

BOTANY

2015

Time: 15 Minutes

Max. Marks: 08

SECTION "A" (MULTIPLE CHOICE QUESTION)

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

- (i) The study of Earth's surface texture is termed:
- Topographic factor • Edaphic factor
 - Climatic factor • Biotic factor
- (ii) Double fertilization is the characteristics of:
- Bryophytes • Gymnosperms
 - Pteridophytes • Angiosperms
- (iii) The formation of mRNA from DNA in the nucleus is called:
- Transformation • Transcription
 - Transduction • Conjugation
- (iv) The diameter of stem and root increases due to:
- intercalary meristem • Lateral meristem
 - Apical meristem • Superficial meristem
- (v) Plants growing in shade are termed:
- Halophytes • Heliophytes
 - Sciophytes • Hydrophytes
- (vi) The running water rivers, springs and streams is called:
- Lentic • Estuary • Niche • Lotic
- (vii) The particular array of chromosomes present in an individual is called:
- Autosome • Genotype • Karyotype • Phenotype
- (viii) Bivalents are formed at this stage:
- Zygotene • Pachytene • Diplotene • Diakinesis
- (ix) Organisms responsible for recycling of minerals within an ecosystem are called:
- Producers • Primary consumers
 - Secondary consumers • Decomposers
- (x) A cell having 16 chromosomes, divides by meiosis. At telophase-I, the number of chromosomes in each nucleus will be: • 08 • 16 • 24 • 32
- (xi) A type of programmed cell death is:
- Apoptosis • Synapsis • Necrosis • Diakinesis
- (xii) During cell division, when homologous chromosomes fail to separate properly, the phenomenon is called:
- Non-disjunction • Polyploidy • Euploidy • Pleiotropy
- (xiii) Chromosomes normally occur as homologous pair in a/an: • sperm cell • egg cell • zygote • gamete
- (xiv) This hormone acts as growth inhibitors causing stomata to close:

- Cytokinin • Gibberellin • Abscissic acid • Ethene

(xv) The plant cells that have their cell walls removed are called:

- Protoplasm • Cytoplasm
- Protoplasts • Tonoplasts

(xvi) Cells found at the stem and root apices are termed:

- Cambium • Lateral meristem
- Intercalary meristem • Apical meristem

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Time: 1 Hours 45 Minutes

Marks: 32

SECTION 'B' (SHORT-ANSWER QUESTIONS) (20)

NOTE: Answer 10 questions from this section.

- 2.(i) What is the role of Auxins in plants?
- (ii) Write a note on natural methods of Asexual reproduction in plants.
- (ii) Explain Chromosomal aberration.
- (iv) Differentiate Mitosis and Meiosis.
- (v) Describe Test cross of Incomplete dominance.
- (vi) Describe the types of RNA.
- (vii) Why did Mendel choose pea plant as an experimental material?
- (viii) What adaptations do plants make to cope with the effects of hot and cold temperatures?
- (ix) Write a note on Excretion in plants.
- (x) Describe Desert ecosystem with reference to Pakistan.
- (xi) What is Syndrome? Describe the effects of XXY Trisomic condition in humans.
- (xii) Write a note on Light as a climatic factor.
- (xiii) Define Interphase. Name and explain its sub-stages.
- (xiv) Define Meristem. Give the types of Meristems and state their functions.
- (xv) Write a note on any one of the following:
- a) Growth correlation b) Seed dormancy

SECTION 'C' (DETAILED- ANSWER QUESTIONS)

NOTE: Answer 2 question from this section(12)

- 3.(i) Describe Watson and Cricks Model of DNA. How does DNA replicates semi-conservatively.
- (ii) What is Movement in plants? Describe various types' of Para tonic movements in plants.

OR Describe various components of Pond Ecosystem

(iii) Describe various stages of Mitotic Cell division.

OR Define Sex-linked inheritance. Discuss Sex-linked inheritance in humans.