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M.Sc. (Semester - I) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
CHEMISTRY OF PESTICIDES AND THEIR FORMULATIONS - I

Day & Date: Thursday, 16-11-2017
 Time: 10.30 AM to 01.00 PM

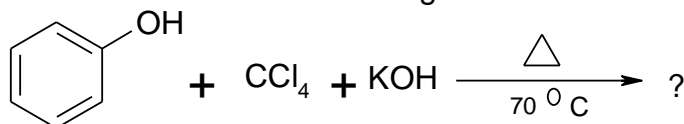
Max. Marks: 70

- Instructions:** 1) All questions are compulsory.
 2) Figures to the right indicate full marks.
 3) Attempt any two questions from section-II and Section-III
 4) All questions carry equal marks.

Section - I

Q.1 Select most correct alternative of the following (each carry 1 marks) 14

- 1) Acylation and alkylation of benzene with acetyl chloride and alkyl halide in presence of AlCl_3 is example of _____.
 a) Electrophilic addition b) Nucleophilic addition
 c) Electrophilic substitution d) Nucleophilic addition
- 2) Which of the following compound undergoes SN^2 – reaction?
 a) Methyl bromide b) Isopropyl bromide
 c) Tertiary butyl bromide d) Ethylene dibromide
- 3) Product of Perkins reaction is _____.
 a) Benzoic acid b) Cinnamic acid
 c) Phthalic acid d) Salicylic acid
- 4) Predict the Product of following reaction.

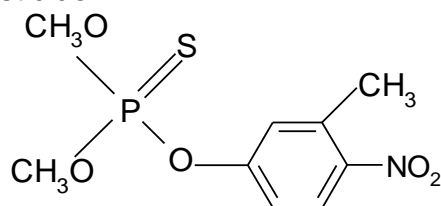


- a) Ortho and para hydroxy benzoic acid.
 b) Ortho and para hydroxy benzaldehyde
 c) O-hydroxy Phenol
 d) P-hydroxy phenol
- 5) Name the following pyrethroid.

 a) Permethrine b) Cyper metherin
 c) Deltamethrin d) Allethrin
- 6) Which of the following compound is best Fumigant?
 a) Methyl bromide b) Methyl sulphate
 c) Methyl chloride d) Methyl iodide

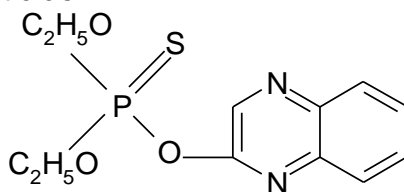
- 7) Sulphur is formulated in the form of _____.
- a) Dust
b) Granules
c) Solution
d) Smoke

- 8) Name the following pesticide.



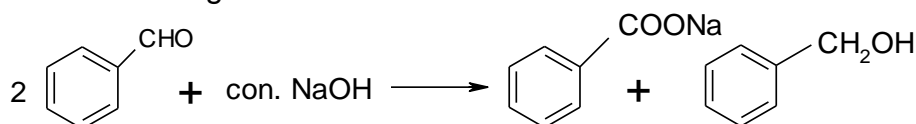
- a) Malethion
b) Parathion
c) Fenitrothion
d) Phorate
- 9) Trade name of Monocrotophos is _____.
- a) Rogar
b) Azodrin
c) Dimecron
d) Thimate

- 10) Name the following pesticide.



- a) Chloropyrifos
b) Monocrotophos
c) Quinolphos
d) None of these
- 11) N-N-dimethyl benzamide is used as _____.
- a) Insect repellent
b) Insect attractant
c) Insect killer
d) All the above
- 12) Neem plant extract is used _____.
- a) Fertilizer
b) Insect attractant
c) Insecticide
d) Insect repellent

- 13) Name the following reaction.



- a) Perkins reaction
b) Knoevenagel reaction
c) Reformatsky reaction
d) Cannizarro reaction
- 14) Which compound is used as antioxidant in pyrethrins to improve the solubility and storage property?
- a) Resorcinol
b) Phenol
c) Cresol
d) Nitrophenol

Section – II

Attempt any two questions from this section:-

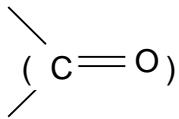
- Q.2** A) Discuss Benzoin Condensation reaction with Mechanism. **07**
 B) Give synthesis and uses of Malethion and Phosphamidon. **07**
- Q.3** A) What are insect attractants and repellents? Describe the mode applications **07**
 in plant protection.
 B) Discuss Cannizarro reaction with mechanism. **07**

- Q.4** **A)** Give synthesis and uses of Quinolphos and Chloropyriphos. **07**
B) Describe the following pesticide formulations. **07**
 i) Wettable powder
 ii) Granules.

Section – III

Attempt any two questions from this section:-

- Q.5** **A)** Explain E₁-elimination reaction with mechanism. **05**
B) Give synthesis of Deltametherin and Cypermetherine. **05**
C) Write note on Bio-efficiency of Neem preparations. **04**
- Q.6** **A)** Discuss Dinacol-Pinacolone rearrangement reaction with mechanism. **05**
B) Describe the use and environmental fate of Phermones and herbicides. **05**
C) Describe the spray formulation. **04**
- Q.7** **A)** Give synthesis and uses of Dimethoate. **05**
B) Describe the natural and synthetic pyrethroids with their applications. **05**
04

- C)** Discuss the reaction of carbonyl  group.

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M.Sc. (Semester - I) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
SOIL SCIENCE, FERTILIZERS, MICRONUTRIENTS AND PLANT GROWTH
REGULATORS

Day & Date: Saturday, 18-11-2017
Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) Attempt totally five questions.
2) Question no.1 is compulsory (Section-I).
3) Attempt any two questions from question no.2 to 4 (section-II).
4) Attempt any two questions from question no.5 to 7 (Section-III).
5) Figures to the right indicate full marks.

Q.1 Choose the correct option given below:-

14

- 1) Chemical composition of bone meal is _____.
a) $Ca_3(PO_4)_2$
b) $Ca_3(PO_4)_2 CaF_2$
c) $Ca_3(PO_4)_2 CaF_2$
d) $CaHP04$
- 2) _____ of composting introduced by Hutchinson and Richard in England in 1924.
a) Adco process
b) Indoor process
c) Activated process
d) Bangalore process
- 3) Desert soils are distributed in _____.
a) Maharashtra
b) Rajasthan
c) Peninsular region
d) Valley of Brahamaputra.
- 4) pH of Regur soil is varies from _____.
a) 6.5 to 7.5
b) 6.0 to 7.0
c) 7.5 to 8.5
d) 7.0 to 8.0
- 5) Arrangement of soil particles is referred as _____.
a) Soil structure
b) Soil organs
c) Soil mass
d) Soil texture
- 6) _____ is a growth retardant.
a) ABA
b) GA
c) IAA
d) Cytokinin
- 7) The product formed by mixing Ammonium hydrate with 40% Limestone is called _____.
a) Lime chalk
b) Nitrate chalk
c) Dolomite chalk
d) Limestone chalk
- 8) N : P : K (10 : 26 : 26) is a _____ fertilizer.
a) Only potassic
b) Only phosphatic
c) Complex
d) Only nitrogenous.
- 9) Nitrogen percentage in Ammonium nitrate is _____.
a) 24%
b) 21%
c) 18%
d) 26%

