Part III

ZOOLOGY

Time Allowed: 3 Hours

Instruction: Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.

पढ़िे - I / PART - I

i) अनुसार विवरणातील विषयांचे विवरण करा.
ii) विवरणातील विषयांचे विवरण करा.

Note: i) Answer all the questions.
ii) Choose and write the correct answers. 30 x 1 = 30

1. मुंबईतील सल्यानी देखील मनोरितत्वातील नाही बनताना ठरला असा का?

   अ) सरदार भंडारी
   ब) आंबेडकर

   ब) शास्त्री जी
   र) गंगाधर जी.

   During root canal treatment the cavity of the tooth is filled with a sealing paste made of

   a) calcium carbonate  
   b) iodised salt  
   c) gutta percha resin  
   d) potassium salt.

   [ पढ़िे / Turn over

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2. At the time of muscle contraction ATP molecules bind with
   a) nerve end  b) actin filament
   c) myosin filament  d) myofibril.

3. Rapid eye movement sleep lasts for
   a) 10 — 40 min  b) 02 — 20 min
   c) 15 — 35 min  d) 05 — 30 min.

4. The inability to recall memories from the past is
   a) Amnesia  b) Coma
   c) REM sleep  d) Alzheimer.

5. The photo-sensitive pigment present in the outer segment of the rod cells of the eye is
   a) protein ops in  b) rhodopsin
   c) photopsin  d) opsonin.
6. The human disease due to autosomal dominant gene is
   a) Huntington's chorea  
   b) Thalassemia  
   c) SCID  
   d) Sickle cell anaemia.

7. Albinism is due to
   a) absence of melanin  
   b) absence of vitamin  
   c) presence of melanin  
   d) absence of hormone.

8. About how many genes have been identified in human genome?
   a) 60,000  
   b) 30,000  
   c) 10,000  
   d) 800.

9. Of the following which is non-biodegradable waste?
   a) Leather  
   b) Fibre  
   c) Paper  
   d) Plastic.
10. Which cattle breed is used for draught purposes?
   a) Sindhi  
   b) Gir  
   c) Kangayam  
   d) Jersey.

11. Which one of the following organs is related to pacemaker?
   a) Brain  
   b) Kidney  
   c) Heart  
   d) Lung.

12. The theory of inheritance of acquired characters was proposed by
   a) Newton  
   b) Lamarck  
   c) Charles Darwin  
   d) Müller.
13. ஓவியான் விளைவு என்று இவற்றையும் சேர்க்க, உள்ளூர் சரியானது என்று சென்றால் அருரிய கலந்துபிடிக்கப்படும் கேள்வியும்?

a) வைலையார்
b) சோமசுரார்

c) உயிரியல் குழி
b) உயிரியல் பதிவு.

The genetic disorder namely sickle cell anaemia is more frequent among

a) Indians
b) Japanese

c) American blacks
d) African blacks.

14. காட்டுநீரில் விளையாட்டு என்று கூறப்பட்டது மிகவும் விளையாட்டு இடமும்

a) மால்யா மால்யா
b) மலிந்து

b) கால்யா கால்யா
b) கீழ்காலா

Butterfly fishes are available in

a) The Gulf of Mannar
b) Lakshadweep islands

c) Gulf of Kachchh
d) Andaman islands.

15. குறிப்பிட்டால் குறிப்பிட்டால் மதிப்பு பெறுமதிப்புப் பறவை என்றால் போதுமா? (பாதுகாப்பு குறிப்பிட்டு)

a) வெளிப்படுத்த மோட்டைச்சிக்க
b) தானுக்க

b) முன்னோடை
b) பனித்து

Which fish keep the fertilized eggs guarded in the mouth? (Exhibits buccal incubation)

a) Tilapia Mosambica
b) Rohu

c) Pomfret
d) Platy.
16. The polysaccharide found in liver and muscles is
a) starch  
 b) cellulose
 c) oxygen  
 d) glycogen.

17. The important role of Vitamin A is
a) growth of bone  
 b) clotting of blood
 c) visual perception  
 d) production of energy.

