

Section-A

(Multiple Choice Question (MCQ's))

Q.1 Choose the correct answer for each from the given options:

- (i) The net movement of molecules remains in equilibrium when a cell is placed in:
 (a) Hypotonic solution (b) Hypertonic solution
 (c) Isotonic solution (d) None of these
- (ii) Which one of the following will not lead to cell-division and cell-elongation?
 (a) Auxins (b) Cytokinins (c) Gibberellins (d) Ethene
- (iii) Which one of the following is natural method of asexual reproduction in plants.
 (a) Apomixis (b) Spore formation (c) Vegetative Propagation
 (d) All of these
- (iv) The cross which determines the homozygosity or heterozygosity of the individual:
 (a) Back-cross (b) Test-cross (c) Both (a) and (b)
 (d) None of these
- (v) A phenomenon of inheritance in which alleles of contrasting characters are not completely dominant over other:
 (a) Complete dominance (b) Intermediate dominance
 (c) Incomplete dominance (d) None of these
- (vi) A type of environment for a particular living organism is called its:
 (a) Habitat (b) Population (c) Symbiosis (d) Ecological-Niche
- (vii) Light zone of ocean is called:
 (a) Euphotic (b) Aphotic (c) Meritic (d) None of these
- (viii) Klinefelter's syndrome is an example of:
 (a) Trisomic (b) Monosomic (c) Nullisomic (d) None of these
- (ix) One complete turn of DNA contains:
 (a) 2 Nucleotides (b) 5 Nucleotides (c) 10 Nucleotides
 (d) 20 Nucleotides

Section-B

(Short Answer)

Note: Answer any TEN of the following questions. Each question carries 02 marks.

- Q.2 How plants respond to drought stress?
- Q.3 Why does wilting of leaves take place in to summer days?
- Q.4 How phenotypic ratio of dihybrid Mendel's cross can modify? Explain.
- Q.5 What is INCOMPLETE DOMINANCE?
- Q.6 Give alternative terms for ANGIOSPERMIC -EMBRYO-SAC POLLENS, RIPENED OVARY and RIPENED OVULE

- Q.7 Define any Two of the following:
 (i) Phellogen (ii) Spikelete (iii) Inversion (iv) Pleiotropy
- Q.8 Distinguish between any "ONE" of the following:
 (a) Racemes and cymose inflorescence of Marine Habitat.
 (b) Apoptosis and necrosis
- Q.9 Why H₂O is considered as limiting factor of Ecosystem?
- Q.10 What is evolutionary significance of diplotene stage?
- Q.11 Name and describe the phenomenon by which plants can produce seeds without their flowers being fertilized?
- Q.12 Give role of Phytohormones in plant movements.
- Q.13 How abnormal Eukaryotic cell differs from normal Eukaryotic cell?
- Q.14 What are Heliophytes and Sciophytes?

Section-C

(Descriptive Answer)

Note: Answer any TWO of the following questions.

- Q.15 What is DIHYBRID cross? Describe the law of INHERITANCE which explains the inheritance of dihybrid cross?

OR

A male has co-dominant blood group marries with a female whose blood group is Homozygous A both have a male child who marries with a female with RECESSIVE blood group. What will be the chances of blood groups in their children? Prove it

with the help of Genetic cross?

- Q.16 What is Gene? How does it act, show it in the form of flow chart? How different RNAs play their role during its expression?
- Q.17 How seed develops into seedling? Describe different conditions required for this transformation also give their ways?