- 10) Bangalore process of composting was devised by _____.
a) C. N. Acharya b) Haward & ward
c) Fowler & Redge d) Hat Chinson & Richard
- 11) Internal Chlorosis occurs due to the deficiency of _____ element.
a) Ca b) Cu
c) Mg d) Mo
- 12) Coconut milk contains the growth regulator _____.
a) IBA b) GA
c) Cytokinin d) ABA
- 13) Water holding capacity of soil governed by _____.
a) Organic matter of soil b) Colour of soil
c) Alkalinity of soil d) Types of soil
- 14) Biogas contains _____ gas.
a) Ethane b) Methane
c) Butans d) Acetylene

Section – II (Any TWO)

- Q.2 A)** What are the Potassic Fertilizer? Describe the manufacture of Muriate of Potash. **07**
- B)** Write in brief about Green Manure. **07**
- Q.3 A)** Describe he chemical properties of soil. **07**
- B)** Describe the structure of soil. **07**
- Q.4 A)** What are bulky organic manure? Explain Adco process of compost. **07**
- B)** Write in brief about Super Compost. **07**

Section – III (Any Two)

- Q.5 A)** Classification of fertilizers. **05**
- B)** Write a short note on 'soil fertility'. **05**
- C)** Buffering capacity of soil. **04**
- Q.6 A)** Factors influencing the availability of micronutrient. **05**
- B)** Deficiency symptoms of Cu & Mo. **05**
- C)** Describe the role of Mn & Fe. **04**
- Q.7 A)** Describe the chemical nature of Indo Acetic Acid (IAA). **05**
- B)** BGA as a biofertilizer. **05**
- C)** Write a short note on sewage manure. **04**

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M.Sc. (Semester - I) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
INTRODUCTORY AND INDUSTRIAL ENTOMOLOGY

Day & Date: Tuesday, 21-11-2017

Max. Marks: 70

Time: 10.30 AM to 01.00 PM

- Instructions:** 1) All questions are compulsory.
 2) All Questions carry equal marks.
 3) Attempt any two questions from question no.2 to 4 (section-II).
 4) Attempt any two questions from question no.5 to 7 (Section-III).

Q.1 Choose the correct answer from options given below:-**14**

- 1) Life cycle of insect completed within three stages is called _____.
 a) Holometabolus b) Hemimetabolus
 c) Complete d) None of the above
- 2) Halter is the wing modification of _____.
 a) Orthoptera b) Coleoptera
 c) Hemiptera d) Diptera
- 3) Setaceous antennae are found in _____.
 a) Dragonfly b) Termite
 c) Cockroach d) None of the above
- 4) Siphoning type of mouth parts found in _____.
 a) Female mosquito b) Till hawk moth
 c) Butter fly d) Gall fly
- 5) Fussorial type of leg is found in _____.
 a) Groundnut leaf miner b) Cockroach
 c) Cotton ball miner d) Mole cricket
- 6) The scientific name of Grasshopper is _____.
 a) *Helicoverpa aemigera* b) *Hieroglyphus banian*
 c) *Odontotermus obesus* d) None of the above
- 7) All flies are included in the _____ order.
 a) Orthoptera b) Coleopteran
 c) Hemipteran d) Diptera
- 8) Midgut of insect is called _____.
 a) Stomodeum b) *Proctodeum*
 c) Mesenteron d) None of these
- 9) In summer season some lepidopteron pest goes to the _____.
 a) Hibernation b) Aestivation
 c) Parasitic d) Saprophytic
- 10) Position of mouth parts in Termite is _____.
 a) Hypognathus b) Opisthognathus
 c) Prognathus d) Lophopidae
- 11) *Apis flora* is also called as _____.
 a) Asian bee b) Giant rock bee
 c) Little bee d) None of these

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**M.Sc. (Semester - I) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
PLANT PATHOLOGY AND WEED MANAGEMENT**

Day & Date: Thursday, 23-11-2017
Time: 10.30 AM to 01.00 PM

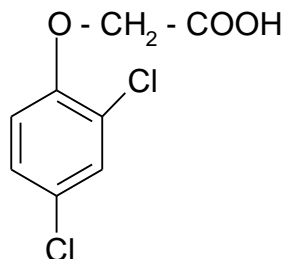
Max. Marks: 70

- Instructions:** 1) Attempt totally five questions.
2) Question no.1 is compulsory (Section-I).
3) Attempt any two questions from question no.2 to 4 (section-II).
4) Attempt any two questions from question no.5 to 7 (Section-III).
5) Figures to the right indicate full marks.

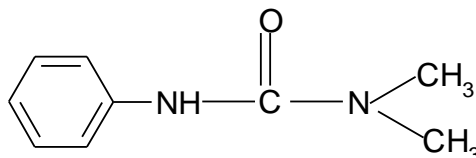
Q.1 Rewrite the following sentences by choosing correct alternative. 14

- 1) _____ are a cellular plant pathogens.
 - a) Fungi
 - b) Viruses
 - c) MLOs
 - d) Algae
- 2) Dodder (*Cuscuta*) is _____.
 - a) Algal pathogen
 - b) Fungal pathogen
 - c) Parasitic insect
 - d) Parasitic plant
- 3) _____ are absorptive pathogens.
 - a) Algae
 - b) Bacteria
 - c) Fungi
 - d) Viruses
- 4) Mildew type diseases generally caused by _____.
 - a) Algae
 - b) Bacteria
 - c) Fungi
 - d) Viruses
- 5) *Cephaleuros virescens* causes rust disease found in _____ crop.
 - a) Papaya
 - b) Mango
 - c) Sugarcane
 - d) Grapes
- 6) Papaya ring rot disease caused by _____.
 - a) TMV
 - b) SMV
 - c) BBTV
 - d) PRSV
- 7) _____ is aquatic weed.
 - a) *Echornia crassipes*
 - b) *Argemone Mexicana*
 - c) *Cynodon dactylon*
 - d) *Commelina bengolensis*
- 8) Crown gall of grapes caused by _____ spp.
 - a) *Nitrosomonas*
 - b) *Azotobacter*
 - c) *Xanthomonas*
 - d) *Agrobacterium*
- 9) Fruit ripening is due to _____ hormone.
 - a) IAA
 - b) Ethylene
 - c) Gibberellin
 - d) Cytokinin
- 10) Leaf curl disease of Chilli caused by _____.
 - a) Fungi
 - b) MLO's
 - c) Nematodes
 - d) Viruses

8) Name the following pesticide.



- a) BHC
c) 2,4-D
- b) DDT
d) Dicofol
- 9) Endosulphan is also called as _____.
a) Sevin
c) PeNB
- b) Rogar
d) Thiodan
- 10) Para chlorobenzaldehyde is condensed with Chloroform gives _____.
a) Dicofol
c) Methamyl
- b) Methoxychlor
d) Butachlor
- 11) Thallium sulphate is used as _____.
a) Fungicide
c) Bactericide
- b) Rodenticide
d) Insecticide
- 12) Mixture of Copper sulphate Pentahydrate and Crystalline Sodium carbonate is known as _____.
a) Burgandy mixture
c) Bordeaux mixture
- b) Organic mixture
d) Compost mixture
- 13) Name the following Herbicide.