18. The sino atrial node is situated in the wall of
a) right atrium  
 b) left atrium
 c) right ventricle  
 d) left ventricle.
19. The hormone that accelerates respiration and stimulates mental alertness is

a) mineralocorticoid
b) adrenalin
c) nor-adrenalin
d) cortisone.

20. During ornithine cycle

a) urea is converted into ammonia
b) ammonia is converted into urea
c) urea is converted into carbon dioxide
d) ammonia is converted into uric acid.

21. Sperms are stored in the

a) testes
b) prostrate gland
c) epididymis
d) seminal vesicle.
22. Which one of the following is a protozoan disease?
   a) African sleeping sickness  
   b) Measles  
   c) Cholera  
   d) Taeniasis.

23. The heavy chain (H chain) of immunoglobulin has a molecular weight of approximately:
   a) 50000 daltons  
   b) 25000 daltons  
   c) 75000 daltons  
   d) 40000 daltons.

24. The most important phagocytes are:
   a) the macrophages and the basophils  
   b) the macrophages and the eosinophil  
   c) the macrophages and the monocyte  
   d) the macrophages and the neutrophil.
25. முழு கோள கார்பனை கொழும்பு

(1) SCID

(2) Multiple sclerosis

Autoimmune disease is

a) AIDS

b) SCID

c) Multiple sclerosis

d) Stroke.

26. மிகவும் துணைக் கருப்பின் 60% இல்லை அதிகமானது தென்மங்களுக்கு

(1) வெப்பநோய்

(2) முசுக்கு

(3) பொய்புற நோய்

60% of the space in fish farm pond is occupied by

a) production pond

b) nursing pond

c) rearing pond

d) breeding pond.

27. பற்களின் துணைக் கருப்பின் அமைப்பு அறிக்கை

(1) PQRS

(2) QS

(3) PRT

(4) XYZ.

In the normal ECG the negative waves are

a) PQRS

b) PRT

c) QS

d) XYZ.
28. Which one of the following is not a character of Aseel?

a) Pugnacity  
b) Not good egg layers  
c) Excellent sitters  
d) Black flesh.

29. A valuable picture of the general health pattern of a patient is provided by

a) dialysis  
b) ureterorenoscopy  
c) urinalysis  
d) lithotripsy.

30. The disease Nosema is caused by

a) protozoans  
b) virus  
c) bacteria  
d) fungus.
31. List out the ailments caused by the deficiency of Vitamin A.

32. What is meant by appendicitis? State the main symptoms for appendicitis.

33. What is Hering-Breuer reflex?

34. Write the functions of hypothalamus.

35. What do you know about the auditory ossicles of the middle ear?

36. Differentiate embolus from thrombus.

37. What are corpus albicans?

38. What are the three types of segments of tapeworms?

39. What are the main functions of anti-bodies?
40. What is called pedigree analysis?

41. What is differentiation?

42. What is meant by seeding of clouds?

43. How can we find out normal and healthy cattle?

44. How can cowpox be prevented?

45. What are the points to be considered during the selection of eggs for hatching?

46. What are the three stages in sericulture?

47. Mention any three disadvantages of auto analyser.

48. Define bottleneck effect.

49. What is integrated fish culture?

50. What is hypophysation?
51. Describe the different types of fracture.

52. Draw the V.S. of human eye and label the parts.

53. Describe the pathogenic adaptation of micro-organism.

54. What are the symptoms of AIDS defined by the WHO?

55. Explain the prevention of graft rejection in the clinical field.

56. Write the effects of ozone depletion.

57. Give a short note on waste water treatment and management.
58. Write any five characters of cultivable fish.

59. Describe the formation of silk.

60. Explain speciation.

61. Write the prospects of aquaculture.

62. Give any five features of *Macrobrachium rosenbergii*.

IV / PART – IV

Note: Answer any four questions. \(4 \times 10 = 40\)

63. Explain the digestive process that takes place in small intestine.

64. Explain the process of inspiration and expiration with diagrams.

65. Write an essay on menstrual cycle.
66. Explain the viral diseases in human beings.

67. Illustrate with example the cloning mechanism.

68. What is known as energy crisis? What are the steps to be taken to solve it?

69. Write an essay on electrocardiogram.

70. Describe induced breeding in fish culture.