

Biotechnology

Paper 1: Cell Biology, Genetics and Microbiology

Time: 3 hours

Max. Marks: 80

SECTION – A

Answer ALL questions

4 x 15 = 60

1. a) Differentiate between mitosis and meiosis?
or
b) Describe the ultra structure of eukaryotic cell?

2. a) Explain Mendel's laws with suitable examples?
or
b) Describe epistatic gene interactions with suitable examples?

3. a) Elucidate that DNA is genetic material?
or
b) Define replication, add any two models of replications?

4. a) Explain isolation and preservation methods of microorganisms?
or
b) Discuss general characters of Viruses?

SECTION - B

Answer any FOUR questions

4 x 5 = 20

5. Plasmids
6. Mitochondria and its functions
7. Incomplete Dominance
8. Sex determination in *Drosophila*
9. DNA repair mechanism
10. Blender experiment.
11. Sterilization
12. *Salmonella typhi*

Practical Model Question Paper

Paper 1: Cell Biology, Genetics and Microbiology

Time : 3 hours

Max. Marks: 50

1. Estimate the amount of DNA/RNA present in the given sample by constructing a standard graph . 20 M
 2. Problem on Monohybrid and Dihybrid ratio in Drosophila/Maize. 10M
or
Identification of bacteria by staining techniques.
 3. Spotters (4x2.5) 10M
 4. Record & Viva-voce 10 M
- Total 50