CET(PG)-2015

Sr. No. : 196245

Question Booklet Series : A

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

Roll No. *In Figures* | | | | | | | *In Words* _____

O.M.R. Answer Sheet Serial No. | | | | | | |

Signature of the Candidate : _____

Subject : M.Sc. (Hons. School/2 Year Course)-Zoology

Time : 90 minutes **Number of Questions : 75** **Maximum Marks : 75**

DO NOT OPEN THE SEAL ON THE BOOKLET UNTIL ASKED TO DO SO

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 Subject and Series Code 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. To open the Question Booklet remove the paper seal gently when asked to do so.
5. Please check that this Question Booklet contains **75** questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
6. Each question has four alternative answers (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.**
7. 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.
8. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
9. Negative marking will be adopted for evaluation i.e., 1/4th of the mark of the question will be deducted for each wrong answer. A wrong answer means incorrect answer or wrong filling of bubble.
10. For calculations, use of simple log tables is permitted. Borrowing of log tables and any other material is not allowed.
11. For rough work only the sheets marked "Rough Work" at the end of the Question Booklet be used.
12. 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.**
13. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
14. 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.
15. 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.
16. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculator is not allowed.**

SEAL

1. **Which one of the following is an example of the name of a species ?**

   (A) Malarial parasite
   (B) Crocodile
   (C) Donovani
   (D) Homo

2. **Type of pseudopodia formed in amoeba :**

   (A) Actinopodia
   (B) Filopodia
   (C) Reticulopodia
   (D) Lobopodia

3. **Sporozoites of malarial parasite enter :**

   (A) RBCs of human
   (B) Liver cells of human
   (C) Stomach of mosquito
   (D) Salivary gland of mosquito

4. **Paramecium contains :**

   (A) Two micronuclei only
   (B) Two macronuclei only
   (C) One macro and one, two or more micronuclei
   (D) One micro and one, two or more macronuclei

5. **Silicoblast is one of the :**

   (A) Porocyte
   (B) Scleroblast
   (C) Thesocytes
   (D) Calcoblast

6. **Which one of the following is a calcareous sponge ?**

   (A) *Spongilla*
   (B) *Hyalonema*
   (C) *Euspongia*
   (D) *Leucosolenia*

7. **Which is the correct sequence of the path of water current flowing through leucosolenia ?**

(A) Ostium—spongocoel—osculum
(B) Osculum—spongocoel—Ostium
(C) Osculum—Ostium—spongocoel
(D) None of the above

8. **Parenchymula is a larva of :**

(A) Clathrina
(B) Hydra
(C) Ascaris
(D) Earthworm

9. **Genetic name of sea fur is :**

(A) Obelia
(B) Cliona
(C) Sea anemone
(D) Pennatula

10. **A sea anemone growing on gastropod shell inhabited by a hermit crab symbolizes which kind of association ?**

(A) Symbiosis
(B) Commensalism
(C) Competition
(D) Neutralism

11. **Nematoblasts are formed by :**

(A) Nerve cells
(B) Gland cells
(C) Interstitial cells
(D) Mesoepithelial cells

12. **Pharynx can be everted in :**

(A) Planaria
(B) Liver fluke
(C) Tapeworm
(D) None

13. **Which one of the following is not a larval stage of fasciola ?**

(A) Miracidium
(B) Cercaria
(C) Cysticercus
(D) Redia

14. **Gynaecophoric canal is present in some animals of :**

(A) nematode
(B) cestoda
(C) turbellaria
(D) trematoda

15. **Scientific name of lung fluke of man is :**

(A) *Hymenolepis nana*
(B) *Schistosoma haematobium*
(C) *Paragonimus westermani*
(D) *Echinococcus granulosus*

16. **Ascaris is a/an :**

(A) Obligatory aerobe
(B) Facultative anaerobe
(C) Obligatory anaerobe
(D) All of these

17. **Coelom derived from blastocoel is known as :**

(A) Pseudocoelom
(B) Enterocoel
(C) Schizocoel
(D) Haemocoel

18. **Scientific name of pinworm is :**

(A) Trichinella
(B) Ancyclostoma
(C) Enterobius
(D) Wuchereria

19. **Name the only protochordate with all the basic chordate structures :**

(A) Amphioxus
(B) Salpa
(C) Doliolum
(D) Balanoglossus

20. **Petromyzon is not a true fish because of :**

(A) Absence of median fins
(B) Presence of gills
(C) Absence of paired fins and true jaws
(D) Absence of operculum

21. **In vertebrates, which one of the following structures is believed to have been transformed into thyroid gland :**

