

Roll No.

Total No. of Pages : 02

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B.Sc. (Hons.) (Agriculture) (Sem.-4)

AGROCHEMICALS

Subject Code : BSAG-421-19

M.Code : 79751

Date of Examination : 10-01-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Write briefly :

- Define agro-chemicals. What are their pest specific types?
- How does use of agrochemicals affect the quality of ground water in crop farming areas?
- List various harmful effects of agrochemicals on the soil microorganisms?
- Define and classify the herbicides based on their time of application?
- How Bordeaux mixture prepared? How *Phytophthora* in citrus is managed by use of fungicides?
- What are inorganic, organic and systematic fungicides? Give one example in each. Why copper oxychloride in citrus and carbendazim in wheat are applied?
- Write short note on chemical fertilizers, farm yard manure, vermicompost and poultry manure. What are slow and fast release fertilisers?
- Differentiate biopesticides and botanicals. What is mode of action of neem in insects?
- What plant biopesticides are recommended by PAU, Ludhiana for management of rice stemborers, leaffolder and cotton whitefly?

- j) What are adverse effects of agrochemicals on human and environment if they are used indiscriminately for pest management on crops?

SECTION-B

2. Name commonly used botanical pesticides with examples of few commercial neem formulations containing azadirachtin. What are their advantages and in IPM and limitations?
3. Give the rules of Insecticide Act, the insecticides are either banned or restricted for their use in India? How new insecticides are registered under this Insecticide Act?
4. What is fertilizer legislative and marketing? What modes of transportation and a series of other process steps are involved in their supply chain?
5. Explain main hazards created by persistent agrochemicals in the soil. How the pesticide disposal is responsible in polluting the environment?
6. Comment on plant and animal systemic insecticides. Enlist various qualities of an ideal systemic insecticide. What are advantages and disadvantages of systemic insecticides?

SECTION-C

7. Describe different classes of pesticides based on their mode of entry and chemical composition. Also give metabolic pathways methyl parathion.
8. What is metabolism of organochlorine insecticides? Also enlist five principal routes of DDT metabolism and give its metabolic pathways.
9. Draw schematic representation of xenobiotic metabolism. Enlist various insecticidal metabolic pathways. What are the enzymes involved in insecticide metabolisms?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.