22615

12425

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following : **10**

(a) State the role of micro element in growth of plant.

(b) List four application of ammonium chloride.

(c) State raw materials in the manufacturing of triple superphosphate.

(d) List the name of phosphatic and nitrogenous based fertilizer industries in India each two.

(e) Enlist raw materials used for production of nitro phosphate.

(f) State any four physical properties of ammonia.

(g) State any four applications of ammonia.

2. Attempt any THREE of the following : **12**

(a) Explain importance of vermi compost and its preparation method.

(b) Explain importance and application of fertilizer nutrients.

(c) State the raw materials used for manufacturing of ammonium chloride and its reactions.

(d) State reactions and raw materials involved in manufacturing of single super phosphate.

3. Attempt any THREE of the following : **12**

(a) Draw flow diagram for the manufacturing of mixed fertilizer.

(b) State raw material, reaction and process description for manufacturing of nitro phosphate.

(c) Describe the storage and handling for mixed fertilizer.

(d) List the secondary nutrients in potassic fertilizer.

4. Attempt any THREE of the following : **12**

(a) Explain manufacturing of diammonium phosphate with flow diagram.

(b) Enlist any two physical and chemical properties of ammonia.

(c) Describe fertilizer production and consumption scenario in India.

(d) Explain the storage and handling of nitrophosphate.

(e) Explain the method of production of nitrophosphate.

5. Attempt any TWO of the following : **12**

(a) List secondary nutrients, feedstock and raw materials for nitrogenous fertilizer.

(b) List the initiatives and schemes of central and state government towards biofertilizer.

(c) Identify the merits and demerits of vermi compost and kitchen waste biofertilizer.

6. Attempt any TWO of the following : **12**

(a) Explain with diagram manufacturing of single superphosphate.

(b) Describe the devices used for handling of ammonia and DAP.

(c) Explain the production of calcium ammonium nitrate with neat flow diagram.
