

B.Sc.- II CBCS Pattern Semester-IV
012A - Botany Paper-I : Cell Biology, Genetics and Biotechnology

P. Pages : 2

Time : Three Hours



GUG/W/23/11992

Max. Marks : 50

-
- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrates your answer with diagrams and suitable examples whenever necessary.

1. a) Give a detail account on structure of Cell Wall. 5
b) Give detail account on Functions of Nucleus. 5

OR

- c) Write Fluid Mosaic model of plasma membrane. 2½
d) Anaphase. 2½
e) Peroxisome. 2½
f) Mitochondria. 2½
2. a) Explain Mendel's Law of Independent Assortment. 5
b) Complementary Gene Interaction. 5

OR

- c) Incomplete Dominance. 2½
d) Law of Segregation. 2½
e) Supplementary Gene Interaction. 2½
f) Plastid DNA 2½
3. a) Write an account on Polyploidy. 5
b) Structural Changes in Chromosome. 5

OR

- c) Breakage and Reunion Theory. 2½
d) Complete Linkage. 2½
e) Application of Induced Mutation. 2½
f) Gene Theory of Morgan. 2½

4. a) Give detail account on C-DNA Library. 5
b) Lac Operon Concept. 5

OR

- c) Initiation of Transcription in prokaryotes. 2½
d) Plasmid. 2½
e) Restriction Enzymes. 2½
f) Translation. 2½
5. Write in very short **any ten**. 10
- a) Pachytene.
b) Glyoxisomes.
c) Cytokinesis.
d) Allele.
e) Test cross.
f) Punnett square.
g) Centimorgan.
h) Robertsonian translocation.
i) Colchicine.
j) Ligase.
k) Ti-Plasmid.
l) Jumping Gene.
