No. of Printed Pages : 4

FIRST TERM EXAMINATION, 2015–16

Subject : Biology

Time : 3 Hrs. **CLASS : XII** **M.M. : 70**

General Instructions :

(i) All the questions are compulsory.

(ii) Marks allotted to each question are indicated against it.

(iii) There are five questions of 1 mark each, five questions of 2 marks each, twelve questions of 3 mark each, one question of 4 marks and three questions of 5 marks each.

(iv) Attempt all parts of a question together.

1. How will you find out whether the given plant is homozygous dominant or heterozygous for a particular character ? 1

2. Which of the two, euchromatin or heterochromatin, is transcriptionally active ? Why ? 1

3. Name two major gases that were present in the atmosphere of primitive earth other than CO_2. 1

4. How inbreeding depression is got rid of in animals ? 1

5. Name the enzyme used as a clot buster and name the organism that produces it. 1

6. Which plant is known as 'Terror of Bengal' ? Why is it so called ? 2

7. Differentiate between in situ and ex situ approaches of conservation of biodiversity. 2

8. Mention four reasons why Drosophila is considered a good material for experiments in genetics ? 2

9. Bring out four advantages of micropropagation. 2

10. What are bio fertilizers ? What are the three main sources of them ? 2

11. Name the two types of cells present in the inner lining of seminiferous tubules. What are their functions ? 3

12. Three codons on mRNA are not recognized by tRNA. What are they ? What is their significance in protein synthesis ? 3

13. Give one example of anology and one of homology in plants. What do they indicate ? 3

14. Name the two special types of lymphocytes in humans. How do they differ in their roles in immune response ? 3

15. Represent schematically the process of oogenesis in human female, indicating the number of chromosomes in the cells during different stages. 3

16. A man with blood group A marries a woman with blood group B. Their first child has blood group O. Give the genotypes of the father, the mother and the child. What other blood groups do you expect in the future children of this couple ? 3

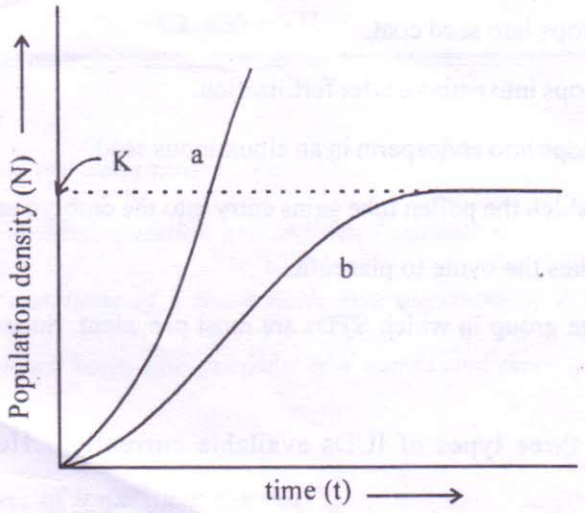
17. Explain the evolution of DDT resistance in mosquitoes. 3

18. How is ozone formed in the stratosphere ? Why is it called 'good' ozone ? CFCs contribute to ozone hole formation. Explain. 3

19. Briefly describe the various steps involved in plant breeding. 3

20. Draw a labeled diagram of a biogas plant. Why is cow dung an ideal material for generation of biogas ? 3

21. Identify curve a and b shown in the graph below. List the conditions responsible for growth patterns a and b. Give equations to represent these curves. 3



22. What is detritus ? How is detritus decomposed step-by-step by different agents and made available as nutrients to plants ? Explain. 3

23. The resource consumption pattern of people in economically developed and the developing countries differ radically.

(a) Who, between the two, people of developed countries or of developing countries, use more resources ? Justify your answer.

(b) What is the consequence of consumption of more natural resources on the environment ? Explain

(c) Indicate the value neglected by some of their people. 4

24. (a) Where does triple fusion takes place in a flowering plant ? Why is it so called ? Mention its significance.

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(b) Draw a diagram matic sectional view of a mature anatropous ovule and label the following parts in it :

(i) that develops into seed coat.

(ii) that develops into embryo after fertilization.

(iii) that develops into endosperm in an albuminous seed.

(iv) through which the pollen tube gains entry into the embryo sac.

(v) that attaches the ovule to placenta. 2+3

25. (a) Mention the age group in which STDs are most prevalent. Suggest three practices to avoid them.

(b) What are the three types of IUDs available currently ? How do they prevent pregnancy ? 2+3

26. (a) Draw a neat and labeled diagram to show continuous and discontinuous synthesis of DNA.

(b) Who performed 'Blender' experiment ? Explain its steps. What did it prove ? 2+3