- a) Fenuron
c) Tenuron
- b) Manuron
d) Fluometuron
- 14) Methuron is derivative of _____.
a) Urea
c) Oxalic acid
- b) Malonyl Urea
d) Thiourea

Section – II

Attempt any two questions from this section:-

- Q.2** A) Give synthesis of Dinoseb and Dinobuton. **07**
B) Explain the role of azo compound and hydrazine compounds in agriculture. **07**
- Q.3** A) Give synthesis of Moneb and Zineb. **07**
B) Describe the role of zinc oxide and zinc phosphate as pest control. **07**
- Q.4** A) Give synthesis of 2, 4-D and Dicofol. **07**
B) Explain the role of Hydrogen cyanide and Carbon disulphide as Fumigant in Pest control. **07**

Section - III**Attempt any two questions from this section:-**

- | | | |
|------------|--|-----------|
| Q.5 | A) Explain synthesis and properties of Endosulphan | 05 |
| | B) Explain the structure, activity relationship of carbamate with reference to acetylcholine. | 05 |
| | C) Give synthesis propanil. | 04 |
| Q.6 | A) Give synthesis and properties of Baygoan. | 05 |
| | B) Give synthesis and applications of PCNB. | 05 |
| | C) Describe thiocyanate and mercaptans as pesticides. | 04 |
| Q.7 | A) Give synthesis of Methomyl. | 05 |
| | B) Explain the role of amino compounds as herbicide. Give synthesis of Nitralin. | 05 |
| | C) Write notes on Copper Fungicides. | 04 |

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M.Sc. (Semester - II) (New) (CBCS) Examination Oct/Nov-2017

Agrochemicals and Pest Management

ANALYTICAL TECHNIQUES FOR AGROCHEMICALS

Day & Date: Monday, 20-11-2017

Max. Marks: 70

Time: 10.30 AM to 01.00 PM

- Instructions:** 1) All Questions are Compulsory.
 2) All Question carry equal marks.
 3) Solve any two Questions from Section-II
 4) Solve any two Questions from Section-III

SECTION - I

Q.1 Choose the most correct answer (one mark each):-

14

- 1) In a conductivity cell _____ plates are used as a electrode.
 - a) Copper
 - b) Aluminium
 - c) Zinc
 - d) Platinum
- 2) In potentiometric titration the potential of indicator electrode depends on the _____ of ions present in the solution.
 - a) Pressure
 - b) Temperature
 - c) Volume
 - d) Concentration
- 3) SI unit of conductance is _____.
 - a) Siemen
 - b) ohm
 - c) ohm⁻¹
 - d) mhos
- 4) Which is the second step of stripping analysis?
 - a) Concentration
 - b) Stripping
 - c) Oxidation
 - d) Dissolution
- 5) Anion exchange chromatography is used for separation of _____.
 - a) Both cations and anions
 - b) Cations only
 - c) Anions only
 - d) Neutral species
- 6) In adsorption column chromatography technique the distribution of solution occurs between _____.
 - a) Two liquid phases
 - b) Two solid phases on the column
 - c) Solute and solvent phases
 - d) A solid and liquid phase on the column
- 7) The liquid-liquid chromatography is known as _____ chromatography.
 - a) Gas liquid
 - b) Adsorption
 - c) Absorption
 - d) Partition
- 8) In Acid-base titration which indicator is used?
 - a) Phenolphthalein
 - b) Eriochrome Black-T
 - c) Methyl red
 - d) Xylenol orange
- 9) Methyl red is _____ in acid solution.
 - a) Red
 - b) Yellow
 - c) Orange
 - d) Pink

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M.Sc. (Semester - II) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
ECONOMIC ENTOMOLOGY

Day & Date: Wednesday, 22-11-2017
 Time: 10.30 AM to 01.00 PM

Max. Marks: 70

- Instructions:** 1) All Questions are Compulsory.
 2) All Questions carry equal marks.
 3) Solve any two Questions from Section-II
 4) Solve any two Questions from Section-III

Q.1 Choose correct answer from options given below.

14

- 1) Filaria causes due to _____ mosquito.
 - a) Male Anopheles
 - b) Female Anopheles
 - c) Female Culex
 - d) Male Aedes
- 2) Scientific name of Rice weevil is _____.
 - a) Sitophilus oryzae
 - b) Periplaneta Americana
 - c) Cimex lectularius
 - d) Musca domestica
- 3) _____ is sucking pest.
 - a) Mealy bug
 - b) Nematode
 - c) Silver fish
 - d) Helicoverpa borer
- 4) Wild boar having great sense of _____.
 - a) Chewing
 - b) Biting
 - c) Smell
 - d) Hearing
- 5) _____ insect swarms and cover over 1000 kms distance.
 - a) Locust
 - b) Termite
 - c) Snail
 - d) Thrips
- 6) _____ is the vector of Loa-Loa.
 - a) Khapra beetle
 - b) Horse fly
 - c) Rat
 - d) Sand fly
- 7) Digger wasp belongs to family _____.
 - a) Aleyrodidae
 - b) Buprestidae
 - c) Cimicidae
 - d) Moridae
- 8) Chemicals used to control rat are known as _____.
 - a) Pesticides
 - b) Insecticides
 - c) Sprayers
 - d) Rodenticides
- 9) Patches found on flowers due to _____ pest
 - a) Mite
 - b) Housefly
 - c) Spiraling white fly
 - d) Pulse beetle
- 10) Meloidogyne Spp. Is called as _____.
 - a) Root knot nematode
 - b) Seed gall nematode
 - c) Cyst nematode
 - d) Flower nematode
- 11) Insects are belonging to phylum _____.
 - a) Mollusca
 - b) Arthropoda
 - c) Nematode
 - d) Chordate

- 12) _____ is the characteristic of Lawn web worm.
a) Formation of sooty mold b) Formation of runner mass
c) Formation of gall d) Nematode
- 13) _____ crop is damaged by Limax spp.
a) Wheat b) Garden Plants
c) Coconut d) Apple
- 14) The blood off insect is called as _____.
a) Haemolymph b) White corpuscles
c) Hemoglobin d) Leucocytes

Section – II

- Q.2** a) Describe life cycle stages of cockroach. **14**
b) Describe reproduction pattern in Grasshopper with suitable diagram.
- Q.3** a) Explain snail as a mollusean pest of agricultural crops. **14**
b) Describe different control measures on stored grain pest.
- Q.4** a) Describe seed gall nematode. **14**
b) Describe importance of study of pest.

Section – III

- Q.5** a) Describe the nature of damages caused by culex mosquito. **05**
b) Explain damages caused by House Sparrow. **05**
c) Describe use of Trichogramma in rice field. **04**
- Q.6** a) Describe nature of damages of pulse beetle. **05**
b) Explain control measures of mealy bug. **05**
c) Write morphological peculiarities of rat. **04**
- Q.7** a) Discuss specific feeding characters and Control measures of root borers. **05**
b) Draw life cycle diagram of Helicorarpa borer. **05**
c) Describe the damages caused by House fly. **04**

Seat No.	
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Set **P**

M.Sc. (Semester - III) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
PESTICIDE RESIDUES AND TOXICOLOGY

Day & Date: Thursday, 16-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any Two questions from Section II.
 3) Attempt any Two questions from Section III.
 4) All questions carry equal marks.

