

Duration 2 Hrs.

Course code: BNBUSBO1T2

Total Marks 60

**N.B.**

1. All questions are compulsory.
2. Draw neat labeled diagrams wherever necessary.
3. Use of simple calculator is allowed.

- Q.1. Answer the following questions in brief (any two)** 16
- a Describe the 'Fluid Mosaic Model' of plasma membrane in detail.
  - b Distinguish between Prokaryotic Cell and Eukaryotic Cell.
  - c Explain the ultra-structure of plant cell wall.
  - d Give an account on various types of plastids studied by you.
- Q.2. Answer the following questions in brief (any two)** 16
- a What is an ecosystem? Explain briefly biotic and abiotic components of it.
  - b Define a food chain. Add a note on types of food chain.
  - c Discuss any one aquatic ecosystem with respect to its biotic components and productivity.
  - d Give an account on 'Grassland ecosystem'.
- Q.3 Answer the following questions in brief (any two)** 16
- a What is a monohybrid ratio? Explain monohybrid cross with suitable example.
  - b Describe the test cross by citing one example.
  - c Define Mode. Calculate mean, median and mode from the given data.  
(47, 53, 67, 79, 81, 73, 63, 58, 54, 47)
  - d Describe *Arabidopsis* as Plant model organism
- Q.4 Write short notes on (any three)** 12
- a Lysosomes
  - b Types of Ribosome
  - c Pyramid of Energy
  - d Desert Ecosystem
  - e Concept of Phenotype and Genotype (with 2 examples)
  - f Back cross