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## COMMON QUARTERLY EXAMINATION - 2024 - 25

Time Allowed : 3.00 Hours]

**BIOLOGY**

[Max. Marks : 70

Part - I (Bio-Botany) (Marks : 35)

**SECTION - I**

Note. (i) Answer All the questions.

8×1=8

(ii) Choose the most appropriate answer from the given four alternatives and write the option code and corresponding answer.

- Which of the following represent megagametophyte.
  - Ovule
  - Embryo sac
  - Nucellus
  - Endosperm
- In his classic experiments on pea plants mendel did not use
  - Flowering position
  - Seed colour
  - Pod length
  - Seed shape
- Accurate mapping of genes can be done by three point test cross because increases
  - Possibility of single cross over
  - Possibility of double cross over
  - Possibility of multiple cross over
  - Possibility of recombination frequency
- Which one of the following palindromic base sequence in DNA can be easily cut at about the middle by some particular restriction enzymes.
  - 5'CGTTCG 3'-----3'ATCGTA 5'
  - 5'GATATG 3'-----3'CTACTA 5'
  - 5'GAATTC 3'-----3'CTTAAG 5'
  - 5'CACGTA 3'-----3'CTCAGT 5'
- Totipotency refers to
  - Capacity to generate genetically identical plants.
  - Capacity to generate a whole plant from any plant cell/expand
  - Capacity to generate hybrid protoplasts
  - Recovery of healthy plants from diseased the plants
- Which is the common type of oval found in Dicot and monocots?
  - Amphitropous
  - Campylotropous
  - Anatropous
  - Orthotropous
- Which of the following is not a Stop codon?
  - UAA
  - AUG
  - UGA
  - UAG
- Increasing speed of the degradation process by the addition of selected microbes is called
  - Composting
  - Bioaugmentation
  - Bio leaching
  - Phytoremediation

**SECTION - II**

Answer any four of the following questions.

4×2=8

- What is endothelium?
- Differentiate incomplete dominance and codominance.
- What is cell suspension culture?
- What is plasmogerie?
- Define---Biopiracy.
- What is primary metabolism? Give an example.

**SECTION - III**

Answer any three of the following questions. Q.No 19 is compulsory

3×3=9

- Give an account on cryopreservation.
- What is meant by cytoplasmic inheritance.
- Write the salient features of Satton and Beveri concept.
- Which is known as the natural genetic engineer in plant? Why is it called so?
- Write about the gene transfer process through biolistics method.

**SECTION - IV**

Answer all the questions.

2×5=10

- a) What is tapetum ? write its Origin, types and functions  
(OR)  
b) How is Nicotiana exhibit self incompatibility explain its mechanism
- a) Mention the application of biotechnology.  
(OR)  
b) Explain the basic concepts involved in plant tissue culture.

V / 12 / Bio / 1