Section - I

Q.1 Rewrite the following sentence by choosing the correct alternatives given below:- **14**

- 1) Na/K imbalance resulting in disturbance of nerve fiber is caused due to _____.
 a) Organochlorine pesticide b) Organophosphorus pesticide
 c) Carbamate pesticide d) Pyrethroides
- 2) _____ poison is effects on Nervous System of man.
 a) Corrosive b) Irritants
 c) Neurotics d) Cardiac
- 3) Gamma rays and X-rays are radiant's used for _____.
 a) Mutation b) Expression
 c) Genetics d) None of these
- 4) Decomposition of pesticide by microbes is _____ the process.
 a) Bio-accumulation b) Bio-activation
 c) Bio-concentration d) Bio-degradation
- 5) In liquid chromatography liquid contains in column as _____ phase.
 a) Steady b) Mobile
 c) Detector d) None of these
- 6) Toxicology is the branch of _____.
 a) Entomology b) Biology
 c) Pharmacology d) None of these
- 7) Hepatic necrosis is the disorder related to _____ gland.
 a) Salivary b) Liver
 c) Both a and b d) None of these
- 8) Insects are controlled by using _____.
 a) Herbicides b) Bactericides
 c) Fungicides d) Insecticides
- 9) Neurotoxin pesticide affects _____ system of victim.
 a) Digestive b) Circulatory
 c) Nervous d) All the above

- 10) Which of following pesticide is carbamate type?
 a) Carbaryl
 b) Malathion
 c) DDT
 d) Endosulphon
- 11) Bhopal gas tragedy caused by leakage of _____.
 a) Methyl iso-cynate
 b) Methyl iso-cyanide
 c) Mercury
 d) None of these
- 12) _____ is high pressure is type of chromatography.
 a) GC
 b) HPLC
 c) TLC
 d) None of these
- 13) _____ is the movement of pesticides in water over a sloping surface.
 a) Leaching
 b) Absorption
 c) Run off
 d) Migration
- 14) Agonist is _____.
 a) Active form of toxicant
 b) Toxicant reductase
 c) Inactive form of toxicant
 d) None of these

Section - II

- Q.2** a) Define toxicology and its scope in agriculture. **07**
 b) Explain effects of pesticides on human health. **07**
- Q.3** a) Explain in detail mechanism of action of organochlorine pesticide. **07**
 b) Comment upon Gas chromatography technique for the analysis of pesticide residues in fruits. **07**
- Q.4** a) Explain in brief "Forensic toxicology". **07**
 b) State effects of pesticide residues on soil micro-organisms. **07**

Section - III

- Q.5** a) Mechanism of action of pyrethroids. **05**
 b) Biomagnifications **05**
 c) GC in residue analysis **04**
- Q.6** a) Discipline of toxicology. **05**
 b) Write a note on irritants poison. **05**
 c) Explain mutagens. **04**
- Q.7** a) Inhibition of Acetyl choline esterase. **05**
 b) Classification of poisons. **05**
 c) Microsomal oxidases. **04**

Seat
No.

Set P

M.Sc. (Semester - III) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
ADVANCES IN PEST CONTTROL - I

Day & Date: Saturday, 18-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any Two questions from Section II
 3) Attempt any Two questions from Section III
 4) All questions carry equal marks

Section - I

Q.1 Choose correct answer from options given below :-

14

- 1) Atomization of the liquid spray into proper size droplet is the main function of _____.
 a) Agitator
 b) Pressure gauges
 c) Nozzle
 d) Hose
- 2) Discharge rate power operated duster is _____.
 a) 13 kg/min.
 b) 0.5 to 150 gram/min.
 c) 13 to 20 kgm/min.
 d) 1 to 9 kg/min.
- 3) A parasite attacks on phytophagous insects are called as _____.
 a) Primary
 b) Secondary
 c) Tertiary
 d) Hyper
- 4) Concept of genetic control of insect pest was coined by _____.
 a) Pau Muller
 b) E. F. Knipling
 c) Michel Faraday
 d) Jorger Mendele
- 5) Sulphur is used as a _____.
 a) Herbicide
 b) Fungicide
 c) Insecticide
 d) Nematicide
- 6) _____ is used as a repellants against mosquitoes.
 a) Alderin
 b) Di methyl phthalate
 c) Citronil oil
 d) Indalone
- 7) The good example of anti feedant is _____.
 a) Carbamate
 b) Rogar
 c) Neon
 d) Chloropyriphos
- 8) _____ is a good trap crop near the cotton to attract Jassid and Spotted ball worm.
 a) Tur
 b) Castor
 c) Bean
 d) Bhendi
- 9) "Bt" insecticidal formulation act as _____ Poisson.
 a) Contact
 b) Stomach
 c) Nervous
 d) Respiratory
- 10) _____ is used in cultural method of pest control.
 a) Crop rotation
 b) chemicals
 c) light trap
 d) Sterile technique

- 11) Warfarin baits are used for control of _____.
- a) Fruit fly
 - b) White fly
 - c) Rats
 - d) Termites
- 12) _____ is an organism which is usually smaller than its prey and single or more individuals usually require for killing the host.
- a) Predators
 - b) Parasites
 - c) Parasitoids
 - d) All of the above
- 13) A substance produced by one or both sexes and brings both sexes together for feeding and protection purposes are called as _____ pheromones.
- a) Alarm
 - b) Aggregation
 - c) Sex
 - d) Repell
- 14) _____ is includes in biological method of pest control.
- a) Insecticide
 - b) Herbicide
 - c) Weedicide
 - d) repellent

Section - II

- Q.2** a) Enlist various method of pest control. Explain the Biological method of pest control with suitable example. **07**
- b) Enlist the plant protection appliances. Explain hand atomizer sprayer. **07**
- Q.3** a) Give an account of Chemosterilants in pest control programme with suitable example. **07**
- b) Explain the factors affecting on Host Plant Resistance. **07**
- Q.4** a) Define host plant resistance. Explain mechanism of resistance in plants. **07**
- b) Explain the detail genetic method of pest control. **07**

Section - III

- Q.5** a) Repellents and their role in pest control. **05**
- b) Use of Neem in plant protection. **05**
- c) Write a note on Insecticide. **04**
- Q.6** a) Types of nozzles. **05**
- b) Management of stored agricultural commodities. **05**
- c) Breeding for insect resistance. **04**
- Q.7** a) Insecticide resistance. **05**
- b) Plant origin insecticides. **05**
- c) Repellant. **04**

Seat No.	
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Set	P
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M.Sc. (Semester - III) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
DISEASES OF CROP PLANTS – I

Day & Date: Tuesday, 21-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All sections are compulsory.
 2) Attempt any Two questions from Section II
 3) Attempt any Two questions from Section III
 4) All questions should be written in same answer book.
 5) Draw neat and labeled diagrams wherever necessary.
 6) Figures to the right indicate full marks.

Section - I

Q.1 Rewrite the sentences by choosing the correct answer from the given alternatives:- **14**

- 1) Leaf spot disease of groundnut is also called _____.
 a) Blight
 b) Rust
 c) Tikka
 d) Shot hole
- 2) A fungus _____ produces a toxin known as Aflatoxin.
 a) Sclerotium bataticola
 b) Aspergillus Flavus
 c) Cercospora personata
 d) Cercospora arachidicola
- 3) In _____ disease of Groundnut, Uredial pustules develop commonly on the lower surface of leaf.
 a) Leaf spot
 b) Rust
 c) Seed rot
 d) Seedling blight
- 4) Cercospora Sojina causing frog eye leaf spot disease of soyabean belongs to class _____.
 a) Ascomycetes
 b) Basidiomycetes
 c) Deuteromycetes
 d) Zygomycetes
- 5) Anthrachase of soyabean is caused by _____.
 a) Colletorichum truncatum
 b) Colletotrichum falcatum
 c) Phakaspora pachyrhizi
 d) Fusarium oxysporium
- 6) Rust of Sunflower is caused by _____.
 a) Alternaria helianthi
 b) Puccinia helianthi
 c) Puccinia cdrthami
 d) Melamspora ricini
- 7) White rust of Mustard is caused by _____.
 a) Erysiphae cichoracearum
 b) Albugo candida
 c) Puccinia arachidis
 d) Puccinia recandida
- 8) Melamspora ricini causes _____ disease of castor.
 a) Leaf spot
 b) Wilt
 c) Rust
 d) Blight
- 9) A fungus causing leaf spot disease of sesamum belongs to class _____.
 a) Basidiomyceter
 b) Ascomycetes
 c) Deuteromycetes
 d) Oomycetes

