

SECOND REVISION TEST - 2023

MAYILADUTHURAI DISTRICT

ZOOLOGY

Time Allowed : 3.00 Hours

Maximum Marks : 70

- 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.

PART – I (15x1=15)

- Note : (i) Answer all the questions.
(ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

1. Which of the following menstrual irregularities is correctly matched?

- (a) Oligomenorrhoea - Excessive menstruation (b) Menorrhagia - Painful menstruation
(c) Amenorrhoea - Absence of menstruation (d) Dysmenorrhoea - Irregularity of menstruation

2. Which one of the following is true regarding binary fission in Paramecium?

- (a) Macronucleus divides by mitosis and the micronucleus divides by amitosis.
(b) Macronucleus divides by amitosis and the micronucleus divides by mitosis.
(c) Macronucleus and micronucleus divide by amitosis.
(d) Micronucleus and macronucleus divide by mitosis.

3. If the Child's blood group is 'O', the father's blood group is 'A' and the mother's blood group is 'B', the genotypes of the parents will be :

- (a) IA IO and IB IO (b) IA IA and IB IB (c) IO IO and IB IB (d) IA IB and IO IO

4. Which one of the following is a protozoan STI ?

- (a) Lymphogranuloma venereum (b) Genital warts (c) Candidiasis (d) Trichomoniasis

5. _____ and _____ proposed the classical model of Lac operon to explain gene expression and regulation in E.Coli.

- (a) Hershey, Chase (b) Jacob, Monod (c) Meselson, Stahl (d) Watson, Crick

6. If a triploid female Drosophila is crossed with a diploid male, which one of the following is not a possible progeny in the next generation ?

- (a) Triploid female (b) Triploid intersex (c) Super male (d) Haploid male

7. B Cells that produce and release large amounts of antibody is called :

- (a) Killer Cells (b) Memory Cells (c) Basophils (d) Plasma Cells

8. Match the following and find the correct answer :

(i) Leishmania donovani (A) Amoebiasis

(ii) Wuchereria bancrofti (B) Sleeping sickness

(iii) Trypanosoma gambiense (C) Filariasis

(iv) Entamoeba histolytica (D) Kala - azar

(a) (i) - (C), (ii) - (A), (iii) - (D), (iv) - (B) (b) (i) - (B), (ii) - (C), (iii) - (D), (iv) - (A)

(c) (i) - (C), (ii) - (D), (iii) - (A), (iv) - (B) (d) (i) - (D), (ii) - (C), (iii) - (B), (iv) - (A)

9. Which of the following group of animals are the common fauna of the Thar deserts ?

- (a) Gaur, Rhino, Antelope
(b) Jack rabbits, Kangaroo rats, Pocket mice
(c) The blackbuck, The Indian Spiny-tailed lizard, The white-footed fox
(d) Bobcat, Timber wolf, Black bear

10. Which method is commonly used to denature the double stranded DNA ?

- (a) Addition of restriction endonuclease. (b) Short time heating at 95°C.
(c) Short time cooling at 0°C. (d) Addition of DNA polymerase.

11. Which one of the following is not coming under insitu conservation ?

- (a) Biosphere Reserve (b) Sanctuaries (c) National Parks (d) Zoological Park

12. When plain land people move to hill stations, their RBC count increases for a few days. Why ?

- (a) in order to cope with low temperature. (b) in order to cope with frequent rainfall.
(c) in order to cope with low oxygen density. (d) in order to cope with high CO₂ density.

13. Now-a-days dissection of frog in schools is prohibited. This prevents :

- (a) mass extinction (b) natural extinction (c) anthropogenic extinction (d) selective extinction

14. The thickness of stratospheric ozone layered is measured in/on :

- (a) Sieverts units (b) Dobson units (c) Melson units (d) Beaufort scale

15. As per 2017 statistics, the higher per capita emitter of carbon dioxide in the world is :

- (a) USA (b) China (c) Qatar (d) Saudi Arabia

PART – II (6x2=12)

Note : Answer any six of the following. Question Number 24 is compulsory.

16. What is Colostrum ? Write any one of its significances.

17. Draw the diagram of human ovum and label the parts

18. Differentiate divergent evolution from convergent evolution with one example each.

19. If a normal visioned man marries a colour blind woman, what will be the condition of F₁ and F₂ Children?

20. What is known as cytological isolation?

21. What is known as cytology? Write its uses.

22. Write the key features of organic farming.

23. List out the biodiversity hot spots of India.

24. By 2025, two thirds of the world's Population may face water shortages. So, what are the preventive measures to be taken to reduce water pollution?

PART – III (6x3=18)

Note : Answer any six of the following. Question Number 33 is compulsory

25. Describe any three of the Viral STI and mention their symptoms.

26. Why is statutory ban imposed on amniocentesis in India ?

27. Compare and contrast bacillary dysentery and amoebic dysentery.

28. List out the withdrawal symptoms of alcoholic addicts.

29. Write the possible risks of GMOs (Genetically Modified Organisms)

30. Plastics are no more environmental hazardous wastes. What is the bioremedial solution for it ?

31. How would be the earth without green house effect ?

32. Explain the two strategies used in gene therapy

33. Write the main goals of Human Genome Project.

PART – IV (5x5=25)

Note : Answer all the questions.

34. (a) Explain the role of oxytocin and relaxin in parturition and lactation.

OR

(b) Define infertility. Write its causes.

35. (a) Comment on the methods of Eugenics.

OR

(b) Define speciation according to A.E. Emerson and explain its types giving suitable example.

36. (a) List out the salient features of genetic code.

OR

(b) Explain the process of transcription in eukaryotes.

37. (a) Explain the classical model of Lac operon proposed by Jacob and Monod

OR

(b) Explain the method of diagnosis of AIDS by ELISA test.

38. (a) Explain the exotic species invasion.

OR

(b) Every living organisms responds to its environment. Explain the various types by which organisms respond to abiotic conditions.