

2023
M.Sc.
Second Semester
CORE – 07
BOTANY
Course Code: MBOC 2.31
(Biochemistry & Biotechnology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. What is β -oxidation? Explain in detail, the transport of fatty acid from adipose tissues to the matrix of mitochondria. 2+12=14
2. Write notes on the following: 7 \times 2=14
 - (a) Carbohydrates
 - (b) Lipids

UNIT-II

3. Explain Michaelis-Menten steady state of enzymes kinetics. 14
4. Write notes on the following: 7 \times 2=14
 - (a) Bio energetically favourable reaction
 - (b) General classes of enzymes

UNIT-III

5. Explain the ethylene signaling pathway. 14
6. Write notes on the following: 7 \times 2=14
 - (a) Quorum sensing
 - (b) Phospholipids signalling

UNIT-IV

7. Explain the process of recombinant DNA technology. 14
8. Write notes on the following: 7×2=14
- (a) Yeast artificial chromosome (YAC)
 - (b) cDNA libraries

UNIT-V

9. Write the process of polymerase chain reaction. 14
10. Write notes on the following: 7×2=14
- (a) Inverse PCR
 - (b) AFLP
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