- 10) Rust of Maize is caused by _____.
 - a) *Pycelnia graminis*
 - b) *Puccinia sorghi*
 - c) *Puccinia purpurea*
 - d) *Puccinia arachidis*
- 11) Downy mildew of Jowar is caused by _____.
 - a) *Sclerospora graminicola*
 - b) *Sclerospora sorghi*
 - c) *Puccinia sorghi*
 - d) *Spacetheca sorghi*
- 12) Red rot disease is found on _____ crop.
 - a) Cotton
 - b) Tobacco
 - c) Mustard
 - d) Sugarcane
- 13) GSD sugarcane is _____ disease.
 - a) Fungal
 - b) Bacterial
 - c) Viral
 - d) *Mycoplasma*
- 14) Blast of Rice is caused by _____.
 - a) *Pyricularia oryzae*
 - b) *Oryza sativa*
 - c) *Fusarium oxysporium*
 - d) *Aspergillus flavus*

Section - II

Attempt any two questions from this section:-

- Q.2** a) State the name and nature of causal organism, symptoms and control measures of Ergot disease of Bajara. **07**

b) Write causal organism, symptoms and control measures of Rust of Groundnut. **07**
- Q.3** a) State the name of pathogen, symptoms, nature of damage and control measures of Grain smut of Jawar. **07**

b) Write the name of pathogen, symptoms and control measures of Rust of Soyabean. **07**
- Q.4** a) Describe stem rust of wheat w.r.t. its causal organism, symptoms and control measures. **07**

b) State the name of pathogen, symptoms and control measures of wilt of cotton. **07**

Section - III

Attempt any two questions from this section

- Q.5** a) Describe the life cycle of white rust fungus of mustard. **05**

b) Enlist the diseases of legumes studies by you write the symptoms of wilt of legumes. **05**

c) Write causal organism and symptoms of Rust of Jowar. **04**
- Q.6** a) State the causal organism and symptoms and control measures of GSD of sugarcane. **05**

b) Write causal organism and symptoms of Powdery Mildew of Mustard. **05**

c) Write symptoms and causal organism of blight of Tobacco. **04**
- Q.7** a) Enlist the diseases of pulses and vegetables studies by you. Write the names of Blight disease of cotton. **05**

b) Write the symptoms and control measures of Blight disease of Cotton. **05**

c) Write a note on Powdery mildew of Sunflower. **04**

Seat No.	
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Set P

**M.Sc. (Semester - III) (Old) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
ADVANCES IN PEST CONTTROL - I**

Day & Date: Saturday, 18-11-2017
Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
2) Attempt any Two questions from Section II
3) Attempt any Two questions from Section III
4) All questions carry equal marks

Section - I

Q.1 Choose correct answer from options given below :- **14**

- 1) Atomization of the liquid spray into proper size droplet is the main function of _____.
a) Agitator b) Pressure gauges
c) Nozzle d) Hose
- 2) Discharge rate power operated duster is _____.
a) 13 kg/min. b) 0.5 to 150 gram/min.
c) 13 to 20 kgm/min. d) 1 to 9 kg/min.
- 3) A parasite attacks on phytophagous insects are called as _____ parasites.
a) Primary b) Secondary
c) Tertiary d) Hyper
- 4) Concept of genetic control of insect pest was coined by _____.
a) Pau Muller b) E. F. Knipling
c) Michel Faraday d) Jorger Mendele
- 5) Sulphur is used as a _____.
a) Herbicide b) Fungicide
c) Insecticide d) Nematicide
- 6) _____ is used as a repellants against mosquitoes.
a) Alderin b) Di methyl phthalate
c) Citronil oil d) Indalone
- 7) The good example of anti feedant is _____.
a) Carbamate b) Rogar
c) Neon d) Chloropyriphos
- 8) _____ is a good trap crop near the cotton to attract Jassid and Spotted ball worm.
a) Tur b) Castor
c) Bean d) Bhendi
- 9) "Bt" insecticidal formulation act as _____ Poisson.
a) Contact b) Stomach
c) Nervous d) Respiratory
- 10) _____ is used in cultural method of pest control.
a) Crop rotation b) chemicals
c) light trap d) Sterile technique

- 11) Warfarin baits are used for control of _____.
- a) Fruit fly
 - b) White fly
 - c) Rats
 - d) Termites
- 12) _____ is an organism which is usually smaller than its prey and single or more individuals usually require for killing the host.
- a) Predators
 - b) Parasites
 - c) Parasitoids
 - d) All of the above
- 13) A substance produced by one or both sexes and brings both sexes together for feeding and protection purposes are called as _____ pheromones.
- a) Alarm
 - b) Aggregation
 - c) Sex
 - d) Repell
- 14) _____ is includes in biological method of pest control.
- a) Insecticide
 - b) Herbicide
 - c) Weedicide
 - d) repellent

Section - II

- Q.2** a) Enlist various method of pest control. Explain the Biological method of pest control with suitable example. **07**
b) Enlist the plant protection appliances. Explain hand atomizer sprayer. **07**
- Q.3** a) Give an account of Chemosterilants in pest control programme with suitable example. **07**
b) Explain the factors affecting on Host Plant Resistance. **07**
- Q.4** a) Define host plant resistance. Explain mechanism of resistance in plants. **07**
b) Explain the detail genetic method of pest control. **07**

Section - III

- Q.5** a) Repellents and their role in pest control. **05**
b) Use of Neem in plant protection. **05**
c) Write a note on Insecticide. **04**
- Q.6** a) Types of nozzles. **05**
b) Management of stored agricultural commodities. **05**
c) Breeding for insect resistance. **04**
- Q.7** a) Insecticide resistance. **05**
b) Plant origin insecticides. **05**
c) Repellant. **04**

Seat No.	
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M.Sc. (Semester - III) (Old) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
ANALYSIS OF AGROCHEMICALS

Day & Date: Saturday, 25-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) Sections I is compulsory.
 2) Attempt any Two questions from Section II
 3) Attempt any Two questions from Section III
 4) All questions carry equal marks

Section - I

Q.1 Choose the most correct answer (one mark each): **14**

- 1) In any chromatographic technique the number of phases involved is _____.
 a) 0
 b) 2
 c) 1
 d) 3
- 2) The column in HPLC is made up of _____ material.
 a) Plastic
 b) Stainless steel
 c) Rubber
 d) Silk
- 3) In paper chromatography water adsorbed on paper acts as _____.
 a) Mobile phase
 b) Stationary phase
 c) Indicator
 d) All of these
- 4) The technique of HPLC is developed by _____.
 a) Krikland and Perkins
 b) Cassidy and Mockel
 c) Hamdy and Perkins
 d) Hess and Hotzel
- 5) In thin layer chromatography _____ is used as solid support.
 a) Silica gel
 b) Alumina
 c) Kieselghur
 d) All of these
- 6) In Scintillation counter, the scintillations are produced on the screen coated with _____.
 a) Zinc iodide
 b) Zinc sulphate
 c) Zinc carbonate
 d) Zinc sulphide
- 7) Fluorescence and phosphorescence spectra generally consist of many lines, mostly in _____ region.
 a) UV
 b) Visible
 c) IR
 d) None
- 8) Absorption of UV radiations by organic compound leads to _____.
 a) Electronic changes
 b) Vibrational changes
 c) Rotational changes
 d) None of these
- 9) Absorption maxima shift to longer wavelength due to presence of _____.
 a) Cyclic structure
 b) Conjugation
 c) Saturated group
 d) None of these
- 10) IR spectroscopy is mainly useful in the determination of _____.
 a) Conjugation
 b) Functional group
 c) Molecular weight
 d) Melting point

