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Part III — ZOOLOGY

(English Version)

Time Allowed : 3 Hours]

[Maximum Marks : 150

PART - I

- Note :** i) All the questions are to be answered.
ii) Choose and write the correct answers in the answer-book.

 $30 \times 1 = 30$

1. The human disease caused due to autosomal dominant gene is
 - a) Huntington's chorea
 - b) Albinism
 - c) Thalassemia
 - d) Sickle cell anaemia.
2. The automated machines to read hundreds of bases in the DNA are
 - a) Electrocardiogram
 - b) Sequenators
 - c) Manometer
 - d) Autoanalyser.
3. Super bugs are genetically engineered
 - a) Viruses
 - b) Bacteria
 - c) Fungi
 - d) Algae.
4. The particles that initiate rain by seeding clouds method are
 - a) Sodium chloride
 - b) Potassium chloride
 - c) Potassium iodide
 - d) Chlorofluorocarbons.

[Turn over

5. Which one of the following is not a dual breed variety of cattle ?

- a) Ongole
- b) Karan Swiss
- c) Tharparker
- d) Kankrej.

6. The triose sugar is

- a) Fructose
- b) Galactose
- c) Glyceraldehyde
- d) Glucose.

7. Which one of the following is not a protein digesting enzyme ?

- a) Trypsin
- b) Carboxy peptidase
- c) Renin
- d) Sucrase.

8. Which of the following ions initiates the chemical events of muscle contraction ?

- a) Sodium
- b) Calcium
- c) Potassium
- d) Chloride.

9. Which part of the brain contains sleep centre and respiratory centre ?

- a) Mesencephalon
- b) Diencephalon
- c) Rhombencephalon
- d) Prosencephalon.

10. The organ of corti is located on

- a) Basilar membrane
- b) Reissner's membrane
- c) Plasma membrane
- d) Tympanic membrane.

11. The exotic breed of fowl is

- a) Chittagong
- b) Leghorn
- c) Aseel
- d) Busra.

12. Which of the following Vitamins are rich in fish ?

- a) Vitamins A and B
- b) Vitamins D and K
- c) Vitamins A and D
- d) Vitamins B and E.

13. Progressive increase in WBC count indicates

- a) Anaemia
- b) Polycythemia
- c) Thalassemia
- d) Leukemia.

14. Royal jelly is secreted by

- a) Queen bee
- b) Worker bee
- c) Drone bee
- d) Larva.

15. The infecting agent of Pebrine disease is

- a) Fungus
- b) Virus
- c) Bacteria
- d) Protozoa.

16. Which one of the following represents hypertension blood pressure ?

- a) 120/80 mm Hg
- b) 130/90 mm Hg
- c) 160/95 mm Hg
- d) 95/160 mm Hg.

17. The transmitter substance of stimulus is

- a) Acetyl choline
- b) Potassium chloride
- c) Interferon
- d) Calcium ions.

18. Protein deficiency disease is called

- a) Beriberi
- b) Rickets
- c) Anaemia
- d) Kwashiorkor.

19. C-18 steroid hormone is

- a) Testosterone
- b) Progesterone
- c) Oestrogen
- d) Relaxin.

20. The industrial Noise Survey of India has recognised permissible noise level from

- a) 200 dB to 250 dB
- b) 81 dB to 120 dB
- c) 150 dB to 200 dB
- d) 100 dB to 130 dB.

21. Genetic drift is referred to as

- a) Somatic variation
- b) Bottle neck effect
- c) Disruptive selection
- d) Mutation.

22. The connection between sickle cell anaemia and malaria was established by

- a) Darwin
- b) Allison
- c) Lamarck
- d) August Weismann.

23. The mosquito larvae-controlling fish is

- a) Salmon
- b) Tilapia
- c) Gourami
- d) Trout.

24. The suitable hardness for the growth of fish in pond water is

- a) 15 ppm
- b) 14 ppm
- c) 13 ppm
- d) 12 ppm.

25. Which of the following is cultured in metahaline culture system ?

- a) *Pinctada fucata* b) *Channa striatus*
- c) *Tilapia mossambica* d) *Artemia salina*.

26. The permanent birth control method in male is

- a) Condom b) Copper-T
- c) Vasectomy d) Tubectomy,

27. A system for 'antiseptic' surgery was discovered by

- a) Louis Pasteur b) Robert Koch
- c) Gallo d) Joseph Lister.

28. Which of the following plays a role in the development of cell mediated immunity ?

- a) Thymus b) Spleen
- c) Liver d) Pancreas.

29. During inflammatory response, which type of cells influx into the affected area ?

- a) T-Lymphocytes b) Phagocytic cells
- c) Erythrocytes d) Monocytes.

30. The autoimmune disease is

- a) AIDS b) SCID
- c) Multiple sclerosis d) Alzheimer's disease.

PART - II

Note : Answer any fifteen questions.

15 × 3 = 45

31. How will you calculate Body Mass Index ? Mention its normal range in adult.
32. Write any three causes for peptic ulcer.
33. What is Rigor Mortis ?
34. Write a brief note on cardiopulmonary resuscitation.
35. Define primary memory.
36. Draw the negative feedback mechanism of TSH.
37. Write any three functions of skin.
38. What are the control measures for Ascariasis ?
39. What are the three functions of antibodies ?
40. Write any two uses of Karyotyping.
41. What is differentiation ?
42. What are the effects of ozone depletion on human health ?
43. Define outbreeding.
44. Mention the important steps in rearing of chickens.
45. Write about the T wave of ECG.
46. Write the uses of Stethoscope.

47. Write a brief note on Tasar silk.
48. State the theory of inheritance of acquired characters proposed by Lamarck.
49. What is Hapa ? Mention its uses.
50. What is pole culture ?

PART - III

Note : Answer any seven questions including Question No. 56 which is compulsory.

7 × 5 = 35

51. Write about any five types of bone fracture.
52. How are test tube babies produced ?
53. Explain three types of viral culture.
54. Enumerate the adaptations of pathogenic microbes.
55. How is graft rejected ? Mention the symptoms of graft rejection.
56. Briefly describe the reasons for decline of biodiversity.
57. Write various measures to eradicate poverty in human society.
58. Write a short note on milk fever.
59. Give an account of chemical composition and uses of honey.
60. What are the mechanisms that prevent interspecific crosses ?
61. Enumerate the prospects of aquaculture.
62. Write short notes on any two fresh water ornamental fishes.

PART - IV

Note : Answer any four questions.

4 × 10 = 40

63. Describe the mechanism of breathing with diagram.
 64. Explain the importance of pancreas as an endocrine gland.
 65. Explain the mechanism of urine formation.
 66. Write an essay on symptoms, control and management of AIDS.
 67. Give an account of Human Genome Project.
 68. Write the effects of Global warming and the steps to be taken to control it.
 69. What is computed tomography scan ? Comment on its advantages and uses.
 70. Write an essay on 'induced breeding in fish culture'.
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