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SEAT No. _____

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SARDAR PATEL UNIVERSITY
T. Y. B. Sc. (FIFTH SEMESTER) EXAMINATION
2018
WEDNESDAY, 24th OCTOBER
Time: 10.00 a.m. to 01.00 p.m.
US05CENV02 (ENVIRONMENTAL SCIENCE)
(PESTICIDE, HERBICIDE, FUNGICIDE TOXICOLOGY)

- Note: 1. Answers of all the questions (including multiple choice questions) should be written in the provided answer book only
2. Figures to the right indicate the full marks of sub question
3. Draw neat and labelled diagrams wherever necessary

Maximum Marks: 70

Q. 1. Multiple choice questions

10

1. The most important enzyme system of MMFO is _____.
a. Esterases b. Amidases c. Epoxide hydrolase d. Cytochrome P-450
2. Excretion of toxicants takes place via _____ route.
a. Urinary b. Biliary c. Pulmonary d. All of these
3. The entry of toxicants to CNS is prevented by _____.
a. Placental barrier b. GI tract c. Skin d. Blood-brain barrier
4. Half life of DDT in humans range from _____.
a. 1-2 years b. 0.25-0.50 years c. 3-4 years d. 0.5-0.7 years
5. _____ is an organochlorine insecticide.
a. Malathion b. Dieldrin c. Pyrethroids d. Chloroquine
6. Cell membrane disrupter herbicides are _____.
a. Growth promoters c. Contact herbicides
b. Growth inhibitors d. Kill herbicide
7. _____ herbicide is known as bleachers.
a. Photosynthesis inhibitors c. Cell membrane disrupters
b. Pigment inhibitors d. Growth regulators
8. _____ is a soil applied herbicide that controls both mono and dicotyledonous weed.
a. Triazine b. Phenoxy c. Dichlobenil d. Paraquat
9. Chestnut compound fungicide is a mixture of $\text{CuSO}_4 +$ _____.
a. Na_2CO_3 b. $\text{Ca}(\text{OH})_2$ c. NH_3SO_4 d. Linseed oil
10. Anthracnose disease is controlled by _____.
a. Thiram b. Dichlone c. Ziram d. Perènox

Q. 2. Answer the following questions in short (Any Ten)

20

1. Write salient features of Cytochrome P-450 system.
2. Enlist the factors affecting biotransformation of xenobiotics in human body.
3. Define: Bioassay and Bioactivation.
4. What are axonic poisons? What are neurosynaptic poisons?
5. Draw structures of Dieldrin and Parathion insecticides.
6. What is pesticide resistance?
7. Write about Biotic factors affecting foliar herbicide absorption.
8. Define: Symplastic system.
9. Enlist the morphological response to herbicide by the plants.
10. Draw the structural formulae of Ziram and Thiram fungicide.
11. What are Contact fungicides and Systemic fungicides?
12. Name the organophosphorus fungicides with characteristics of any one.

(1)

(P.T.O.)

Q. 3. Describe in detail about Phase II reaction of biotransformation of Xenobiotics. 10

OR

Q. 3. a. Write in detail about sites of absorption of toxicants in the body. 05
b. Write a detailed note on the storage depots of toxicants in human body. 05

Q. 4. a. Write in detail on impact of pesticides on various organisms. 05
b. Write briefly about carbamate insecticides and their mode of action. 05

OR

Q. 4. a. Write a detailed note on classification of pesticides. 05
b. Write a short note on: DDT in environment and its biomagnifications. 05

Q. 5. a. Explain Absorption and translocation of triazine and its effect on the growth and plant structure. 05
b. Draw the labelled schematic representation of plasma membrane affected by various toxic molecules. 05

OR

Q. 5. a. Write in detail about mode of action and translocation of Urea herbicides. 05
b. Write about classification of Herbicides. 05

Q. 6. a. Write a detail note on Dichlone Fungicide. 05
b. Write about Benomyl fungicides. 05

OR

Q. 6. Write a detailed note on Copper fungicides. 10

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