

MPBSE Class 12th Biology - 2023 Question Paper

Time Allowed :3 Hour	Maximum Marks :70	Total Questions :19
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. Attempt all questions.
2. Read the instructions carefully.
3. Marks allotted to each question are indicated against it.

1. Fill in the blanks:

- (i) Apple is an example of _____ fruit.
- (ii) Occurrence of more than one embryos in a seed is called _____ .
- (iii) The inner glandular layer of uterus is called _____ .
- (iv) Fertilization is taken place in _____ .
- (v) _____ conducted hybridization experiments on garden peas for Seven years.
- (vi) Natural _____ are obtained from the inflorescences of the plant Cannabis sativa.
- (vii) Pyramid of energy is always _____ .

2. Write answer in one word / one sentence:

- (i) Write name of any one autoimmune disease.
- (ii) What is the conformities test of Typhoid?
- (iii) The number of deaths in the population during the given period. What does it called?
- (iv) Write the name of one 'Hotspot' of India.
- (v) What is molecular scissors?
- (vi) Write the name of first transgenic cow.
- (vii) What is the name of the process of copying genetic information of one strand of DNA to RNA?

3. (i) Who gave the chromosomal theory of inheritance?

- (1) Robert Hooke
- (2) Gregor John Mendel
- (3) Sutton and Boveri
- (4) M. H. Swaminathan

3. (ii) Bt poison is formed by:

- (1) Bacillus thuringiensis
- (2) Dhatura
- (3) Bacillus notatum
- (4) Opium poppy

3. (iii) Inactive state of embryo is:

- (1) Dormancy
- (2) Morulla
- (3) Excited state
- (4) None of these

3. (iv) Which bacteria converts milk into curd?

- (1) Saccharomyces cerevisiae
- (2) Lactobacillus
- (3) Aspergillus niger
- (4) Clostridium butilicum

3. (v) Which of the following gives nutrition to developing pollen grains is:

- (1) Ectodermis
- (2) Middle layer
- (3) Tapetum
- (4) Filament

3. (vi) All the animals depend on plants directly or indirectly for their food is called:

- (1) Producers
- (2) Consumers
- (3) Saprophytes
- (4) Decomposers

3. (vii) Inner mass group of cells which have ability (potency) to produce tissue and organs are:

- (1) Spermatocytes
- (2) Ectodermal cell
- (3) Stem cells
- (4) Sertoli cell

4. Match the columns:

A

B

- | | |
|---------------------------|----------------------------------|
| (i) Entamoeba | (a) First antibiotic |
| (ii) Gel electrophoresis | (b) Recessive gene blood disease |
| (iii) Penicillin | (c) Zoological parks |
| (iv) Thalassaemia | (d) Absence of 1 X-chromosome |
| (v) Turner's syndrome | (e) Separation of DNA fragments |
| (vi) Ex-situ conservation | (f) Amoebiasis |
| (vii) Sunken stomata | (g) Attached DNA fragments |
| . | (h) Adaptation |

5. What do you understand by Triple fusion?

OR

5. What is emasculation?

6. What is parturition?

OR

6. What is colostrum?

7. What are the suggested reasons for population explosion? (any two)

OR

7. Write 2 names of sexually transmitted diseases.

8. What is BOD?

OR

8. What is Ganga Action Plan?

9. What is Cloning?

OR

9. What is cry gene?

10. Write down the causes of AIDS. (any two)

OR

10. Write down the treatments of cancer.

11. What is Histone?

OR

11. Which nitrogenous bases are found in RNA?

12. What is Pedigree analysis?

OR

12. Write down differences between homozygous and heterozygous.

13. Draw schematic representation of Oogenesis.

OR

13. What is amniocentesis? Write its uses.

14. What is test-cross? Show diagrammatic representation of it.

OR

14. Draw well labelled diagram of Miller's experiment.

15. Write measures which is useful for prevention and control of alcohol and drug use in adolescence.

OR

15. How microorganism is act like a biofertilizer?

16. Write down about any 3 main abiotic factors of environment.

OR

16. What is decomposition?

17. Write down salient features of genetic code.

OR

17. Find out the phenotypic ratio of offspring found in F₂ generation, when homozygous yellow and round seed of pea plant cross with homozygous green and wrinkled seed plant. With the help of checker board.

18. Write down several steps of recombinant DNA technology in sequence.

OR

18. Write short notes on - (a) Biopiracy (b) Restriction enzyme

19. Explain the ecosystem of pond.

OR

19. Describe the ecological succession on bare rocks.
