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AR-2017

B.Sc (AG)

4th SEMESTER REGULAR EXAMINATION-NOV-2019

EC-241

AGRO CHEMICALS

Time : 2 Hours

Maximum : 50 Marks

(Answer all questions of Section – A)

SECTION – A

1. Choose the correct answer [10×0.5=5]
- a Which of the following is not a type of measure of toxicity?
a) dermal toxicity b) oral toxicity c) toxicity of inhalation d) stomach toxicity
 - b Insecticides that act by permeating the plant are said to be
a) systemic insecticides b) contact poisons c) penetrating pesticides d) porous insecticides
 - c An additive that makes pesticide formulation mix with water is called
a) a mixer b) an adjuvant c) a pellet d) an emulsifier
 - d Pest control by changing crop spacing including crop rotation, pruning and weeding are part of the method of
a) mechanical control b) cultural control c) chemical control d) biological control
 - e What are the unit of LD 50?
a) kilogram/gram of animal body weight b) milligrams /kilogram of animal body weight
c) gram/gram of animal body weight d) milligrams/gram animal body weight
 - f In an IPM program, _____ control is considered first
a) cultural b) legislative c) chemical d) mechanical
 - g The chemical obtained from chrysanthemum that has insecticidal properties is called a
a) parasite b) pathogen c) pyrethrum d) pyrethroid
 - h Which of the following compound is not an organic substance?
a) pyrethrum b) lindane c) rotenone d) nicotine
 - i Which of the following is a synthetic compound
a) ryania b) sabadilla c) pyrethrum d) pyrethroid
 - j A herbicide applied to the soil before planting a crop is called
a) pre emergence herbicide b) post emergence herbicide c) post plant herbicide
d) pre plant herbicide

2. Fill in the blanks [10×0.5=5]

- a) When 2,4-D is used in very low concentration act as ___ and when used in high conc. act as ___.
- b) N content in Ammonium nitrate is _____
- c) Biuret % in Urea for foliar spray should not be more than _____
- d) Chemical formula of SSP is _____
- e) Bone meal is suitable for which soil in India _____
- f) _____ fertilizer is completely imported in India.
- g) Hygroscopicity of N-Fertilizer _____ is highest.
- h) Ammonium chloride is manufactured by the process is called _____
- i) Aammonia is manufactured by the process is called _____
- j) During urea manufacturing the temperature of the combustion chamber is _____



3. Write True/False

- a) Chemicals which can kill nematodes are called nematicide.
- b) Chemicals which can kill rodent are called insecticide.
- c) Herbicide and Pesticide are same term.
- d) Bordeaux mixture is a sulphur compound.
- e) Basic slag is a by-product of Rock Phosphate.
- f) 'Quick knock down' effect is shown by pyrethroids.
- g) Rotenone is a botanical pesticide.
- h) Sylvinite is a raw material for K fertilizer manufacturing.
- i) Gamma-HCH is called Lindane.
- j) Monocrotophos is a carbamate compound

4. Match the following

[10x0.5=5.0]

- | | | | |
|-------|-------------------|----|----------------------|
| i) | Therapeutant | a. | Dithiocarbamate |
| ii) | Zineb | b. | Fungicide |
| iii) | Azadirachtin | c. | Systemic fungicide |
| iv) | Pesticide residue | d. | IAA mimic |
| v) | Metalaxyl | e. | Glycine |
| vi) | Glyphosate | f. | Neem |
| vii) | 2,4-D | g. | Environmental effect |
| viii) | Quinalphos | h. | OP |
| ix) | Thiomethoxam | i. | Mosquito killer |
| x) | Transfluthrin | j. | Neonicotinoids |

SECTION – B

Answer the following questions (**any five**)

[5 x 6 = 30]

- 5) Classify agro-chemicals with proper example? Write about the merits and demerits of using agro-chemicals in crop fields special relevance to pesticide residue.
- 6) Write down the chemistry, properties and use of these group of insecticide. At least one compound from each group. Organochlorine, OP, Carbamates, synthetic pyrethroid, neonicotinoids.
- 7) Write down the manufacturing process of urea in detail. What happens to urea when applied to acidic soil?
- 8) Write down the synthesis, chemical properties and use of these fertilizers.
 - a) NH_4Cl
 - b) $(\text{NH}_4)_2\text{SO}_4$
- 9) Write short notes on the following.
 - a) Basic Slag
 - b) Bone Meal
- 10) Write down the mode of action of copper oxychloride and Bordeaux mixture.