

This question paper contains 4 printed pages]

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : 1834

Unique Paper Code : 217475

E

Name of the Paper : Fungicides (Paper—16)

Name of the Course : B.Sc. (Prog) Applied Life Science

Semester : IV

Duration : 3 Hours

Maximum Marks : 75

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

Attempt Five questions out of the following.

*All questions carry equal marks.*

1. Answer the following :

(a) Thiram belongs to which class of fungicides ? Give its structure.

(b) Discuss fungicides and fungi static state.

(c) Write structural formula of two organo-mercury compounds used as fungicides.

(d) How would you prepare Vapam ? Give chemical equation.

(e) Write the chemical equation for the preparation of Metaldehyde.

2. Answer the following :

(a) Differentiate between contact and systemic fungicides.

P.T.O.

- (b) Write the structural formula of Ziram and Kitazine.
  - (c) Abbreviations EMC and PMC stands for what ?
  - (d) Write the structural formula of Propiconazole.
  - (e) What is the mode of action of organo-mercury fungicides ?
3. Discuss the following :
- (a) Preparation of Bordeaux-mixture with the help of chemical equations.
  - (b) Carbamate fungicides with suitable examples.
  - (c) Molluscicides as fumigants.
  - (d) Systemic fungicides with examples.
  - (e) Use and mode of action of Propiconazole.
4. Answer the following :
- (a) What happens when  $\text{Cu}^{++}$  ions are present in B.D. mixture and how the farmer would detect it ?
  - (b) Discuss the action of Rodenticides.
  - (c) What are thiophanates ? Discuss their role in agriculture.
  - (d) What is the basic unit of Dithiocarbamates ? Give structural formula of Nabam.
  - (e) Write down the structure of Dichlone and indicate to which chemical class it belongs.

5. Answer the following :

- (a) Discuss the preparation of thiram with the help of chemical equations.
- (b) Discuss the preparation of a fungicide using the following chemicals :
  - (i)  $\text{NH}_2\text{CN}$
  - (ii)  $\text{ClCOCH}_3$
  - (iii)  $\text{C}_4\text{H}_9\text{NCO}$ .
- (c) Discuss the role of MBC, a metabolite of benomyl as fungicide.
- (d) Write the structure for Metalaxyl and Warferin.
- (e) Write the structural formula of Karathane and metam-sodium.

6. Discuss the following :

- (a) Preparation of Ziram with the help of chemical equations.
- (b) LD 50, and comment on the toxicity of Thiram ( $\text{LD}_{50} = 750 \text{ mg/kg}$ ) in comparison with Ziram ( $\text{LD}_{50} = 1400 \text{ mg/kg}$ .)
- (c) Discuss the role of 1, 3-dichloropropene, and 1, 2-dibromo-3-chloropropane as Nematicides.  
Fungicides.
- (d) Dinitrophenols as fungicides.
- (e) Role of fumigants in soil as fungicides.

7. Discuss the following :

- (a) Protective and curative fungicides
- (b) Nematicides
- (c) Action of Warfarin as Rodenticides
- (d) Non-target effects of copper fungicides.
- (e) Mode of action of Bordeaux mixture. Warfarin.