

PU-CET (B.D.S.) – 2015**Paper – III : Biology**

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*

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

O.M.R. Answer Sheet Serial No.

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

Signature of Candidate: _____

Signature of Invigilator: _____

Time: 70 Minutes**Number of Questions: 60****Maximum Marks: 120****DO NOT OPEN THE SEAL ON THE BOOKLET UNTIL ASKED TO DO SO.****INSTRUCTIONS:**

1. Write your Roll No. on the Questions Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Question Booklet Serial No. 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 **60** 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**. Each question carries 2 marks.
6. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Booklet. No marks will be deducted in such cases.
7. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the question 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. For calculation, use of simple Log tables is permitted. Borrowing of log table or other material is not allowed.
11. 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.**
12. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
13. 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.
14. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistant or found giving or receiving assistant 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.
15. **Communication equipment such as mobile phones, pager, wireless set, scanner, camera or any electronic/digital gadget etc., is not permitted inside the examination hall. Use of calculators is not allowed.**
16. The candidates will not be allowed to leave the Examination Hall/Room before the expiry of the allotted time.

- In the five-kingdom classification of Whittaker, slime molds were placed in the kingdom.....
 - Protista
 - Monera
 - Fungi
 - Animalia
- Soredia, the type reproductive structures, are found in.....
 - Ferns
 - Hornworts
 - Liverworts
 - Lichens
- Which of the following pteridophytes is not heterosporous?
 - Isoetes*
 - Psilotum*
 - Marsilea*
 - Selaginella*
- Acharya Jagadish Chandra Bose Indian Botanical Garden is located in.
 - Uttarakhand
 - West Bengal
 - Kerala
 - Karnataka
- Which of the following viroids was the first to be identified?
 - Avocado Sunblotch Viroid
 - Peach Latent Mosaic Viroid
 - Potato Spindle Tuber Viroid
 - Eggplant Latent Viroid
- Tapeworms belong to the phylum.....
 - Arthropoda
 - Platyhelminthes
 - Annelida
 - Nematoda
- In *Volvox*, the chloroplast is.....
 - Reticulate
 - Spiral
 - Cup shaped
 - Ribbon shaped
- Which of the following trace elements is absorbed in anionic form?
 - Molybdenum
 - Copper
 - Manganese
 - Zinc
- In which of the following plants germination is epigeal?
 - Pea
 - Gram
 - Maize
 - Castor
- Cyclic photophosphorylation involves.....
 - Only Photosystem I
 - Only Photosystem II
 - Both Photosystems I and II
 - Either Photosystem I or Photosystem II
- Cryptochrome, a plant photoreceptor, is sensitive to...
 - Red light
 - Far-red light
 - Blue light
 - Ultra-violet light
- Which of the following is a C4 plant?
 - Rye
 - Wheat
 - Rice
 - Corn
- Which of the following is not true about plant hormones?
 - Are the signal molecules
 - Their biosynthesis is not always localized
 - Are required in very low concentrations
 - Provide nutrients to the plant

14. Which of the following plant growth regulators known to stimulate seed germination are found in the smoke of the burning plant material?
- A) Karrikins
B) Strigolactones
C) Polyamines
D) Brass inosteroids
15. In the eukaryotic cell, Krebs cycle takes place in the
- A) Matrix of mitochondrion
B) Inter-membrane space of mitochondrion
C) Along outer membrane of mitochondrion
D) Along plasma membrane
16. In which of the following plants species, leaves are involved in reproduction?
- A) *Kalanchoe*
B) *Dahlia*
C) *Narcissus*
D) *Fragaria*
17. Removal of anthers (before their dehiscence) from bisexual flowers is referred to as:
- A) Apomixis
B) Parthenogenesis
C) Anthesis
D) Emasculation
18. The fleshy whitish outgrowth at the micropylar end of seeds is known as:
- A) Perisperm
B) Caruncle
C) Remains of Pollen tube
D) Carina
19. Which of the following terms is used for change in allele frequency from one generation to the next?
- A) Gene transfer
B) Genetic drift
C) Gene flow
D) Gene Therapy
20. Which of the following represents trisomic condition?
- A) $2n+1$
B) $2n-1$
C) $2n+2$
D) $2n-2$
21. Which of the following bacterium converts nitrite into nitrate?
- A) *Nitrosomonas*
B) *Pseudomonas*
C) *Clostridium*
D) *Nitrobacter*
22. Who is known as the father of modern taxonomy?
- A) A. P. de Candolle
B) Theophrastus
C) A. L. Takhtajan
D) Carl Linnaeus
23. Who among the following proposed that in a population, the allele frequencies remain constant and stable from one generation to the other?
- A) Hardy-Weinberg
B) Lotka-Volterra
C) Nicholson and Bailey
D) Beadle-Tatum
24. First commercially grown genetically modified crop was.....
- A) Tomato
B) Potato
C) Maize
D) Soybean
25. The clover leaf structure of tRNA is its.....structure
- A) Primary
B) Quaternary
C) Tertiary
D) Secondary