- 11) Among the following which is IR active molecule.
a) HCl
b) N₂
c) CCl₄
d) Cl₂
- 12) _____ radiations are used in NMR spectroscopy.
a) Microwave
b) IR
c) Radio
d) UV
- 13) _____ is used as internal standard in NMR spectroscopy.
a) DMF
b) TMS
c) CDCl₃
d) Acetone
- 14) Carbonyl compound containing γ hydrogen, during fragmentation undergoes _____ rearrangement.
a) Hoffmann
b) Beckmann
c) Mc-Lafferty
d) Fries

Section - II

- Q.2** a) Explain principle, procedure and applications of paper chromatography. **07**
b) Describe the method used for measurement of radioactivity. **07**
- Q.3** a) Distinguish Fluorescence from Phosphorescence in terms of mechanism by which an excited molecule is deactivated. **07**
b) Explain in brief types of electronic excitations in UV spectroscopy. **07**
- Q.4** a) Describe in brief analysis of ammonia. **07**
b) Draw the schematic diagram of mass spectrometer and explain its working. **07**

Section - III

- Q.5** a) Write applications of polarography for analysis of insecticides. **05**
b) Describe types of vibrations in IR spectroscopy. **05**
c) Write a note on Mc-Lafferty rearrangement. **04**
- Q.6** a) Write a note on Scintillation Counter. **05**
b) Explain equivalent and non equivalent protons with example. **05**
c) Explain different types of detectors in UV spectroscopy. **04**
- Q.7** a) Distinguish following pairs of compound by IR spectroscopy. **05**
1) CH₃-CH₂-OH and CH₃-COOH
2) CH₃COCH₃ and CH₃-CH₂-CHO
b) Predict the NMR spectra of following: **05**
CH₃CH₂-COOH and CH₃-CH₂-CHO
c) Describe types of detectors in HPLC. **04**

Seat No.	
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M.Sc. (Semester - IV) (Old) (CGPA) Examination Oct/Nov-2017
Agrochemicals And Pest Management
AGRO-BASED MARKETING MANAGEMENT

Day & Date: Friday, 17-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any Two questions each from Section II and Section III.
 3) All questions carry equal marks

Section - I

Q.1 Choose the correct answer from options given below:-

14

- 1) WTO form in _____.
 a) 1995
 b) 1994
 c) 1998
 d) 2000
- 2) _____ is first stage in PLC.
 a) Introduction
 b) Maturity
 c) Growth
 d) Decline
- 3) Marketing environment includes _____.
 a) Legal
 b) Economical
 c) Social and cultural
 d) All of these
- 4) Market segmentation based on _____.
 a) Geographical
 b) Demographic
 c) Social
 d) All of these
- 5) _____ is a logo or company name.
 a) Brand
 b) Packing
 c) Both
 d) None of these
- 6) _____ is first stage of new product development.
 a) Creation of new idea
 b) Launch product
 c) Evaluation of ideas
 d) None of these
- 7) GATT form in _____.
 a) 1947
 b) 1948
 c) 1949
 d) 1946
- 8) RBI is _____ bank of India.
 a) Commercial
 b) Foreign
 c) Central
 d) Industrial
- 9) NABARD made for _____ purpose.
 a) Industrial
 b) Education
 c) Agriculture
 d) Import-export
- 10) Producer to consumer _____ channel.
 a) One level
 b) two level
 c) Three level
 d) Four level
- 11) In modern marketing _____ is supreme.
 a) The product
 b) The advertisement
 c) The consumer
 d) All of these

- 12) GATT stands for _____.
- a) General agreement of tariff and trade
 - b) General Agreement of tax and trade.
 - c) Both
 - d) None of these
- 13) _____ is not part of 4ps.
- a) Product
 - b) Price
 - c) People
 - d) Promotion
- 14) Marketing environment includes _____.
- a) Legal
 - b) Economical
 - c) Social & cultural
 - d) All of these

Section - II

Solve any two questions from sec-II:-

- | | | |
|------------|--|-----------|
| Q.2 | a) Advantage of Market segmentation. | 07 |
| | b) Explain the concept of marketing. | 07 |
| Q.3 | a) Advertising. | 07 |
| | b) Importance of marketing. | 07 |
| Q.4 | a) Explain the Function of WTO. | 07 |
| | b) Define the stages product life cycle. | 07 |

Section - III

Solve any two questions from sec-II:-

- | | | |
|------------|--|-----------|
| Q.5 | a) Problems of agri-business. | 05 |
| | b) Marketing audit. | 05 |
| | c) Publicity. | 04 |
| Q.6 | a) Marketing research. | 05 |
| | b) Marketing audit. | 05 |
| | c) Marketing planning. | 04 |
| Q.7 | a) Write type of distribution channels. | 05 |
| | b) Describe the place mix for 'Kadam seeds'. | 05 |
| | c) Define importance of supply chain Management. | 04 |

Seat No.	
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M.Sc. (Semester - IV) (Old) (CGPA) Examination Oct/Nov-2017
Agrochemicals And Pest Management
MANUFACTURE OF AGROCHEMICALS

Day & Date: Wednesday, 22-11-2017
Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All sections are compulsory.
2) Attempt any Two questions from Section II
3) Attempt any Two questions from Section III
4) All questions carry equal marks

Section - I

Q.1 Choose the most correct answer (one mark each):

14

- 1) The agrograde sulphur is used as _____.
a) Herbicide
b) Fungicide
c) Growth promoter
d) Growth retardant
- 2) The acute toxicity of dimethoate for rat is _____.
a) 320 to 500 mg/kg
b) 365 to 540 mg/kg
c) 60 to 120 mg/kg
d) 30 to 45 mg/kg
- 3) The trade name of phosphamedon is _____.
a) Rogar
b) Sevin
c) Dimecron
d) Dithane
- 4) Recruitment and selection of employees come under jurisdiction of _____ manager.
a) Personnel
b) Finance
c) Production
d) Market
- 5) _____ is a process of moving goods from production to consumption.
a) Selling
b) Marketing
c) Transportation
d) Migration
- 6) In _____ type of training a duplicate work place is created.
a) On the job training
b) Vestibule training
c) Apprenticeship training
d) Classroom training
- 7) If there is no association no dissociation and no polymerization of solute in solvent then the distribution ratio becomes _____ distribution coefficient.
a) Equal
b) Less than
c) More than
d) None of these
- 8) Centrifugation is used for separation of _____.
a) Liquid from solid
b) Solid from solid
c) Gas from gas
d) Liquid from liquid
- 9) The drying is carried out because _____.
a) Storage of dry solid is easy
b) Purifying a crystalline powder
c) The cost of transportation of dry material would be reduce
d) All of these

Seat No.	
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Set **P**

M.Sc. (Semester - IV) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
AGRO-BASED MARKETING MANAGEMENT

