

## SAMPLE QUESTION PAPER-III

### Class: XII BIOLOGY (Theory)

Time : 3 Hours

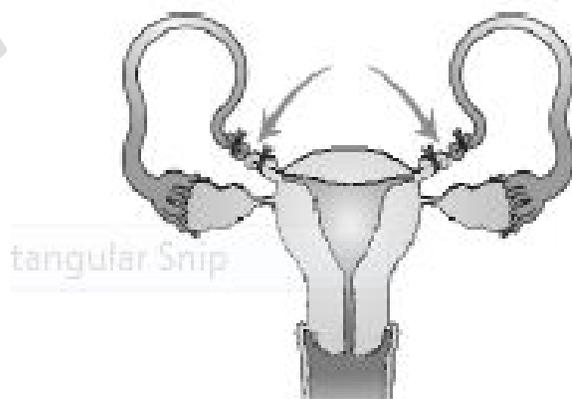
Max. Marks : 70

#### 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 labelled.

#### SECTION – A

1. Name the layer in maize seed which stores proteins? 1
2. What is common to Marchantia and Papaya plants with respect reproductive organs? 1
3. Where the gametocytes of plasmodium develops in our body? 1
4. Which chemical is used to precipitate Purified DNA? 1
5. Why small animals are found in polar regions ? 1
6. Which concept was introduced by Government of India to work closely with the local communities for protecting and managing forests? 1
7. Which bacterium is called as natural genetic engineer? 1
8. Name the sterilization techniques shown in the given figure below? 1



## SECTION – B

9. How does production of polyblend reduce the plastic waste? 2
10. (i) Name the plant which produce flower once in 12 years found in south parts of India.  
(ii) What is juvenile phase? 2
11. Describe the structure of male gametophyte. 2 12. Why testes are located in scrotum? Name the cells which secretes testosterone. 2
13. What is Panspermia? Who disprove the theory of spontaneous generation? 2
14. What is the main root of plant breeding? What are the sources of this? 2

OR

Name the semi dwarf varieties of rice developed by :-

(i) IRRI Philippines and (ii) Taiwan. 2

15. What are the outbreeding devices which prevent self pollination in plants? 2
16. Complete the table by use of suitable terms given below: 2

Ligase, Conidia, Gemmules, Polymerase chain reaction, Catabolism, Leaching

Sl.No	Terms	Meanings
1.	-----	Internal buds in sponges
2.	-----	The enzyme which joins two different DNA
3.	-----	Technique used to amplify DNA fragments.
4.	-----	Process by which nutrients are dissolved and carried away

17. How the animals are used for testing chemical safety? 2
18. What are the attributes of population? 2

## SECTION – C

19. Draw a diagram of human sperm and label the following parts:- 3
- (a) Which is filled with enzymes?  
(b) Which produce energy for movements?  
(c) Which carry paternal characters?  
(d) Which help in motility of sperm? 20. When Round Yellow seed plant for heterozygous is crossed with homozygous wrinkled green seed, ( I ) Give the genotypes of each parent. (II) What are the phenotypes of Cross (III) Show the cross by use Punnet Square. 3
21. Explain the biochemical experiment to determine the transforming principle. 3

OR

Trace the evolutionary history of Horse. 3

22. What is fitness according to Darwin? Name the naturalist who had the similar conclusion of that of Darwin. 3

23. (i) Name the exaggerated response of the immune system to certain antigens,  
(ii) Name the chemicals release to this response.  
(iii) Name the antibodies produced during this response. 3

24. Complete the following table. 3

Sl.No	Character	Dominant trait	Recessive trait
1.	Height	---	----
2.	----	---	Green
3.	Seed Shape	----	---
4.	---	----	Constricted
5.	----	Green	---
6.	---	----	Terminal

25. Draw a labeled diagram of pBR322 and label the following :- 3

(i) Rop (ii) amp<sup>R</sup> (iii) Ori (iv) tet<sup>R</sup> (v) BamHI (vi) Pst I

26. Name the three categories of conservation of biodiversity. Explain any one 3

27. What do you mean by? 3

(i) Primary productivity (ii) Secondary productivity (iii) NPP

### SECTION- D

28. List the different methods of animal breeding. Explain each any three. 5

OR

(a) How pathogens harm the host organism?

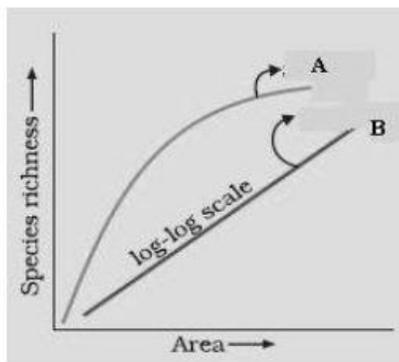
(b) Name the Fungi which cause ringworm disease. (c) List the symptoms of ringworm. [2+1+2] 29.  
Describe the silent features of DNA double helix structure with labeled diagram. 5

OR

(i) What is sickle anemia disease?

(ii) What is the major cause for this disease? (iii) How many pairs of alleles control this disease? [2+2+1]

30. Study the graph and answer the following questions.



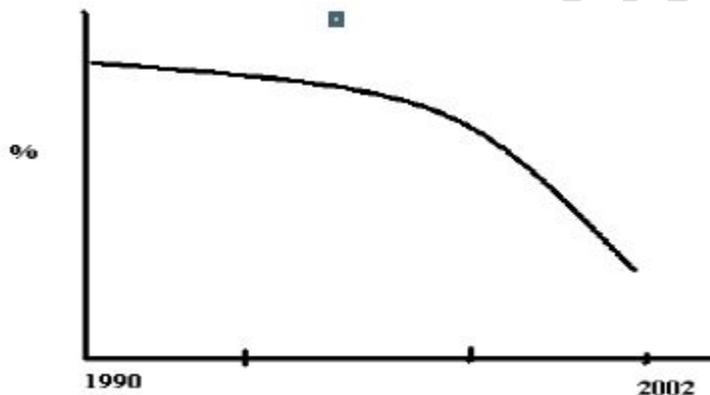
5

- (i) Name the naturalist who presented this relationship?
- (ii) What kind of relation between species richness and area for a wide variety of taxa and entire continent is found in this?
- (iii) Give the equation of A and B
- (iv) What is the value of Z line in fruit eating birds?

OR

Study the graph given below the case study of air pollution in Delhi. Explain the following questions.

5



- (a) What was the position of Delhi in 1990 in the world?
- (b) What are the main causes for this?
- (c) Why there is decrease in pollution level after 2002?