

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Horticulture

Semester	: I (New)	Term	: First	Academic Year	: 2023-24
Course No.	: H/BIOCHEM 111	Title	: Elementary Plant Biochemistry		
Credits	: 2 (1+1)	Time	: 10:00 to 12:00 hrs.	Total Marks	: 40
Day & Date	: Wednesday, 17.01.2024				

- Note :
1. Solve ANY EIGHT questions from SECTION 'A'.
  2. All questions from SECTION 'B' are compulsory.
  3. All questions carry equal marks.
  4. Draw neat diagram wherever necessary.

SECTION 'A'

- Q.1 Define Lipids. State the chemical properties of lipids and explain any one of them.
- Q.2 Differentiate between Reducing and Non-reducing sugar.
- Q.3 Define Carbohydrate. Classify homopolysaccharides with suitable examples.
- Q.4 Define Plant pigments. Give the physiological role of carotenoids.
- Q.5 Define Fatty acid. Give the classification of unsaturated fatty acids on the basis of degree of saturation.
- Q.6 What is Protein? Give the classification of proteins.
- Q.7 Define Enzyme. State the factors affecting enzyme activity and explain any one.
- Q.8 State the steps of reaction involved in *Beta* oxidation of fatty acids.
- Q.9 What is Phosphorylation? Describe cyclic phosphorylation.
- Q.10 Explain the terms: Anabolism, Catabolism, Glycolysis and Glycogenesis.

SECTION 'B'

Q.11 State True or False:

- 1) Loss of blood clotting power is due to the deficiency of vitamin K.
- 2) Sucrose is an example of reducing disaccharide.
- 3) Carbohydrates are cheap source of energy.
- 4) On hydrolysis, monosaccharides produce zero sugar unit.

Q.12 Fill in the blanks:

- 1) Vitamins A, D, E and K are \_\_\_\_\_ soluble vitamins.
- 2) Fructose shows \_\_\_\_\_ possible isomers.
- 3) \_\_\_\_\_ is amphoteric in nature.
- 4) Carotene is a precursor of vitamin \_\_\_\_\_.

