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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) Each question carries *one* mark.
 - iii) Choose and write the correct answers in the answer-book.

$30 \times 1 = 30$

1. Gene pool is enriched by
 - a) somatic variation
 - b) increase in cytoplasm
 - c) mutations
 - d) decrease in chromosomes.
2. Among which population Sickle cell anaemia is more frequent ?
 - a) American Black
 - b) African Black
 - c) European White
 - d) American White.
3. The culture practice which takes place in cold water is
 - a) Race way culture
 - b) Larvivorous fish culture
 - c) Ornamental fish culture
 - d) Sport fish culture.
4. Which disease is caused by protozoan parasite in fishes ?
 - a) Septicaemia
 - b) Costiasis
 - c) Saprolegniasis
 - d) Dropsy.
5. Which among the following is pearl oyster ?
 - a) *Ostrea edulis*
 - b) *Mytilus edulis*
 - c) *Crossostrea madrasensis*
 - d) *Pinctata fucata*.

[Turn over

6. Feeding jaggery along with limewater is one of the first aid measures for
- a) Anthrax
 - b) Diarrhoea
 - c) Constipation
 - d) Milk fever.
7. Which is a Mediterranean breed ?
- a) Australorp
 - b) Sussex
 - c) Cornish
 - d) Minorca.
8. Which of the following guards the fertilized eggs in its mouth ?
- a) Tilapia
 - b) Tuna
 - c) Pomfret
 - d) Flat fish.
9. Which instrument makes it possible to hear the foetal sounds in mother's womb ?
- a) Endoscope
 - b) Bronchoscope
 - c) Cystoscope
 - d) Electronic stethoscope.
10. Which beehive is not in practice in India ?
- a) Newton
 - b) Langstroth
 - c) Neubauer
 - d) Jeolikote.
11. About how many hereditary diseases in human beings have been identified ?
- a) About 400
 - b) More than 300
 - c) About 100
 - d) Less than 300.
12. Very short acrocentric chromosomes are grouped under
- a) Group G
 - b) Group B
 - c) Group F
 - d) Group D.
13. Which language does not help in Bioinformatics ?
- a) E-commerce
 - b) JAVA
 - c) C++
 - d) UNIX.

23. Rapid Eye Movement sleep lasts for
- a) 10 – 40 min
 - b) 02 – 20 min
 - c) 15 – 35 min
 - d) 05 – 30 min.
24. Excessive exposure to UV rays can cause
- a) Redness of eyes
 - b) Skin cancer
 - c) Colour change
 - d) Vomitting.
25. During glomerular filtration, the malpighian body acts as
- a) Acid-base balancer
 - b) Biological filter
 - c) Structural unit
 - d) Biological buffer.
26. The normal Body Mass Index range for adults is
- a) 19 – 20
 - b) 19 – 25
 - c) 10 – 15
 - d) 15 – 20.
27. Which is an exopeptidase ?
- a) Amylase
 - b) Trypsin
 - c) Lipase
 - d) Carboxypeptidase.
28. Teratologic disorder refers to which type of dislocation ?
- a) Traumatic
 - b) Congenital
 - c) Pathological
 - d) Paralytic.
29. Calcium ions necessary for the contraction of muscles are released from
- a) Sarcoplasmic reticulum
 - b) Blood
 - c) Synovial membrane
 - d) Protoplasm.
30. Which disease is more common in communities with very high rates of infection ?
- a) Pneumonia
 - b) Bronchitis
 - c) Tuberculosis
 - d) Pleurisy.

PART - II

Note : i) Answer any *fifteen* questions.

ii) Each question carries *three* marks.

15 × 3 = 45

31. What are essential amino acids ? List out them.
32. What is Rigor mortis ?
33. Write down the importance of cardio-pulmonary resuscitation.
34. What is meant by lateralization ?
35. What are the characteristics of Myxoedema ?
36. What do you know about the auditory ossicles ?
37. What are corpus luteum and corpus albicans ?
38. Comment on pathogenicity of Ascaris.
39. What are haptens ?
40. Define Bioinformatics.
41. What are the characteristics of Severe Combined Immunodeficiency ?
42. Write about the impact of solar energy on the environment.
43. What are the control measures of cowpox ?
44. What are the points that should be considered during selection of eggs in poultry ?
45. What are the uses of Stethoscope ?
46. What is Royal Jelly ?
47. What is Sercin ?

48. What is meant by chromosomal aberration ?
49. What do you know about Chicken-Fish culture ?
50. Expand the following acronyms :
 - a) CIBA
 - b) CIFA
 - c) CMFRI.

PART - III

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

ii) Each question carries *five* marks.

7 × 5 = 35

51. Give an account of the regulation of respiration.
52. Describe the structure of sarcomere.
53. Enumerate the adaptations of pathogenic microbes.
54. Write notes on Cholera and Plague.
55. Give an account of immunodeficiency diseases.
56. What are the various effects of global warming ?
57. How can poverty in human society be eradicated ?
58. What do you know about artificial insemination ?
59. What are the advantages and disadvantages of autoanalyser ?
60. Write down the mechanisms that prevent interspecific crosses.
61. What are the bionomics and salient features of *Macrobrachium rosenbergii* ?
62. Write a note on Brackish water culture.

PART - IV

Note : i) Answer any *four* questions.

ii) Each question carries *ten* marks.

4 × 10 = 40

63. Explain the digestive process taking place in small intestine.
 64. Write an essay on the physiological effects of the hormones of pancreas.
 65. Describe menstrual cycle.
 66. Give an account of Viral diseases.
 67. Give an account of Human Genome Project.
 68. What do you know about Freshwater Management ?
 69. Give a detailed account of Electrocardiogram.
 70. What are the things you have to know for setting up an Aquarium tank for Ornamental fish culture ? Mention the characteristics of any five ornamental fishes.
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