

Day : Monday  
Date : 23/04/2018

S-2018-0640

Time : 03.00 PM TO 06.00 PM  
Max. Marks: 60.

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat and labeled diagrams **WHEREVER** necessary.

- Q.1** A) Attempt the following: (MCQ) (06)
- a) The groups of micro-organisms which are able to fix atmospheric nitrogen are called -----
    - (i) Biofertilizers
    - (ii) Chemical fertilizers
    - (iii) Biological nitrogen fixers
    - (iv) Fertilizers
  - b) The most quickly available source of nitrogen to plants are -----
    - (i) Amide fertilizers
    - (ii) Ammonia fertilizer
    - (iii) Nitrate fertilizers
    - (iv) Ammonia nitrate fertilizers
  - c) Growth hormone producing apical dominance is -----
    - (i) Auxin
    - (ii) Gibberellin
    - (iii) Ethylene
    - (iv) Cytokinin
  - d) IPM stands for -----
    - (i) Integrated pest manufacture
    - (ii) Integrated plant management
    - (iii) Integrated plant manufacture
    - (iv) Integrated pest management
  - e) ----- is known as paddy straw mushroom.
    - (i) *Pleurotus*
    - (ii) *Amanita*
    - (iii) *Helvella*
    - (iv) *Volvariella*
  - f) *Azolla* is used as biofertilizers as it has -----
    - (i) *Rhizobium*
    - (ii) *Cyanobacteria*
    - (iii) Mycorrhiza
    - (iv) Lavage quantity of humans
- B) Attempt the following (**One** sentence/ statement/ definition) (06)
- a) What is tissue culture?
  - b) Give definition of biofertilizer.
  - c) Give nutritive value of mushrooms.
  - d) What is energy plantation?
  - e) What is spawn?
  - f) Define biotechnology.
- Q.2** Attempt any **THREE** of the following: (12)
- a) Explain in brief steps involved in cultivation of *pleurotus*.
  - b) Discuss scope and importance of plant tissue culture.
  - c) Enlist non-conventional foods with suitable example.
  - d)
- Q.3** Attempt any **THREE** of the following: (12)
- a) Describe steps involved in the production of *Rhizobium* biofertilizer.
  - b) Comment on advantages of non-conventional food.
  - c) Explain scope and importance of industrial botany.
  - d) Describe advantages and disadvantages of chemical fertilizer.
- Q.4** Attempt any **TWO** of the following: (12)
- a) Describe the method of spawning in *Agaricus*.
  - b) Give the need and advantages of energy plantation.
  - c) Explain plant propagation by tissue culture.
- Q.5** Attempt any **TWO** of the following: (12)
- a) Describe the environmental and health hazards due to pesticides and fungicides.
  - b) Explain methods of cultivation of *Spirulina* and give its role in human life.
  - c) Mention use of plant and animal waste for production of bioenergy.