

SAMPLE QUESTION PAPER-IV

Class: XII

BIOLOGY (Theory)

Time: 3 Hours

Max. Marks: 70

GENERAL INSTRUCTIONS:-

- (i) All questions are compulsory.
- (ii) The question paper consists of four sections A, B, C and D. Section-A contains 8 questions of 1 mark each, Section B is of 10 questions of 2 marks each, Section C has 9 questions of 3 marks each whereas Section D is of 3 questions of 5 marks each.
- (iii) There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 marks and all the three questions of 5 marks weightage. A student has to attempt only one of the alternatives in such questions.
- (iv) Wherever necessary, the diagrams drawn should be neat and properly labeled.

SECTION – A

1. Where was fossils of Australopithecus found in Africa ? 1
2. Name the common ancestor of cycads and dicots ? 1
3. What is the medical use of cyclosporin – A ? 1
4. Why is the gene encoding for „Cry“ protein inserted into a crop plant? 1
5. Expand MALT 1
6. Write the scientific name of any one plant that exhibits incomplete dominance in the inheritance of its flower colour . 1
7. Name the class of enzymes to which restriction enzymes belong? 1
8. Which catalytic metals are fitted in to automobiles for reducing emission of poisonous gases ? 1

SECTION – B

9. How the following methods helps in birth control ? 2
(a) IUD (b) Pills
10. Why is the number of tropic level in an ecosystem limited to 4 to 5? Explain with the help of example ? 2
11. Mother belongs to “A” group of blood father to “B” They had four children of A, B, AB, O type, Give the genotype of parents and their children ? 2

OR

Explain the main features of Turner’s Syndrome.

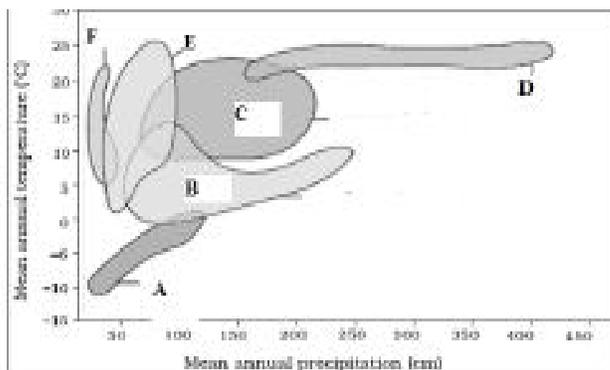
12. Sketch and label the structure of an antibody molecule. 2
13. List the factor which affect the rate of decomposition ? 2
14. How do the members of fungi and algae reproduce by special asexual structures? 2
15. Name the useful vector to deliver desirable genes in to a animal cells ? How its has been modified ? 2
16. What is Oparin Haldane theory ? can life be originated abiotically inside the laboratory today? 2
17. Explain the terms primary lymphoid organ and secondary lymphoid organ with suitable examples ? 2
18. What steps would you suggested for the conservation of wild life ? 2

SECTION – C

19. What is the main difference between Oogenesis and spermatogenesis ? 3
20. “Germplasm collection is a very effective method of plant breeding.”. How it can be done ? Is there any other method for plant breeding ? 3
21. A₃ “ _____ 5” B 3
C₅ “ _____ 3” D

AB and CD represent two strands of a DNA molecule
When this molecule undergoes replication forming a replication fork between A and C in the above.

- (i) Name the template strands for replication.
- (ii) Using which strand as the template will there be continuous synthesis of a complementary DNA strand ?
- (iii) Complementary to which strand will okazaki segment get synthesized discontinuous synthesis will occur.
22. Identify the biome indicated as A, B, C, D, E and F



3

23. What are selected marker in the vectors? Name some useful marker in E. Coli ? 3

OR

What are down stream processing operation ?

24. With the transcription of one DNA following mRNA chain was obtained.

5' - AUG CCC GGG AAA UUU CCC UGA - 3'

(i) Write the anticodons present on tRNA molecules at anticodon loop for each codon on mRNA.

(ii) How many amino acid will form this oligopeptide chain

25. Do you think that friends can influence one to take drugs heroin ? If yes how may one protect himself /herself from such an influence ? 3

26. What do you mean by e-wastes ? What are the common practices of their disposal ? 3
What risk factor are associated with their recycling in developing countries?

27. Distinguish between a Test cross and Back cross. 3

SECTION – D

28. Draw the typical dicot embryo, Label the parts, state the function of each of the labeled part.5

OR

What is menstruation ? What are the specific action of FSH, LH, estrogen and progesterone in the menstrual cycle?

29. What are transgenic animals ? Give their main benefits to humans. 5

OR

What is gene therapy ?

Illustrate using the example of adenosine deaminase deficiency ?

30. The CBI department could observe some skin scrapings in the nails of a murdered man. There were two persons suspected in this offence. How will the forensic department give a clue to find out the culprit ? Explain the technique ? What are the major steps ?

5

OR

Differentiate between the following:

- a) Homozygous and Heterozygous
- b) Monohybrid and Dihybrid
- c) Dominance and Recessive

www.eVirtualGuru.com