

QP Code : **BV-15160**

(2½ Hours)

[Total Marks : 60

- N.B. : (1) All questions are compulsory.
(2) All questions carry equal marks.
(3) Draw neat, labelled diagrams wherever necessary.

1. Answer the following (any two) :-
 - (a) Describe Watson & Crick model of DNA. 6
 - (b) Describe the structure of mRNA (Messenger RNA). Write a brief note on its function. 6
 - (c) What is recombinant DNA technology? Explain the impact of Transgenic plants on the environment. 6

2. Answer the following (any Two) :-
 - (a) Explain in details, the process of preparation of vermicompost. 6
 - (b) Explain the mechanism of degradation of xenobiotic compounds. Add a note on biological odorization. 6
 - (c) Write a note on the role of hydrolyzing microbes in digestion. Distinguish between Acetogens and Methanogens. 6

3. Answer the following (any Two) :-
 - (a) What is Organic farming? Explain in brief the basic principles of organic farming. 6
 - (b) What are VAM? Explain their role in nitrogen fixation. 6
 - (c) What are Biopesticides? Explain various applications of biopesticides. 6

4. Answer the following (any Two) :-
 - (a) Describe various applications of nanotechnology in food & agriculture industry. 6
 - (b) Explain the role of nanotechnology in water purification. 6
 - (c) Explain how nanotechnology is used in renewable energy resources. 6

5. Answer the following (any four) :- 12
 - (a) Carbon nano tubes
 - (b) Classification of biofertilizers
 - (c) Surface soil contaminant Remediations
 - (d) Marketing of Bio compost.
 - (e) Bioplastics
 - (f) Factors influencing phytoremediation.