱۹۱۱ء (C) ۱۹۳۰ء (D) ۱۹۳۰ء
- 46- عبدالحی اردو کے کس شاعر کا اصل نام ہے؟  
(A) جگر (B) ساحر (C) جوش (D) مجاز
- 47- افسانہ "نوبہ یک سنگھ" کے مصنف کون ہیں؟  
(A) راجندر سنگھ بیدی (B) سعادت حسن منٹو (C) کرشن چندر (D) گلشن نندرا
- 48- انارکلی کس کا مشہور ڈراما ہے؟  
(A) امتیاز علی تاج (B) محمد مجیب (C) حبیب خوری (D) اصغر و جاہت
- 49- "ذکر میر" کس کی کتاب ہے؟  
(A) مولوی عبدالحق (B) نثار احمد فاروقی (C) شمس الرحمن فاروقی (D) محمد حسن
- 50- شمالی ہند کا پہلا مرثیہ نگار کون تھا؟  
(A) اسماعیل امروہوی (B) میر انیس (C) مرزا دبیر (D) سودا

## Ph.D. Entrance Test – 2014

Subject : Russian

Paper-I

**Important:** Please consult your Admit Card/Roll No. slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No. *In Figure* *In Words*

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O.M.R. Answer Sheet Serial No.

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*Signature of the Candidate* \_\_\_\_\_

**Time: 60 minutes**

**Number of Questions: 50**

**Maximum Marks : 50**

### INSTRUCTIONS

1. Write your roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Code No. of Question Booklet on the OMR answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. Please check that this Question Booklet contains 50 questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
5. Each question has four alternative answer (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen**. There shall be no negative marking for wrong answers.
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7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
8. If you want to change an already marked answer, erase the shade in the darkened bubble completely.
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13. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
14. Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.



1. Отметьте, какую из следующих структур языка изучает фонетика:
- |   |                            |
|---|----------------------------|
| А\ словообразовательную структуру слова | В\ структуру слова         |
| С\ структуру предложения                | Д\ звуковую оболочку слова |
2. Что такое слог?
- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| А\ Сочетание гласного с согласным | В\ Сочетание гласного с предлогом |
| С\ Сочетание гласного с гласным   | Д\ Сочетание гласного с морфемой  |
3. Чего не относится к интонации?
- |                                    |                                    |
|------------------------------------|------------------------------------|
| А\ паузы                           | В\ повышение основного тона голоса |
| С\ понижение основного тона голоса | Д\ согласные звуки                 |
4. Отметьте, какой из следующих органов речи является активным органом при произношении согласных [к], [г], [х]:
- |                       |                  |
|-----------------------|------------------|
| А\ задняя часть языка | В\ переднее нёбо |
| С\ нижняя губа        | Д\ верхняя губа  |
5. Отметьте, в каком из следующих слов все согласные произносятся твёрдо:
- |         |          |
|---------|----------|
| А\ бить | В\ грязь |
| С\ жир  | Д\ билет |
6. Слова, которые совпадают по звучанию, но имеют разные значения и пишутся по-разному называются.....
- |               |                |
|---------------|----------------|
| А\ синонимами | В\ антонимами. |
| С\ омонимами  | Д\ нет из них. |

7. Отметьте, какой из следующих определений антонимов является проавильным:
- A\ это слова с несколькими значениями  
 B\ это слова с противоположными значениями  
 C\ это слова, по-разному звучащие, но одинаковые или очень близкие по значению  
 D\ это слова, одинаково звучащие, но никак не связанные между собой по смыслу
8. Сколько звуков в слове «ёлка»
- A\ 3  
 B\ 5  
 C\ 4  
 D\ 6
9. Отметьте, какое из следующих существительных не склоняется:
- A\ метро  
 B\ письмо  
 C\ окно  
 D\ кресло
10. Окончание – это.....
- A\ приставка  
 B\ корень  
 C\ изменяемая часть слова  
 D\ неизменяемая часть слова
11. Несовершенный вид глагола может обозначать
- A\ недлительные однократные действия  
 B\ результативные действия  
 C\ законченные действия  
 D\ повторяемость действия
12. Причастие имеет характеристику
- A\ имён существительных  
 B\ имён прилагательных.  
 C\ наречия  
 D\ местоимения
13. Отметьте, к какому типу обстоятельственных наречий относится наречие «долг»
- A\ к наречиям причины  
 B\ к наречиям места  
 C\ к наречиям времени  
 D\ к наречиям цели

