

Section-A

Multiple Choice Questions (MCQ's)

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

- (i) Living organisms when repeat their biological or behavioural activities at regular intervals.
 (a) Behaviour (b) Circadian rhythm
 (c) Biorhythm (d) Photoperiodism
- (ii) Zeatin is a phytohormone belongs to:
 (a) Gibberellins (b) Cytokinin (c) Allergin (d) Auxin
- (iii) In a chain of DNA two nucleotides are linked by:
 (a) Hydrogen bond (b) Peptide bond (c) Phosphodiester bond
 (d) ether linkage
- (iv) Production of daughter cells with unequal number of chromosomes during meiosis

called:

- (v) What will be the genotype ratio when a heterozygous tall crossed with dwarf:
 (a) 1:1 (b) 3:1 (c) 1:2:1 (d) None of these
- (vi) Plants which grow and like light are:
 (a) Halophytes (b) Heliphyles
 (c) Hydrophytes (d) Hygrophytes
- (vii) The tubular heavily lignified dead cells with large hollow cavities & oblique transverse wall called:
 (a) Scleroids (b) Tracheids (c) Fibers (d) Tracheae
- (viii) The type of inflorescence found in cotton plant is:
 (a) Racemose (b) Helicoid (c) Cymose (d) Scorpioid
- (ix) The separated part of apical meristem found at the base of node and internode called:
 (a) Primary meristem (b) Secondary meristem
 (c) Intercalary meristem (d) Apical meristem

Section-B

Short Answer

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

- Q.2: How HALOPHYTES absorb water from the having lower water potential than the cell-sap?
- Q.3: Do the cells beneath formative-phase differ from each other?
- Q.4: What is Nutation?
- Q.5: How HETERO-CHROMATIN differs from the EU-CHROMATIN?
- Q.6: How bisexual flowers are prevented from self-pollination and to favour cross-pollination?
- Q.7: Why TRANSCRIPTION and TRANSLATION are so named?
- Q.8: Define any TWO of the following:
 (a) SAVANAH (b) CAPITULUM
 (c) CIRCADIAN (d) TRANSLOCATION
- Q.9: Distinguish between any "ONE" of the following:
 (a) Pelagic and Benthic-zones of marine habitats.
 (b) Tundra and Desert
- Q.10: How Edaphic-factors an ecosystem?
- Q.11: Why HEMOPHILIA is comparatively rare in women?
- Q.12: Which of the Phytochrome is considered as "Fruit ripening hormone" and why?
- Q.13: How do Mesophytes prevent themselves from excessive transpiration?
- Q.14: Why distribution of population depends upon climatic factors?
- Q.15: How APOMIXIS is different from PARTHENO-CARPY?

Section-C Descriptive Answer

Note: Answer any TWO of the following questions. Each question carries 07 marks.

- Q.16: What is heteroploid? How it occurs in living organisms. Discuss any two abnormalities of human in detail.
- Q.17: A HETEROZYGOUS normal female married a male whose one son is colour-blind while the other children are normal. What will be Genotype and Phenotype of father. (Prove it with the help of Genetic Cross)
- Q.18: State the "LAW OF PURITY OF GAMETES" related with the inheritance of single trait, giving suitable example.