

UP Board Class 12 Biology 2026 (Set 348 EK) Question Paper



General Instructions

- (i) This question paper contains 9 questions. All questions are compulsory.
- (ii) It comprises 4 single-correct multiple-choice questions.
- (iii) Attempt every question; detailed solutions are provided in the companion solutions booklet.

1(a). Which of the following is a water pollinated plant?

- (A) Vallisneria
- (B) Zostera
- (C) Hydrilla
- (D) All of these

1(b). Which of the following is an initiation codon?

- (A) AUG
- (B) AUU
- (C) UAG
- (D) GAU

1(c). Which of the following is needed in recombinant DNA technology?

- (A) Restriction enzyme
 - (B) Ligase
 - (C) Vector
 - (D) All of these
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1(d). Lichen is an example of which of the following type of population interactions?

- (A) Predation
 - (B) Commensalism
 - (C) Mutualism
 - (D) Parasitism
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2(a). Name any two plants in which multicarpellary syncarpous gynoecium is found.

2(b). Write the full form of ZIFT.

2(c). Name the gene which can exhibit multiple phenotypic expressions.

2(d). What is the length of DNA in a typical nucleosome?

2(e). Name the type of food chain which begins with dead organic matter.

3(a). What do you mean by Mendelian disorders? Give two examples of sex-linked Mendelian disorder.



3(b). Explain Frame shift mutation with an example.



3(c). What is trichoderma? Give one application of trichoderma as an effective biocontrol agent.



3(d). Write a note on photosynthetically active radiation.



3(e). Write a short note on over exploitation.



4(a). What is Placenta? Describe different functions of placenta in brief.



4(b). Describe various factors responsible for explosive population growth in India.



4(c). Explain test cross and back cross.



4(d). What is adaptive radiation? Describe it with the help of a suitable example.



5(a)(i). Comment upon the following: Infectious disease.

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5(a)(ii). Comment upon the following: Amoebiasis.

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5(b). Briefly describe the structure and function of antibody molecule.

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5(c). Describe the causes, detection and diagnosis of cancer in brief.

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5(d). Discuss various measures for prevention and control of drug/
alcohol abuse.

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6(a). Explain the nomenclature of restriction endonucleases. Add a note
on its applications.

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6(b). Briefly describe the different methods used to transfer the
recombinant DNA into the host cell.

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6(c). What are transgenic plants? Describe benefits of transgenic plants
in brief.

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6(d). What is trophic level? Comment upon the different types of trophic
levels in an ecosystem.

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7. Define spermatogenesis. Describe the process of spermatogenesis with the help of schematic diagram.

OR

Write an explanatory note on: Medical termination of pregnancy.

Write an explanatory note on: Biotic and abiotic agents of pollination.

8. Describe the mechanism of sex determination in honey bees and birds.

OR

Write an explanatory note on: Hardy-Weinberg principle.

Write an explanatory note on: Linkage.

9. Describe the decomposition cycle in a terrestrial ecosystem with the help of a diagram.

OR

Write an explanatory note on: Productivity.

Write an explanatory note on: Consumers.