PART - III

சிறுகுழுவை / ZOOLOGY

(தமிழ் மற்றும் ஆங்கில மொழி / Tamil & English Versions)

தேர்வு: 3 மணிக்குறிகள்
Time Allowed: 3 Hours

[ எண்ணில் முறுப்பு வடிவம்: 150
[ Maximum Marks: 150

Instructions: (1) Check the question paper for fairness of Printing. If there is any lack of fairness, inform the Hall Supervisor immediately.

(2) Use Blue or Black ink to write and underline and pencil to draw diagrams.

பாகம் - I / PART - I

குறிப்பிட்டு: (i) அனைத்து சிறுகுழுவையாளரின் கிளைப்பக்கம்பற்று.

(ii) சிறுகுழுவையாளரின் கிளைப்பக்கம்பற்றுவட்டம் சிறுகுழுவையாளரின் கிளைப்பக்கம்பற்று விளங்கும் வரையாட்டு.

Note: (iii) Answer all the questions.

(iv) Write the most suitable answer from the given four alternatives and write the corresponding answer.

1. கொள்குருந்தை (சோலை) சிறுகுழுவையாளரின் கிளைப்பக்கம்பற்று:

   (a) கொள்குருந்தை B<sub>1</sub>
   (b) கொள்குருந்தை D
   (c) கொள்குருந்தை B<sub>6</sub>
   (d) கொள்குருந்தை B<sub>12</sub>

   Cod liver oil is a very good source of:

   (a) Vitamin B<sub>1</sub>
   (b) Vitamin D
   (c) Vitamin B<sub>6</sub>
   (d) Vitamin B<sub>12</sub>

[ இறுதியாக்கம் / Turn over
2. The fresh water salinity is:
(a) > 0.5%  (b) > 0.65%  (c) < 0.5%  (d) > 0.98%

3. Which type of fish grow to a large size in shorter period?
(a) Carps  (b) Tilapia  (c) Cat fish  (d) Sport fish

4. The small pox vaccine consists of:
(a) Oncho Virus  (b) Vaccinia  (c) Variola  (d) Measles virus

5. Fishes that are capable of directly breathing atmospheric air are:
(a) Cat fish  (b) Tilapia  (c) Mrigal  (d) Rohu

6. Which of the following is a fuel gas?
(a) Sulphur penta fluride  (b) Chloro fluro carbon  (c) Carbon monoxide  (d) Hydrogen
7. The natural pacemaker of heart is:
   (a) Cardiac muscle  
   (b) AV node  
   (c) Myocardium  
   (d) Sinus atrial node

8. Immunoglobulins are chemically:
   (a) glycogen  
   (b) lipoprotein  
   (c) glycoprotein  
   (d) glycolipid

9. Who developed the concept of genetic drift?
   (a) Lamarck  
   (b) H.J. Muller  
   (c) Sewall Wright  
   (d) G.H. Hardey

10. The volume of cerebrospinal fluid secreted per day in human is:
    (a) 170 ml  
    (b) 550 ml  
    (c) 200 ml  
    (d) 220 ml

11. B-lymphocytes are produced from:
    (a) Thymus  
    (b) Lymph node  
    (c) Spleen  
    (d) Bone marrow
12. The absence of plasma cells can be caused by:
(a) Albinism
(b) Huntington's chorea
(c) Agammaglobulinemia
(d) Thalassemia

13. The vasopressin is otherwise called as:
(a) Antidiuretic hormone
(b) Progesterone
(c) Leutinizing
(d) Oxytocin

14. The collection of genes in a population is called:
(a) gene pool
(b) gene accumulation
(c) gene population
(d) genome

15. The heparin which is an anticoagulant present in the cells of:
(a) Basophils
(b) Lymphocytes
(c) Neutrophils
(d) Monocytes

16. The thymus gland functions best during:
(a) Early life
(b) Adult age
(c) Middle age
(d) At rest
17. Which part of the sperm produces energy for the movement of sperm?
(a) acrosome (b) nucleus (c) mitochondria (d) axial filament

18. The organ of corti is located on the:
(a) Reissners membrane (b) Basilar membrane (c) Scala tympanic membrane (d) Tectorial membrane

19. The optimum temperature of the artificial brooding of chick during the first 3 days is:
(a) 30°C (b) 28°C (c) 32°C (d) 33°C

20. Injection of pituitary extract to induce breeding is known as:
(a) homogenizer (b) centrifuge (c) hypophyseal extract (d) chemical treatment

21. What is the name of mobile genetic element?
(a) Pili (b) Plasmids (c) Barr body (d) Transposons
22. The kidney failure leads to:
   (a) amnesia
   (b) uraemia
   (c) anaemia
   (d) leukemia

23. The parental care is seen in:
   (a) Discus fish
   (b) Angel fish
   (c) Gourami
   (d) Platy

24. A polysaccharide found in liver and muscle is:
   (a) Chitin
   (b) Cellulose
   (c) Starch
   (d) Glycogen

25. Which blood vessel begins the systemic circulation?
   (a) Pulmonary artery
   (b) Pulmonary Vein
   (c) Aorta
   (d) Coronary Sinus
26. The home of Sindhi breed is:
(a) Baroda  (b) Karachi  (c) Punjab  (d) Haryana

27. Brackish water fish are:
(a) Mrigal  (b) Rohu  (c) Madavai and Koduva  (d) Tilapia

28. The wall of the stomach is protected against the action of HCl by:
(a) Pepsin  (b) Lysozyme  (c) Mucous layer  (d) Adipose tissues

29. The minorca is originated from:
(a) Spain  (b) Europe  (c) Asia  (d) Australia

30. The human chromosome 14 and 15 are represented in the group:
(a) C  (b) D  (c) E  (d) F
Note: Answer any fifteen questions.

31. What are the uses of root canal treatment?

32. What are the symptoms of Rickets?

33. Define the term Chronic Bronchitis.

34. What is Myocardial infarction?

35. Write a brief note on REM sleep.

36. What are auditory ossicles?

37. What are corpus luteum and corpus albicans?

38. What are the methods of diagnosis of AIDS?
39. Write down the observations of Medaver in transplantation technology.

40. Mention any three tools used in genetic engineering.

41. What are the merits of cloning?

42. What is meant by Seeding of clouds?

43. Define the term Swarming.

44. Mention any three distinguishing characters of Ongole breed.

45. What is brooding?

46. What are the uses of stethoscope?

47. What is propolis?
48. How does allopatric species differ from sympatric species?

49. What is called Hapa?

50. Mention the nutritive value of edible oyster.

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Note: Answer any seven questions including question no. 56 which is compulsory.

51. Explain the phases of healing of bones in fracture.


53. Give an account on bacterial genetics.

54. Describe the Scolex of Taenia solium with diagram.
55. Write the various symptoms of graft rejection and its clinical prevention.

56. Write about the preventive measures of ozone depletion.

57. Briefly describe the reasons for decline of bio diversity.

58. Mention any five uses of Bee wax.

59. Describe the formation of silk.

60. Describe the modern concepts of Natural Selection.

61. What are the prospects of Aqua culture?

62. What are the bionomics of Tilapia Mosambica.
Note: Answer any four questions.

63. **Describe the process of digestion in small intestine.**

64. **Write an essay on refractive errors of an eye and their corrective measures.**

65. **Write an essay on birth control techniques.**

66. **Describe the life cycle of Ascaris.**

67. **Give an account on bio informatics.**

68. **Describe the management of hazardous wastes.**

69. **Write an essay on green house gases and their impact on the environment.**

70. **Describe induced breeding in fish culture.**