14. Слово «Бульдозер» является

A\ старославянизмом

B\ историзмом

C\ архаизмом

D\ неологизмом

15. Подлежащее и сказуемое:

A\ это главные члены предложения

B\ это второстепенные члены предложения

C\ это часть речи

D\ это предлог

16. Слова, которые пишутся одинаково, но звучат по-разному и имеют разные значения называются.....

A\ омографами

B\ омоформами

C\ омофонами

D\ синонимами.

17. Отметьте, на основе какого признака происходит перенос значения в сочетании:

«крыло самолёта»

A\ сходства предметов по качеству

B\ сходства предметов по характеру движения

C\ сходства предметов по цвету

D\ сходства предметов по форме

18. Какое из следующих существительных является собирательным?

A\ человечество

B\ хлеб

C\ мальчик

D\ красота

19. Предложение, имеющее в своём составе две или несколько предикативных единиц, образующих смысловое структурное и интонационное единство, называется.....

A\ сложным

B\ простым

C\ восклицательным

D\ двусоставным



20. Соедините предложения из столбика А и их типы из столбика Б:

А

1. Гости ушли, мы остались вдовём.
2. Ты закончил статью?
3. Пойдёмте к реке, там хорошо.
4. О, если бы я могла уснуть.

Б

- a. Вопросительные
- b. Повествовательные
- c. Восклицательные
- d. Побудительные

А\ 1-с, 2-d, 3-а, 4-б

В\ 1-d, 2-в, 3-б, 4-а

С\ 1-б, 2-а, 3-d, 4-с

Д\ 1-d, 2-б, 3-а, 4-с

21. Какая часть речи может обозначать признак действия ?

А\ имя существительное

В\ имя прилагательное

С\ имя числительное

Д\ наречие

22. Чего не относится к винительному падежу

А\ винительный падеж обозначает прямой объект

В\ винительный падеж обозначает время

С\ винительный падеж обозначает лицо, который производит действие

Д\ винительный падеж обозначает расстояние

23. Какая часть речи может обозначать признак действия ?

А\ имя существительное

В\ имя прилагательное

С\ имя числительное

Д\ наречие

24. Глагол «мыться» относится к возвратному глаголу с собственно-возвратным значением, потому что:

A) указывает на внутреннее состояние субъекта.

B) называет такое действие, производитель которого является одновременно и объектом действия.

C) обозначает такое действие, которое постоянно свойственно субъекту.

D) указывает на действие, которое совершается некоторыми действующими лицами.

25. Чего не входит в исконно- русскую лексику

A) индоевропейские слова

B) общеславянские слова

C) собственно русскими

D) заимствованные слова

26. Просторечие - это:

A) кодированная речь

B) литературный язык

C) особенности языка людей

D) территориально ограниченные говоры

27. Слова , которые пришли в данный язык из других языков называется.....

A) иноязычными

B) индоевропейскими

C) собственно русскими

D) устаревшими

28. Отметьте в какой группе языков принадлежит русский язык:

