

Sample Question Paper

Session-2024-25

Biology

Class-12

Time 3 hours 15 minutes

Marks- 70

1- The first 15 minutes are allotted for the candidates to read the question paper.

2- All questions are compulsory.

3- Confirm your requirement through labeled diagrams.

4- The allocated marks for each question are indicated in front of them.

Choose the correct option and write it in your answer sheet:

(a) Which of the following parts represents the male reproductive organ of a flower? 1

(I) Pumang,

(ii) Xiang,

(iii) Insemination

(iv) Pollination

(b) In humans, the sex of the offspring is determined by 1

(i) from mother's sex chromosome

(ii) from father's sex chromosome

(ii) by the measurement of the ovum

(iii) By measuring sperm count

(c) Genetic engineering is used 1

- (i) In medicine
- (ii) In agriculture
- (iii) In both of these,
- (iv) not in any

(d) Which of the following is considered a hot spot of biodiversity in India 1

- (i) Aravalli Mountains
- (ii) Indogangetic Plain
- (iii) Western Ghats
- (iv) Eastern Ghats

2-Very short answer question-

- (a) Write the number of chromosomes in Klein Felter and Turner syndrome. 1
- (b) By which division do male germ cells produce sperms? 1
- (c) What is the number of chromosomes in the pollen mother cell? 1
- (d) Name the enzyme which breaks the DNA molecule into fragments. 1
- (e) What type of pyramids are there in the universe? 1

3- Short Answer Question-

- (a) Explain sex determination in birds. 2
- (b) Draw a neat labelled diagram of the double helical model of DNA presented by Watson and Crick. 2
- (c) What is immunity? 2
- (d) Orchid plant is growing on the branch of mango tree. How would you explain the interaction between? 2
- (e) Draw a diagrammatic representation of the decomposition cycle in a terrestrial ecosystem. 2

4- Short Answer Questions-II

- (a) Explain any three differences between microsporangium and megasporangium. 3
- (b) In our society, only women are blamed when girls are born? Explain why this is not right? 3
- (c) Explain Mendel's law of dominance taking the example of a hybrid cross. 1+2
- (d) Which feature of the DNA helix helped Watson and Crick to imagine the semi-conservative form of DNA replication? Explain it. 3

- 5-(a) Make a neat and labeled diagram of the life cycle of malaria parasite. 3
- (b) How has the study of biology helped us in controlling infectious diseases? 3
- (c) How do biofertilizers increase the fertility of the soil? 3
- (d) What is baculovirus? 3

6- (a) Write a comment on the following

- (i) PCR 1+1/2
- (ii) Restriction enzyme 1+1/2
- (b) What is the use of biotechnology in agriculture sector? 3
- (c) What do you understand by parasitic animals? Give one example. 2+1
- (d) Differentiate between the following:
- 1-Production and decomposition 1+1/2
- 2-Parasitism and commensalism 1+1/2

Long answer question-

- 7- Describe the male reproductive system of humans with a diagram. Where are the sperms stored in it? 2+2+1

Or

Describe microsporogenesis in flowering plants with diagram 2+3

8-What is the genetic code? Describe its main features.

2+3

Or

What is biological evolution? the evolution of plants through geological periods Describe pictorially. 2+3

9- The species diversity of plants (22 percent) is much less than that of animals (72 percent): What is the reason that more diversity is found in animals?

5

Or

What are the main causes of species loss in a geographical area?

5