(A) Pygostyle (B) Urostyle

(C) Endostyle (D) Anal style

22. **Ganoid scales are present in :**

(A) Labeo (B) Anguilla

(C) Amia (D) Lepidosteus

23. **A sanguivorous, ectoparasitic, anadromous animal is :**

(A) Eel (B) Lamprey

(C) Salmon (D) Slime eel

24. **Weberian ossicles are found in :**

(A) Frogs (B) Fishes

(C) Birds (D) Snakes

25. **If skin of earthworm dries it dries due to :**

(A) Dehydration (B) Toxicity

(C) Starvation (D) Asphyxia

26. **An organ in earthworm analogous to our kidney is :**

(A) Clitellum (B) Nephridium

(C) Testis (D) Ovary

27. **A file like rasping organ for feeding in mollusca :**

(A) Dental plate (B) Tongue

(C) Radula (D) Osphradium

28. **Development of echinoderm is :**

(A) Parthenogenetic
(B) Direct
(C) Indirect
(D) None of above

29. **Sedentary echinoderm is :**

(A) Sea lily
(B) Sea pen
(C) Sea cow
(D) Sea cucumber

30. **Father of pearl industry is :**

(A) Jenner
(B) Mikimoto
(C) Tremley
(D) Wallack

31. **Terminal chiasmata are characteristics of :**

(A) Anaphase **I**
(B) Metaphase **II**
(C) Metaphase **I**
(D) Prophase **II**

32. **Sexual reproduction involves the alternation of :**

(A) Mitosis and oogamy
(B) Mitosis and oogamy
(C) Meiosis and fertilization
(D) Isogamy and meiosis

33. **Synapsis is the process whereby :**

(A) Homologous pairs of chromosomes separate and migrate toward a pole.
(B) Homologous chromosomes exchange chromosomal material.
(C) Homologous chromosomes become closely associated.
(D) The daughter cells contain half of the genetic material of the parent cell.

34. **Transitional epithelium is found in :**

(A) Stomach
(B) Lungs
(C) Liver
(D) Urinary bladder

35. **Compound tubular gland is :**

(A) Salivary gland
(B) Sweat gland
(C) Brunner's gland
(D) None of above

36. **What is the blending theory of inheritance ?**

(A) Mendel's theory of how the traits of parents are passed to offspring through the gametes
(B) Darwin's theory of how traits are passed from all parts of the parent's body into the gamete to be transmitted to the offspring
(C) The modern theory of how genetic information is passed from parents to offspring
(D) An old theory that said that offspring show traits intermediate between those of the parents

37. **Since each child of two heterozygous parents has a 1/4 chance of receiving a recessive trait from each parent :**

(A) If the first child is phenotypically recessive, then the next child must be phenotypically dominant.
(B) If the first child is phenotypically recessive, then the next child has a 3/4 chance of being phenotypically recessive.
(C) If the first child is phenotypically recessive, then the next child has a 1/2 chance of being phenotypically recessive.
(D) No matter what the first child's phenotype, the next child will have a 1/4 chance of being phenotypically recessive.

38. **In the use of a Punnett square for genetic results of crossing individuals :**

(A) all different kinds of sperm are lined up either horizontally or vertically.
(B) all different kinds of eggs are lined up either horizontally or vertically.
(C) every possible allele combination is placed within the square.
(D) All of the choices are correct.

39. **Each of the following statements concerning kala-azar is correct except :**

(A) Kala-azar is caused by leishmania donovani

(B) Kala-azar is transmitted by the bite of sandflies

(C) Kala-azar occurs primarily in rural Latin America

(D) Kala-azar can be diagnosed by finding amastigotes in bone marrow

40. **Which of the following agent is used to prevent Malaria ?**

(A) Mebendazole

(B) Chloroquine

(C) Inactivated vaccine

(D) Zinc tablet

41. **Open vascular system is found in :**

(A) man

(B) fish

(C) prawn

(D) snake

42. **In homeotherms the brain center which regulates the body temperature is located in :**

(A) Cerebrum

(B) Cerebellum

(C) Medulla oblongata

(D) Hypothalamus

43. **Oxytocin stimulates the contraction of :**

(A) Lung

(B) Ovary

(C) Heart

(D) Uterus

44. **During hibernation frog respires by :**

(A) Skin

(B) Lung

(C) Both (A) and (B)

(D) None of these

45. **Most of fat digestion occur in :**

(A) Rectum

(B) Stomach

(C) Duodenum

(D) Small intestine

46. **Which are called sperm mother cells ?**

(A) Spermatids
(B) Spermatogonia
(C) Spermatocytes
(D) Primodial germ cells

47. **Each centriole in the mature sperm consists of :**

(A) 2 central and 9 peripheral fibrils
(B) 3 central and 6 peripheral fibrils
(C) 4 central and 5 peripheral fibrils
(D) 9 central and 2 peripheral fibrils