A) восточнославянские языки

B) западнославянские языки

C) южнославянские языки

D) угро-финские

29. Кто написал стихотворение " Парус ",

A) М. Лермонтов

B) А. Пушкин

C) Н. Некрасов

D) Н. Карамзин

30. О какой войне говорится в романе Толстого «Война и мир»:  
 А\ о гражданской войне  
 В\ о Первой мировой войне  
 С\ о Войне 1812.  
 D\ о Второй мировой войне
31. Ранние рассказы Горького относятся к направлению:  
 А\ Реализма  
 В\ Социалистического реализма  
 С\ Романтизма  
 D\ Сентиментализма
32. Какое из следующих литературных направлений не относится к началу 20-ого века?  
 А\ Акмеизм  
 В\ Имажинизм  
 С\ Футуризм  
 D\ Реализм
33. «Хождение за три моря» А. Никитина относится к русской литературе:  
 А\ 15ого века  
 В\ 17 ого века  
 С\ 18ого века  
 D\ 19ого века
34. Поэзия "Россия" Блока выражает образ  
 А\ Англии  
 В\ Германии  
 С\ России  
 D\ Франции
35. За какое произведение М.А.Шолохов удостоен международной нобелевской премии ?  
 А\ Донские рассказы  
 В\ Поднятую целину  
 С\ Судьба человека  
 D\ Тихий Дон
36. Какое особое литературное направление формировалось в первые десятилетия XIX века в России?  
 А\ Романтизм  
 В\ Сентиментализм.  
 С\ Символизм  
 D\ Классицизм



37. Стихотворение «Смерть поэта» было написано как отклик на трагическую, преждевременную гибель:
- А\ С. Есенина  
 В\ А. Блока  
 С\ А.С. Пушкина  
 D\ А. Фета
38. О ком говорят следующие слова старуха Изергиль в рассказе «Старуха Изергиль» М. Горького – «Он разорвал себе грудь и вырвал из неё своё сердце и высоко поднял его над головой...»?
- А\ о Ларре  
 В\ о Лойко Зобаре  
 С\ о Данко  
 D\ о Данило
39. Конфликт между двумя поколениями изображается в романе:
- А\ Обломов  
 В\ Отцы и дети  
 С\ Преступление и наказание  
 D\ Анна Каренина
40. Первым русским писателем получившим нобелевскую премию был:
- А\ М. Шолохов  
 В\ А. Солженицын  
 С\ И. Бунин  
 D\ Б. Пастернак
41. Кто основал город «Санкт Петербург»?
- А\ Иван Грозный  
 В\ В.И. Ленин  
 С\ Пётр первый  
 D\ М.В.Ломоносов
42. Поэма «Слово о полку Игореве» была создана:
- А\ в 1812 г  
 В\ в 1945 г  
 С\ в 1921 г  
 D\ в 1186 г
43. Произведение «Ревизор» Н. Гоголя – это:
- А\ комедия  
 В\ трагедия  
 С\ поэма  
 D\ роман в стихах

44. Какому русскому писателю Махатма Ганди писал письма ?
- |                |                    |
|----------------|--------------------|
| А\ Антон Чехов | В\ Максим Горький  |
| С\ Лев Толстой | Д\ В.В. Маяковский |
45. «Эрмитаж» находится в:
- |           |               |
|-----------|---------------|
| А\ Минске | В\ Петербурге |
| С\ Киеве  | Д\ Москве     |
46. Когда произошла 'Великая Октябрьская Социалистическая Революция' в России ?
- |         |         |
|---------|---------|
| А\ 1916 | В\ 1917 |
| С\ 1918 | Д\ 1919 |
47. Россия приняла христианство
- |             |             |
|-------------|-------------|
| А\ в 1108 г | В\ в 988 г  |
| С\ в 888 г  | Д\ в 1018 г |
48. Пётр Первый был
- |           |              |
|-----------|--------------|
| А\ Князей | В\ Помещиком |
| С\ Куштом | Д\ Царей     |
49. Столицей древнерусского государства была
- |                    |          |
|--------------------|----------|
| А\ Москва          | В\ Киев  |
| С\ Санкт Петербург | Д\ Минск |
50. Кому посвящено стихотворение "К..." Пушкина ?
- |                     |                    |
|---------------------|--------------------|
| А\ А.П.Керн         | В\ Н. О. Ганнибалу |
| С\ Арина Родионовне | Д\ Н.Н.Гончарове   |