

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END EXAMINATION

B.Sc. (Hons.) Horticulture

|                                  |                                       |                         |
|----------------------------------|---------------------------------------|-------------------------|
| Semester : I (New)               | Term : I                              | Academic Year : 2019-20 |
| Course No. : H/BIOCHEM 111       | Title : Elementary Plant Biochemistry |                         |
| Credits : 2(1+1)                 | Time : 10.00 to 12.00                 | Total Marks : 40        |
| Day & Date : Tuesday, 07.01.2020 |                                       |                         |

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 diagrams wherever necessary.

Sri. Shri. College of Horticulture  
AMBAVATI

Library Department

SECTION "A"

- Q.1 Define Biochemistry. Explain the importance and scope in agriculture.
- Q.2 Classify carbohydrates on the basis of complexity and behavior on hydrolysis.
- Q.3 Explain nucleic acid. List out the types and functions of nucleic acid.
- Q.4 Define proteins. Classify them based on the biological /metabolic functions of proteins.
- Q.5 What are plant pigments? Classify them on the basis of solubility with suitable example.
- Q.6 Define Lipids. Classify lipids on the basis of product of hydrolysis.
- Q.7 What are enzymes? Classify the enzyme (IUB System) based on type of reaction.
- Q.8 Write the sequence of reactions involved in TCA cycle.
- Q.9 Define vitamins. Classify and give one deficiency disorder of each vitamin.
- Q.10 What is photosynthesis? Discuss the processes of photosynthesis.

SECTION "B"

- Q.11 State True or False.
- 1) Sucrose is a monosaccharide.
  - 2) All enzymes are proteins, but not all proteins are enzymes.
  - 3) Ascorbic acid and vitamin C are different chemicals.
  - 4) Nucleic acids are molecules that store information for cellular growth and reproduction.
- Q.12 Fill in the blanks.
- 1) The second stage of photosynthesis is the \_\_\_\_\_.
  - 2) \_\_\_\_\_ deficiency causes beriberi (neurological disorder).
  - 3) \_\_\_\_\_ are building blocks for triglycerides and phospholipids.
  - 4) Amino acids are those that can be synthesized in the body thus they are \_\_\_\_\_ in the diet.

