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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 × 1 = 30

- The normal blood glucose level during fasting is
 - 70 to 110 mg/dl
 - 80 to 200 mg/dl
 - 100 to 150 mg/dl
 - 200 to 250 mg/dl.
- Deficiency of Vitamin niacin causes
 - Anaemia
 - Scurvy
 - Pellagra
 - Xerosis.
- Ca ions necessary for the contraction of muscles are released from
 - Blood
 - Protoplasm
 - Synovial membrane
 - Sarcoplasmic reticulum.

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4. Which disease is associated with the atrophy of cerebral cortex ?
- a) Amnesia
 - b) Myasthenia gravis
 - c) Meningitis
 - d) Alzheimer's disease.
5. The photosensitive pigment present in the outer segment of the rod cells of eye is
- a) Proteinopsin
 - b) Rhodopsin
 - c) Photopsin
 - d) Opsonin.
6. The other name for Grave's disease is
- a) Diabetes
 - b) Thyrotoxicosis
 - c) Cretinism
 - d) Dwarfism.
7. Which part of the brain contains a respiratory centre ?
- a) Lungs
 - b) Medulla oblongata
 - c) Cerebellum
 - d) Cerebrum.
8. Urea biosynthesis takes place in
- a) Pancreas
 - b) Liver
 - c) Spleen
 - d) Kidney.
9. The sperms are stored in
- a) Epididymis
 - b) Seminal vesicle
 - c) Vas deferens
 - d) Prostate gland.
10. In ear, which gland secretes wax ?
- a) Apocrine glands
 - b) Merocrine glands
 - c) Sweat glands
 - d) Ceruminous glands.

11. Thymus growth occurs up to
- a) 17 years b) 30 years
c) 12 years d) 5 years.
12. Insulin dependent diabetes is an example for
- a) Hypersensitivity b) Anaphylaxis
c) Immunodeficiency disease d) Autoimmune disease.
13. Which one of the following is an anatomical barrier ?
- a) WBC b) Mucous membrane
c) Interferon d) Thymocytes.
14. Feeding jaggery along with lime water is one of the first-aid measures for
- a) Diarrhoea b) Constipation
c) Milk fever d) Anthrax.
15. Which country holds first place in seaweed production ?
- a) China b) India
c) Sri Lanka d) Bangladesh.
16. What is the name for mobile genetic elements ?
- a) Plasmids b) Pili
c) Barr body d) Transposons.
17. The Y chromosome (Karyotyping) in man is included under
- a) Group-C b) Group-E
c) Group-A d) Group-G.

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18. In Proteomics, the amino acid sequences are read by
- a) Glucometer
 - b) Thermometer
 - c) Sequenator
 - d) Haemocytometer.
19. Which one of the following organisms plays vital role in pollination of trees in tropical forest ?
- a) Mimic moths
 - b) Orchid bees
 - c) Rhinoceros beetles
 - d) Humming birds.
20. Which one of the following cow's milk contains high carotene content ?
- a) Sindhi
 - b) Haryana
 - c) Gir
 - d) Jersey.
21. Which one of the following breeds is most popular and commercial breed in India ?
- a) Aseel
 - b) Busra
 - c) Leghorn
 - d) Chittagong.
22. The disease Nosema is caused by
- a) bacteria
 - b) protozoa
 - c) fungus
 - d) virus.
23. Which blood vessel begins the systemic circulation ?
- a) Pulmonary artery
 - b) Pulmonary vein
 - c) Aorta
 - d) Superior Venacava.

24. Which one of the beehive products is used for apitherapy ?
- | | |
|--------------|----------------|
| a) Propolis | b) Royal jelly |
| c) Bee venom | d) Pollen. |
25. The diluting fluid used to count WBC is
- | | |
|---------------------|--------------------|
| a) Hayem's solution | b) Turk's solution |
| c) Eosin solution | d) Bouin's fluid. |
26. A classical example for polymorphism is
- | | |
|-------------|-------------------------|
| a) Mutation | b) Huntington's chorea |
| c) SCID | d) Sickle-cell anaemia. |
27. The book 'Philosophie Zoologique' was published by
- | | |
|-------------------|------------------------------|
| a) Charles Darwin | b) August Weisman |
| c) McDougall | d) Jean Baptiste de Lamarck. |
28. Which species is larvivorous air breathing fish ?
- | | |
|---------------------------|--------------|
| a) Gourami | b) Moli |
| c) <i>Channa marulius</i> | d) Kathival. |
29. Which fish keeps the fertilized eggs guarded in its mouth ?
- | | |
|------------|-----------|
| a) Tilapia | b) Rohu |
| c) Pomfret | d) Platy. |
30. Which one of the following is a RNA oncogenic virus ?
- | | |
|-----------------|------------------|
| a) Simian virus | b) Polioma virus |
| c) Adenovirus | d) Rous sarcoma. |

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PART - II*Note : Answer any fifteen questions.* $15 \times 3 = 45$

31. What is Marasmus ? Mention its symptoms.
32. Define appendicitis. Mention its main symptoms.
33. What is Herring-Breuer reflex ?
34. What are the symptoms of Myocardial infarction ?
35. What is 'lateralization' ?
36. Mention three reasons for cataract.
37. What is 'Corpus luteum' ?
38. Write any three contributions of Louis Pasteur in the field of Microbiology.
39. Draw a labelled sketch of the structure of immunoglobulin.
40. What are superbugs ? Mention any one of their uses.
41. Write the uses of karyotyping.
42. What is biodiversity ?
43. Name three books that explain the basic concepts of evolution.
44. List out the viral diseases of cattle.
45. What is royal jelly ?
46. What are the three stages of sericulture ?

47. Write any three uses of CT scan.
48. What is brooding ?
49. What is hypophystation ?
50. What do you know about sport fish culture ?

PART - III

Note : Answer any seven questions including Question No. 56 which is compulsory. 7 × 5 = 35

51. Give an account of root canal therapy.
52. Define memory. Explain its types.
53. Describe the structure of HIV with the help of diagram.
54. Define chemotherapeutic agents. Write the characteristic features of chemotherapeutic agents.
55. Explain the different types of graft.
56. What are the consequences of losing biodiversity ?
57. Write various measures to eradicate poverty in human society.
58. Briefly describe 'Sewal Wright effect'.
59. Write short notes on artificial insemination in cattle.
60. What are the uses of Bee wax ?
61. What are the salient features of *Macrobrachium rosenbergii* ?
62. Enumerate the prospects of aquaculture.

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PART - IV*Note : Answer any four questions.* $4 \times 10 = 40$

63. Write an essay on composition of blood.
 64. Give an account of endocrine function of Adenohypophysis.
 65. Comment on the various schemes suggested by the National Family Welfare Programmes and their importance.
 66. Give an account of various bacterial diseases in man.
 67. What is Gene therapy ? Explain its different types.
 68. Describe Fresh water management.
 69. Write an essay on Electrocardiogram.
 70. Explain any five fresh water ornamental fishes.
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