Day & Date: Friday, 17-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any Two questions each from Section II and Section III.
 3) All questions carry equal marks

Section - I

Q.1 Choose the correct answer from options given below:-

14

- 1) _____ is an attempt to recognize distinct in the sales history of the product.
 - a) Product Life Cycle
 - b) Project Life Cycle
 - c) Human Life Cycle
 - d) None of these
- 2) _____ is the value of the product or service to customer into quantitative terms.
 - a) Product
 - b) Price
 - c) Place
 - d) Promotion
- 3) Modern concept of marketing is _____ oriented.
 - a) Sales
 - b) Profit
 - c) Production
 - d) Customer
- 4) _____ is the sum total of all factors that affects Marketing transactions.
 - a) Marketing concept
 - b) Marketing Environment
 - c) Marketing Research
 - d) Marketing Segmentation
- 5) _____ type marketing is not part of direct marketing.
 - a) Face to face
 - b) Direct mail
 - c) Telemarketing
 - d) Sale promotion
- 6) Agro-based marketing management used for _____.
 - a) Inform the farmer
 - b) Growth of Agro-sector
 - c) Increase sales
 - d) All of these
- 7) Buying Behave is basically _____ in nature.
 - a) Economical
 - b) Social
 - c) psychological
 - d) cultural
- 8) Marketing environment includes _____.
 - a) Legal
 - b) Economical
 - c) Social & cultural
 - d) All of these
- 9) _____ problem in agro marketing.
 - a) Competition
 - b) Education
 - c) Govt. policy
 - d) None of these
- 10)Registration of brand name is _____.
 - a) Mandatory
 - b) Optional
 - c) Compulsory
 - d) Essential

11)The major components of marketing mix are _____.

- a) Product
- b) Prices
- c) Place
- d) All of these

12) Marketing is process which aims at _____.

- a) Promotion
- b) Profit making
- c) Satisfaction of consumer needs
- d) Selling goods

13) If only wanted to target the age group between the age 18 to 35, this would be what type of market segmentation?

- a) Geographic
- b) Demographic
- c) Ageism
- d) Psychographic

14)Which tool vital in Agri business _____.

- a) Place
- b) Price
- c) Promotion
- d) All of these

Section - II

Solve any two questions from sec-II:-

- Q.2** a) Stages of product life cycle. **07**
- b) Explain the bases of market segmentation. **07**
- Q.3** a) Problem of agri-business. **07**
- b) Explain the advantage of direct marketing. **07**
- Q.4** a) Function of environment **07**
- b) Marketing environment **07**

Section - III

Solve any two questions from sec-III:-

- Q.5** a) Explain the one level distribution channel. **05**
- b) Describe price mix in fertilizer industry. **05**
- c) Define 4 P's in marketing. **04**
- Q.6** a) Importance of Marketing. **05**
- b) Explain the advantages of direct marketing. **05**
- c) Define the Role of agro-based marketing management. **04**
- Q.7** a) Macro environment of agro-marketing. **05**
- b) Market Planning. **05**
- c) Target Marketing **04**

Seat No.	
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Set **P**

M.Sc. (Semester - IV) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
ADVANCES IN PEST CONTROL - II

Day & Date: Monday, 20-11-2017
 Time: 02.30 AM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any Two questions from Section II
 3) Attempt any Two questions from Section III
 4) All questions carry equal marks

Section - I

Q.1 Choose the correct answer from options given below:

14

- 1) _____ is the example of predators.
 - a) Sugarcane and wooly aphid
 - b) Cut worm
 - c) Termite
 - d) Lady bird beetle
- 2) Ti plasmid used for _____ transfer process in rDNA technique.
 - a) Bacterium
 - b) Nucleus
 - c) Gene
 - d) None of above
- 3) Alarm pheromone is the example of _____.
 - a) Attractants
 - b) Repellant
 - c) Pathogens
 - d) None of the above
- 4) Juvenile hormone is secreted by _____ of the brain.
 - a) Pitutary
 - b) Prothorasic
 - c) Corpora alata
 - d) Corpora cardiac
- 5) Oil of citronella is the example of _____.
 - a) Attractants
 - b) Repellant
 - c) Chemosterilant
 - d) Pheromones
- 6) Miscellaneous group are included in _____.
 - a) Attractants
 - b) Repellant
 - c) Chemosterilant
 - d) Pheromones
- 7) _____ refers to the disease producing power of a group or sp. Of micro-organisms.
 - a) Infectivity
 - b) Virulence
 - c) Pathogenecity
 - d) All the above
- 8) *Trichogamma chelonus* is _____ parasitoid.
 - a) Egg
 - b) Larval
 - c) Pupal
 - d) Adult
- 9) Triflumuron is used as _____.
 - a) Starycide
 - b) Weedicide
 - c) Herbicide
 - d) None of the above
- 10) E.F.Kinipling was initiated _____ control of screw worm fly.
 - a) Mechanical
 - b) Legal
 - c) Genetic
 - d) All the above
- 11) Due to fungal infection _____ condition occurs.
 - a) Dysentery
 - b) Mycosis
 - c) Both a and b
 - d) None of the above

- 12) Use of hybrid sterility used in _____ control in pest.
a) Mechanical
b) Legal
c) Genetic
d) All of the above
- 13) *Bacillus thuringiensis bacterium* produces a crystal toxic substance called _____.
a) Alpha endotoxin
b) Beta endotoxin
c) gamma endotoxin
d) Delta endotoxin
- 14) Shape of NPV is _____.
a) Round
b) Quadrangular
c) Cylindrical
d) None of the above

Section - II

- Q.2** a) What is microbial control of insect and explain fungi pathogen in details? **07**
b) What is isparasitoid and explain use of parasitoid in rice field. **07**
- Q.3** a) What are the semiochemicals? Discuss the importance of pheromones. **07**
b) Describe the biotechnological applications in pest management. **07**
- Q.4** a) Define biological control and discuss how it is better than chemical control. **07**
b) What is genetic engineering? How vector mediated gene transfer takes place. **07**

Section - III

- Q.5** a) Explain Chemosterilants. **05**
b) Use of bacteria pathogen in pest management. **05**
c) Insect growth regulators. **04**
- Q.6** a) Light activated pesticides. **05**
b) Juvenile hormone. **05**
c) Hot water treatment for disease control. **04**
- Q.7** a) Genetical method of pest control. **05**
b) Write note on herbicide and weedicide. **05**
c) Enlist the advances in pest control. **04**

Seat No.	
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M.Sc. (Semester - IV) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
MANUFACTURE OF AGROCHEMICALS

Day & Date: Wednesday, 22-11-2017
 Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) All questions are compulsory.
 2) Attempt any Two questions from Section II
 3) Attempt any Two questions from Section III
 4) All questions carry equal marks

Section - I

Q.1 Choose the most correct answer (one mark each):