26. In which of the following dihybrid cross, F₂ phenotypic ratio is 13:3?
- A) Complementary genes
B) Epistatic genes
C) Supplementary genes
D) Incomplete dominance
27. Resemblance between distantly related organisms due to a common adaptation is known as
- A) Parallel evolution
B) Divergent evolution
C) Convergent evolution
D) Reticulate evolution
28. Which of the following type of mutations occur when to a codon specifying an amino acid gets converted to one of the stop codons?
- A) Leaky mutation
B) Nonsense mutation
C) Neutral mutation
D) Missense mutation
29. Which of the following is the source of foreign gene in Bt cotton?
- A) Bacterium
B) Virus
C) Neurspora
D) Arabidopsis
30. Sterilization / surgical methods applied to females to control population is known as...
- A) Tubectomy
B) Vasectomy
C) *In-vitro* fertilization
D) Castration
31. The sclerites of insect skeleton represent:
- A) The internal skeleton of each segment
B) The external skeleton of each segment
C) Hard chitinous exoskeleton covering the whole body
D) Thin flexible articular membranes between segments
32. Cockroach is.....and its excretory organs are.....
- A) Amonotelic, flame cells
B) Ureotelic, nephridia
C) Uricotelic, Malpighian tubules
D) Ureotelic, Green glands
33. Which of the following cell organelles lacks a membrane:
- A) Smooth endoplasmic reticulum
B) Rough endoplasmic reticulum
C) Lysosomes
D) Ribosomes
34. Nissl bodies present in the cytoplasm of a neuron represent:
- A) Lysosomes
B) Mitochondria
C) Pigment granules
D) Endoplasmic reticulum
35. A prokaryotic ribosome consists of the following two subunits:
- A) 50S and 30S
B) 60S and 20S
C) 50S and 20S
D) 60S and 30S
36. Which one of the following has its own DNA:
- A) Centriole
B) Endoplasmic Reticulum
C) Mitochondria
D) Ribosome

37. Which one of the following is a structural polysaccharides:
- A) Fibrin B) Keratin C) Chitin D) Elastin
38. Chargaff's rule pertains to:
- A) Energy currency B) Base pairing
C) Chromosome binding D) Cardiac output
39. Albinism is a disease caused by deficiency of:
- A) Enzyme B) Hormone C) Vitamin D) Minerals
40. Water has maximum density at:
- A) 1°C B) 2°C C) 0°C D) 4°C
41. Crossing over occurs during:
- A) Leptotene B) Zygotene C) Pachytene D) Diplotene
42. Curdling of milk in the human stomach is brought about by:
- A) Rennin B) Renine C) Caesin D) Lactose
43. Mumps are caused due to inflammation of salivary glands. Which of the following is responsible for the disease:
- A) Parotid B) Sub lingual C) Sub mandibular D) Maxillary
44. Deficiency of oxygen in blood causes a dark blue color of skin and mucous membrane. This is called:
- A) Orthopenia B) Hypercapnia C) Cyanosis D) Rhinitis
45. Which class of lipids are considered friendly lipids
- A) HDL B) LDL C) VLDL D) FFA
46. When is blood donation day observed
- A) 1st February B) 1st July C) 1st October D) 1st December
47. In a honey bee colony the workers which are sterile females sacrifice their lives for the defense of the colony. This type of behavior is called:
- A) Mutualism B) Commensalism C) Altruism D) Ammensalism
48. Vital index is:
- A) Mortality/Natality B) Natality/Mortality
C) Natality/Mortality x 100 D) Mortality/Natality x 100
49. The interdependent evolution of flowering plants and pollinating insects together is known as
- A) Proto-cooperation B) Co-evolution C) Allelopathy D) Sympatric

50. Which bacteria is used in bread making:
- | | |
|--------------------------------------|--------------------------------|
| A) <i>Streptococcus thermophiles</i> | B) <i>Streptococcus lactis</i> |
| C) <i>Saccharomyces cerevisiae</i> | D) <i>Acetobacter aceti</i> |
51. Which of the following does not caused AIDS:
- | | |
|---|---|
| A) Kissing an infected person | B) Unprotected sex with infected person |
| C) Infected mother to baby before birth | D) Infected needles |
52. Which of the following is a parasitic disease not transmitted by insect vector
- | | | | |
|------------|---------------|---------------|------------------|
| A) Malaria | B) Filariasis | C) Ascariasis | D) Leishmaniasis |
|------------|---------------|---------------|------------------|
53. The only floating-national park in the world which is home of the dancing deer is located in:
- | | | | |
|-----------|----------|--------------|-----------------|
| A) Canada | B) India | C) Sri Lanka | D) South Africa |
|-----------|----------|--------------|-----------------|
54. Which one of the following is a source of botanical pesticide:
- | | | | |
|------------------|---------|---------------|---------------|
| A) Chrysanthemum | B) Rose | C) China rose | D) Holly hock |
|------------------|---------|---------------|---------------|
55. Which one of the following is related to synthesis of antibodies:
- | | | | |
|---------|----------|-----------|--------|
| A) GERL | B) He la | C) LNG-20 | D) Cry |
|---------|----------|-----------|--------|
56. A population in which mating occurs at random is:
- | | | | |
|--------------|----------------|--------------|---------------|
| A) Apomictic | B) Pieiotropic | C) Panmictic | D) Allopatric |
|--------------|----------------|--------------|---------------|
57. Which mouth parts of cockroach help in the crushing of food:
- | | | | |
|-------------|-----------|-----------|--------------|
| A) Maxillae | B) Labrum | C) Labium | D) Mandibles |
|-------------|-----------|-----------|--------------|
58. How many segments are present in the leg of cockroach:
- | | | | |
|------|------|------|------|
| A) 3 | B) 4 | C) 5 | D) 6 |
|------|------|------|------|
59. The accessory reproductive glands of female cockroach are
- | | |
|-----------------------|----------------------|
| A) Mushroom glands | B) Preputial glands |
| C) Bartholin's glands | D) Collateral glands |
60. Egg case of cockroach is:
- | | | | |
|------------------|----------------|------------|-----------|
| A) Spermatophore | B) Spermatheca | C) Ootheca | D) Cocoon |
|------------------|----------------|------------|-----------|

x-x-x