

UP Board 12 Biology (348(GJ)) Question Paper

Time Allowed :3 hours

Maximum Marks :70

Total questions :33

General Instructions

Read the following instructions very carefully and strictly follow them:

- 1. All questions are compulsory.**
- 2. Illustrate your answers with labeled diagrams, wherever necessary.**
- 3. Marks allotted to each question are mentioned against it.**

Multiple Choice Type Questions

1. (a) Which nitrogenous base is not present in DNA?

- (A) Thymine
 - (B) Uracil
 - (C) Adenine
 - (D) Guanine
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(b) How many contrasting characters were included by Mendel in his experiment?

- (A) 7
 - (B) 8
 - (C) 9
 - (D) 10
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(c) Sickle cell anemia is an example of which type of mutation?

- (A) Point mutation
 - (B) Euploidy
 - (C) Deletion
 - (D) Translocation
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(d) Pollen grains are formed in which organ of the flower?

- (A) Microsporangium
 - (B) Gynoecium
 - (C) Megasporangium
 - (D) Ovary
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Very Short Answer Type Questions

2. (a) Which organism is responsible for the spread of malaria disease?

(b) Write down the full form of PCR.

(c) Write down the name of any one transgenic animal.

(d) Coloured attractive corolla of flower is suitable for which type of pollination?

(e) What is the term used for green plants in ecosystem terminology?

Short Answer Type Questions I

3. (a) Define decomposition.

(b) Write down the names of any two fermented beverages.

(c) Write a note on the test tube baby programme.

(d) Give two differences between homozygous and heterozygous.

(e) Write two functions of ribosomes.

Short Answer Type Questions II

4. (a) Write a short note on polyembryony.

(b) Draw the three organs of gynoecium with diagrams.

(c) Write down the names of three accessory glands of the male sex organ.

(d) Differentiate between primary productivity and secondary productivity.

5. (a) Explain natural selection with an example.

(b) Explain the functions of restriction enzyme.

(c) Write a note on adaptive radiation.

(d) Comment on parthenocarpic fruits.

6. (a) Define divergent evolution with example.

(b) Write a short note on t-RNA.

(c) Define opioid drugs with an example.

(d) Draw different trophic levels in an ecosystem with a line diagram.

Long Answer Type Questions I

7. Write an essay on the importance of Biotechnology in Agriculture.

OR Describe the polymerase chain reaction with line diagram.

8. Describe Biogas plant with diagram.

OR What is cancer? Describe the causes and treatment of cancer in detail.

9. Write an essay on human evolution.

OR Explain linkage and recombination with example.
