

Model Paper-2021-22
Biology (only Question Paper)
Class-12

Time – 3 hours 15 minutes

MM-70

Note- First 15 minutes are allotted for the candidates to read the question paper.

Instructions-

- I. All questions are compulsory
- II. Illustrate your answers with labelled diagrams wherever necessary.
- III. Marks allotted to each questions are mentioned against it.

1- Choose the correct option and write in your answer book :

- a) Which of the following part represents the male sex organ of the flower- 1
 - i. Stamen
 - ii. Pistil
 - iii. Megasporangium
 - iv. Pollination
- b) In Human, sex of baby determined by- 1
 - i. Sex chromosome of mother
 - ii. Size of ovum
 - iii. Size of sperm
 - iv. Sex chromosome of father
- c) Genetic engineering is used in – 1
 - i. In Medicine
 - ii. In Agriculture
 - iii. In both (i) and(ii)
 - iv. None of these
- d) Lichen, which is responsible for ecological succession, in fact it shows symbiotic relation between 1
 - i. Algae – bacteria
 - ii. Algae- fungi

- iii. Bacteria - fungi
- iv. Fungi- bacteria

2- Very short answer type questions-

- a) Write chromosome number in klinefelter and turnor syndrome. 1
- b) By which division do male germinal cells form sperms? 1
- c) What is the number of chromosomes in pollen grain mother cell? 1
- d) Write the name of enzyme which breaks the DNA in small segments. 1
- e) What are plants called due to carbon dioxide fixation? 1

3- Short answer type questions- I

- a) Define sex determination in birds. 2
- b) Draw well labelled diagram of double helix DNA model proposed by Watson and crick. 2
- c) What is immunity? 2
- d) An orchid plant is growing on the branch of mango tree. How would you describe the interaction between these two? 2
- e) Draw clean linear diagram of biological response. 2

Short answer type questions-II

- 4 – a) Write any three differences between microsporangia and megasporangia. 3
- b) In our society, when girls are born, only women are blamed. Define why it is not correct. 3
- c) Define Mendol’s Law of dominance with the help of monohybrid cross. 3
- d) Which feature of DNA – helix help Watson and Crick to propose semi – conservative hypothesis of DNA replication? Define it. 3
- 5 – a) Draw clean and labelled diagram of life – cycle of Malaria parasite. 3
- b) How biological studies help us to control infectious diseases? 3
- c) How biological fertilizers help to increase soil fertility? 3

d) What are Baculoviruses? 3

6 – a) Write down short notes on the following – 3

i.PCR

ii.Restriction endonuclease enzyme

b) What is the use of genetic engineering in field of agricultures? 3

c) What do you understand by transgenic animal? Give any one example. 2 + 1

d) Differentiate between the following - 3

i.Hibernation and Astivation

ii.Ectothermic and Endothermic

Long answer type question-

7 – Describe human's male reproductive system with the help of labelled diagram. Where do sperms store in the system? 2 + 2 + 1

OR

Define microsporogenesis in flowering plants with the help of labelled diagram. 3+2

8- What is genetic code? Define main characteristics of genetic code. 2+ 3

OR

What is Mendel's Law of segregation? Define it with the help of checker board. Why it is called as Law of purity of gamets? 2 + 2 + 1

9 – What is adaptation? Explain with the help of examples. 2 + 3

OR

What are the main reasons of race damage (species degradation) in any geographical areas? 5