

[This question paper contains 4 printed pages.]

Your Roll No. ....

5154

B

**B.Sc. Prog./II**

ACP-202—Fertilizers, Herbicides, Fungicides

(Admissions of 2005 & onwards)

Time : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any Five questions.

All questions carry equal marks.

1. Answer the following :

- (a) Define algacide and growth regulators with suitable examples.
- (b) Define fungicide and fungistatic state.
- (c) Write *one* example each of contact and systemic fungicides.
- (d) Which fertilizer is associated with plant growth ?
- (e) Define non-selective herbicide with example.
- (f) Write the structural formula for any dithiocarbamate.
- (g) Which of the following is used as fertilizer; potassium chloride or potassium nitrate ?
- (h) What is used to inhibit the fungal infection in grains?

[P. T. O.]

- (i) What do you understand by pre-emergence herbicides?
  - (j) Name the component taken by the plants from nitrogen fertilizers.
2. Explain the following :
- (a) Phytotoxicity in relation to water solubility of herbicides.
  - (b) Hydroxylation in 2,4D.
  - (c) Post-emergence Herbicides.
  - (d) Name two total herbicides.
  - (e) Write the structural formula for MCPA and Diclon.
3. (a) Name the types of fertilizers. Given an example of each type.
- (b) What are macro nutrients ? Give at least two examples.
  - (c) Elaborate the characteristics of nitrification inhibitors.
  - (d) Discuss mineralization of nitrogen compounds.
  - (e) What are potash fertilizers, elaborate their importance ?
4. Discuss the following :
- (a) Antifungal activity of heavy metal compounds.

- (b) Preparation of Bordeaux mixture with chemical equations.
  - (c) Discuss the preparation of ziram with chemical equations.
  - (d) Lime sulphur as fungicide.
  - (e) Phytotoxicity with respect to water solubility of fungicides.
5. (a) What are the following, give their structural formulae?  
Barban and Asulam.
- (b) Give *two* examples of herbicides that disrupt the Hill reaction.
  - (c) Discuss the preparation of simazine using chemical equations.
  - (d) How is paraquat prepared ? Give chemical equations.
  - (e) What is the nuclear skeleton of triazines ? Give an example with structural formula.
6. (a) Write the structural formula of the following :  
Dalapon and metalaxyl.
- (b) Thiophanate and propiconazole.

- (c) How is thiram prepared ? Write the chemical equations.
- (d) Depict the chemical equations involved in the preparation of benomyl.
- (e) What are the following, give their structural formula?  
Bromacil and Karathane.

7. Write short notes on :

- (a) Fumigation,
- (b) Fertilizers and ground water pollution,
- (c) Denitrification.