14

- 1) In gas absorption equipment the column consists of _____.
 - a) Packing
 - b) Liquid
 - c) Oil
 - d) None of these
- 2) Maneb is manufactured by using ethylene diamine and _____.
 - a) Carbon monoxide and acid
 - b) Carbon disulphide and alkali
 - c) Carbon dioxide and alkali
 - d) Oxygen and alkali
- 3) Captan is manufactured by using _____.
 - a) Phthalic acid
 - b) Tetrahydrophthalimide
 - c) Phthalimide
 - d) None of these
- 4) _____ cost includes the cost of interaction and testing of goods at various stages of manufacture.
 - a) Failure
 - b) Optimizing
 - c) Prevention
 - d) Appraisal
- 5) BSI kitemark is applied to _____.
 - a) Electrical goods
 - b) Non-electrical and Electrical goods
 - c) Mechanical goods
 - d) None of these
- 6) Which of the following compound is used as neonicotinoid insecticide?
 - a) Metalaxyl
 - b) Thiophenate methyl
 - c) Chlorothalonil
 - d) Thiacloprid
- 7) A molecule whose synthesis is being planned is called _____.
 - a) Reagent
 - b) Target molecule
 - c) Intermediate
 - d) None of these
- 8) Which of the following is used as starting material for the synthesis of BHT?
 - a) Toulene
 - b) P-hydroxy toluene
 - c) Aniline
 - d) P-xylene
- 9) Which of the following is not used as fungicides?
 - a) Carbaryl
 - b) Metalaxyl
 - c) Thiophenate methyl
 - d) Chlorothalonil

- 10) 2, 6-dimethyl aniline and ∞ -bromo methyl propionate is used for synthesis of _____.
- a) Thiophenate methyl
b) Metalaxyl
c) Carbaryl
d) Chlorothalonil
- 11) Synthon is a _____ species.
- a) Charged
b) Neutral
c) Charged as well as neutral
d) None of these
- 12) Distillation is a process in which _____ components are separated from the mixture.
- a) Solid
b) Volatile
c) Water
d) Gas
- 13) The performance of an evaporator is evaluated in terms of _____.
- a) Economy
b) Capacity
c) Efficiency
d) Capacity & Economy
- 14) Gas Absorption is known as _____.
- a) Absorption of gas in solid
b) Absorption of gas on solid surface
c) Absorption of liquid phase
d) All of the above

Section - II

- Q.2** a) What is evaporation? Describe multiple effect evaporators. **07**
b) Write the retrosynthetic approach of 1) 2, 4-D 2) Carbaryl **07**
- Q.3** a) Write the synthesis, properties, and uses, mode of action and environmental fate of thiophenate methyl. **07**
b) What are the main aims of R and D? Which factors are responsible for setting up a research laboratory? **07**
- Q.4** a) Write synthesis, mode of action, environmental fate and applications of imidaclopride. **07**
b) Write synthesis and unit process of captan. **07**

Section - III

- Q.5** a) Explain various types of filters. **05**
b) Describe planning of small scale units. **05**
c) Write a note on agrograde sulphur. **04**
- Q.6** a) Describe fractional distillation process. **05**
b) Explain health education for workers. **05**
c) Write note on BIS and ISI specifications. **04**
- Q.7** a) Explain importance and kinds of first aid treatment in industries. **05**
b) Describe chemoselectivity with example. **05**
c) Write note on spray dryers. **04**

Seat No.	
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M.Sc. (Semester - IV) (New) (CBCS) Examination Oct/Nov-2017
Agrochemicals And Pest Management
DISEASES OF CROP PLANTS - II

Day & Date: Friday, 24-11-2017
Time: 02.30 PM to 05.00 PM

Max. Marks:70

- Instructions:** 1) Attempt totally five questions.
2) Question no. 1 is compulsory.
3) Attempt any Two questions from Q. 2 to 4 (Section II).
4) Attempt any Two questions from Q.5 to 7 (Section III).
5) All questions carry equal marks

Section – I

Q.1 Rewrite the following sentences by choosing the correct alternative:- 14

- 1) Macrocytic rust is the name given to some fungi_____
 - a) Which produces bigger spores
 - b) Where all the five spore stages are produced
 - c) Which completes its life-cycle on a single host
 - d) Which selects many hosts to complete its life-cycle
- 2) *Fungus Alternaria solani* belongs to class _____
 - a) Ascomycetes
 - b) Deuteromycetes
 - c) Schizomycetes
 - d) Oomycetes
- 3) The classification of the plant diseases is based mainly on _____
 - a) The structure of vegetative mycelium
 - b) The asexual stage
 - c) The sexual reproductive stage
 - d) None of these.
- 4) The name 'smut diseases' is given to those produced by *Ustilago* because _____
 - a) Its mycelium is black in color
 - b) It parasitizes cereals
 - c) The host becomes completely black
 - d) The fungus produces black sooty spore masses.
- 5) Anthracnose of mango is caused by _____
 - a) *Pythium*
 - b) *Alternaria*
 - c) *Colletotrichum*
 - d) *Fusarium*
- 6) The rusts are caused by _____
 - a) *Ustilaginales*
 - b) *Peronosporales*
 - c) *Uredinales*
 - d) *Erysiphales*
- 7) Phytopathology is the study of _____
 - a) Algae
 - b) Fungi
 - c) Plant diseases
 - d) Pteridophytes
- 8) *Alternaria solani* causes _____
 - a) Late blight of potato
 - b) wart of potato
 - c) early blight of potato
 - d) leaf curl of potato

- 9) When two host species are required for completion of parasitic fungi life-cycle, this condition is described as _____.
 - a) Autoecism
 - b) Autotrophic
 - c) Heteroecism
 - d) Heterokaryotic
- 10) Fungal spores produced asexually at tips or side of hyphae are called as _____.
 - a) Sporangiospores
 - b) Anthrospores
 - c) Conidia
 - d) Spores
- 11) Biological specialization is term used for fungus which _____.
 - a) Can infect differential hosts
 - b) Shows host specialization
 - c) Can grow in a variety of substrata
 - d) Are biologically useful
- 12) Powdery Mildew of Grapes caused due to _____.
 - a) *Uncinula necator*
 - b) *Cercospora* sp.
 - c) Both 'a' and 'b'
 - d) None of these
- 13) White rust of crucifer is caused by _____.
 - a) Puccinia
 - b) Utilago
 - c) Cystopus
 - d) Peziza
- 14) Wilt of peas, Beans caused due to fungus _____.
 - a) *Uncinula necator*
 - b) *Alternaria alternate*
 - c) *Alternaria solani*
 - d) None of these

Section - II

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| Q.2 | a) Describe the biology, nature of damage and control measure of downy mildew of peas. | 07 |
| | b) Explain any two diseases in Rose studied by you with respect to causal organism, symptoms and control measures. | 07 |
| Q.3 | a) Comment up on following disease with respect to causal organism, disease cycle, and control measures:-
1) Black rot disease of sugar beet.
2) Fruit rot of cucurbits. | 07 |
| | b) Explain Anthracnose of Mango; with respect to causal organism, symptoms and control measures. | 07 |
| Q.4 | a) Give details of Brown rot disease of <i>Citrus</i> ; with respect to causal organism, diseases cycle, symptoms and control measures. | 07 |
| | b) Comment up on fruit decay disease in Figs. | 07 |

Section - III

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| Q.5 | a) Write down the disease cycle of 'black scurf to tubers' disease of potato. | 05 |
| | b) Write down the symptoms and control measures of Powdery Mildews. | 05 |
| | c) Enlist any four Fruit trees disease of vegetable crops along with their causal organism. | 04 |
| Q.6 | a) Write down causal organism and diseases cycle of Wilt of Coconut. | 05 |
| | b) Write down control measures of 'Fruit root of Mango'. | 05 |
| | c) Enlist any four diseases of forest trees along with their causal organism. | 04 |
| Q.7 | a) Write down general symptoms of powdery mildews diseases. | 05 |
| | b) Write down symptoms of seedling blights diseases on Lacuna. | 05 |
| | c) Enlist any two diseases of peas and beans along with causal organism | 04 |