48. **The seven-day blastocyst :**

(A) has a single layer of trophoblast at the embryonic pole
(B) has a full developed amniotic cavity
(C) is attached to the endometrial epithelium
(D) is surrounded by a degenerating zona pellucida

49. **The early stages of cleavage are characterized by :**

(A) Formation of a hollow ball of cells
(B) Formation of the zona pellucida
(C) Increase in the size of the cells in the zygote
(D) Increase in the number of cells in the zygote

50. **The blastocoel becomes the :**

(A) Amniotic cavity
(B) Extraembryonic coelom
(C) Primary yolk sac
(D) Chorionic cavity

51. **Viruses are assigned to the kingdom :**

(A) Archaebacteria
(B) Protista
(C) Fungi
(D) None of above

52. **Which group of vertebrates comprises the highest number of endangered species ?**

(A) Mammals
(B) Birds
(C) Fishes
(D) Reptiles

53. **Identify the odd combination of the habitat and particular animal concerned :**

(A) Sundarbans-Bengal tiger
(B) Periyar-elephant
(C) Rann of Kutch-wild ass
(D) Dachigam national park-snow leopard

54. **What is common among scorpion , crab, honeybee and silverfish ?**

(A) Poison glands
(B) Jointed legs
(C) Metamorphosis
(D) Compound eyes

55. **Peripatus is a connecting link between :**

(A) Annelida and Arthropoda
(B) Annelida and Mollusca
(C) Mollusca and Arthropoda
(D) Coelonterata and Platyhelminthes

56. **The longest segment in the leg of cockroach is :**

(A) Coxa
(B) Femur
(C) Tibia
(D) Trochanter

57. **Histone proteins are synthesized in :**

(A) S-phase
(B) G1-phase
(C) G2-phase
(D) Prophase

58. **The rate of diffusion of a substance through the Plasma membrane is affected by all of the following except :**

(A) Temperature
(B) Availability of ATP
(C) Size or mass of substance
(D) Steepness of the concentration gradient

59. **The Na + /K + pump transports :**

(A) 3 Na + into and 2 K + out of cell
(B) 2 Na + into and 2 K + out of cell
(C) 3 Na + out of and 3 K + into cell
(D) 3 Na + out of and 2 K + into cell

60. **In mitochondria, cristae act as sites for :**

(A) Protein synthesis
(B) Oxidation-reduction reactions
(C) Breakdown of macromolecules
(D) Phosphorylation of flavoproteins

61. **The spherical head of the oxysome is :**

(A) F_0 subunit
(B) F_1 subunit
(C) 70S
(D) Dictyosome

62. **Mesozoic era is considered the age of :**

(A) Fishes
(B) Reptiles
(C) Birds
(D) Mammals

63. **The earliest ancestor of the present day horse was :**

(A) Mesohippus
(B) Merychippus
(C) Eohippus
(D) Equus

64. **Prototherians have evolved from :**

(A) Reptiles
(B) Eutherians
(C) Birds
(D) All of the above

65. **Theory of pangenesis was given by :**

(A) Weismann
(B) Darwin
(C) Hugo de Vries
(D) Lamarck

66. **The biogenetic law is based upon :**

(A) Paleontological evidences
(B) Genetic evidences
(C) Biochemical evidences
(D) Embryological evidences

67. **A population is in Hardy-Weinberg equilibrium for a gene with only two alleles. If the gene frequency of an allele A is 0.7, the genotype frequency of Aa is :**

(A) 0.21
(B) 0.42
(C) 0.36
(D) 0.8

68. **The slow block of polyspermy develops in response to the :**

(A) Opening of sodium channels in plasma membrane
(B) Release of binding
(C) Spreading of the fertilization cone around egg
(D) Formation of fertilization membrane

69. **The term used to describe a single dominant species that dictates community structure :**

(A) Pioneer species
(B) Keystone species
(C) Transitional species
(D) None of the above

70. **Ear lobes of arctic fox are smaller than that of tropical fox. This is :**

(A) Allen's rule
(B) Jordan's rule
(C) Gloger's rule
(D) Bergman's rule

71. **Type of mimicry in which both mimic and model are harmful (unpalatable) to the predator :**

(A) Batesian mimicry
(B) Mullerian mimicry
(C) Warning mimicry
(D) Concealing mimicry

72. **BOD stands for :**

(A) Biotic oxidation demand
(B) Biochemical organic decay
(C) Biological organism death
(D) Biological oxygen demand

73. **Eutrophication results in the reduction of :**

(A) Dissolved oxygen
(B) Mineral salts
(C) Dissolved nitrate
(D) Dissolved nutrients

74. **'Red Data Book' is produced by :**

(A) IBWL
(B) ZSI
(C) IUCN
(D) WWF

75. **The World Biodiversity Day is celebrated annually on :**

(A) 5th June
(B) 22nd April
(C) 29th December
(D) 16th September