

UP Board 12 Biology (348(GH)) 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) The endosperm of an angiospermic plant is:

- (A) Haploid
 - (B) Diploid
 - (C) Triploid
 - (D) Polyploid
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(b) The Widal test is used for the diagnosis of which disease?

- (A) Cholera
 - (B) Malaria
 - (C) Pneumonia
 - (D) Typhoid
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(c) How many meiotic divisions are required to produce 108 microspores from microspore mother cells?

- (A) 54
 - (B) 27
 - (C) 107
 - (D) 216
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(d) 'Down's Syndrome' is caused due to:

- (A) Monosomy of sex chromosomes
 - (B) Trisomy of sex chromosomes
 - (C) Trisomy of 21st pair of chromosomes
 - (D) Monosomy of 21st pair of chromosomes
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Very Short Answer Type Questions

2. (a) Write any two causes of biodiversity loss.

(b) Name any one sex-linked recessive disorder in human beings.

(c) Write the full form of IUD.

(d) Write the names of any two blue-green algae (Cyanobacteria) responsible for nitrogen fixation.

(e) What is Gel Electrophoresis?

Short Answer Type Questions I

3. (a) What do you mean by Medical Termination of Pregnancy (MTP)?

(b) What is Human Insulin?

(c) What is active and passive immunity?

(d) Write any two differences between DNA and RNA.

(e) Define productivity in an ecosystem.

Short Answer Type Questions II

4. (a) Describe mutation with an example.

(b) What is genetic engineering? Write any two applications of genetic engineering.

(c) Write a note on Nucleotide.

(d) Describe the symptoms of Pneumonia and Amoebiasis.

5. (a) Describe the medicinal use of microorganisms.

(b) Write a note on allergy.

(c) Write a short note on over-exploitation and co-extinction.

(d) Write a short note on any three chromosomal aberrations (syndromes) found in humans.

6. (a) Write a note on Natural Selection.

(b) Differentiate between Phenotype and Genotype.

(c) Write a note on seven contrasting traits studied by Mendel in pea plants.

(d) Write short notes on the following: (i) Bioinformatics

(ii) Amniocentesis

Long Answer Type Questions

7. Explain the features required to facilitate cloning into a vector.

OR Describe the dihybrid cross with the help of a checker-board.

8. Describe the processes of triple fusion in angiospermic plants.

OR Write short notes on the following:

(a) Lymphocytes in human blood

(b) Convergent evolution

9. Write an essay on Biosphere Reserves and National Parks.

OR Write short notes on the following:

(a) Applications and future challenges of the Human Genome Project

(b) Infectious diseases
