

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 7476

K

Unique Paper Code : 2233580028

Name of the Paper : DSC- Toxicology of Pests

Name of the Course : **B.SC. (P) ALS WITH AGROCHEMICAL PEST MANAGEMENT (NEP-UGCF)**

Semester : VIII

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four questions** in all including **Question No. 1 which is compulsory**.
3. All questions carry equal marks. All parts of a question should be answered together.

1. (a) Define the following: (4)
 - i) Pesticide residue analysis
 - ii) LT_{50}
 - iii) Tolerance limit
 - iv) Potentiation
- (b) Differentiate between the following (*Any two*): (4)
 - (i) Genotoxic carcinogen and non-genotoxic carcinogen
 - (ii) Bioaccumulation and biomagnification
 - (iii) Selectivity and phytotoxicity
- (c) Expand the following: (4)
 - (i) LC_{50}
 - (ii) GC
 - (iii) IPM
 - (iv) TLC
- (d) Indicate whether following statements are true or false: (3)
 - (i) Phase I reactions are non-synthetic, while Phase II reactions are synthetic.
 - (ii) Organochlorine insecticides are neurotoxic insecticides.

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(iii) LC_{50} refers to the time required to kill 50% of the test population at a given concentration of a toxicant.

2. Discuss Phase 1 and Phase 2 reactions of pesticide metabolism. Support your answer with examples. (15)
3. (a) Describe the effect of pesticides on life in general and consequent effect on human life. (9)
(b) Write a note on pesticide regulation registration process. (6)
4. (a) Explain organic methods of domestic pest management and the appliances used for domestic pest control. (8)
(b) Give a detailed account of post-construction termite proofing of buildings. (7)
5. (a) Explain some important approaches for estimating joint insecticidal mechanisms. (9)
(b) List various routes through which an organism may be exposed to pesticides. (6)
6. (a) What do you understand by pest resistance to insecticides? Explain the mechanisms and types of resistance with suitable examples. (10)
(b) Discuss the process of pesticide registration in India. (5)
7. Write short notes on (*Any three*) (15)
 - (i) Factors affecting toxicity of insecticides
 - (ii) Domestic pest management
 - (iii) Pesticide markets and industries
 - (iv) Health hazards due to pesticide metabolism
 - (v) Types of insecticides formulation