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Set | P

M.Sc. (Agrochemicals and Pest Management) (Sem - I) (New) (NEP CBCS)
Examination: March/April - 2025
Chemistry of Pesticides, Soil Science & Fertilizers (2301101)

Day & Date: Thursday, 15-May-2025
Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternative. (MCQ)

08

- 1) The hormone involved in phototropism is _____

a) Auxin b) Gibberellin
c) Kinetin d) 2, 4-D
- 2) Which of the following is concentrated organic manure?

a) F.Y.M b) Oil cake
c) Guano d) Compost
- 3) The PGR ethylene is _____ in nature.

a) Volatile liquid b) Non volatile liquid
c) Solid d) Gas
- 4) Pit method is used for the production of _____

a) PGR b) Manures
c) BGA d) Rhizobium
- 5) The chemical composition of single superphosphate is _____

a) $[3\text{Ca}(\text{CH}_2\text{PO}_4)\cdot 2\text{H}_2\text{O}]$ b) $\text{Ca}_3(\text{PO}_4)_2$
c) $[\text{Ca}(\text{H}_2\text{PO}_4)_2]$ d) None of these
- 6) _____ deficiency causes acidity of soil.

a) Zinc b) Iron
c) Calcium d) Copper
- 7) The percentage of P_2O_5 in ammonium phosphate is _____

a) 48% b) 45%
c) 46% d) 44%
- 8) The molecular formula of SOP is _____

a) K_2SO_4 b) KSO_4
c) K_2SO_3 d) K_3SO_4

B) Fill in the blanks.**04**

- a) The formula of calcium cyanamide is _____
- b) Muriate of potash is also known as _____
- c) Biogas plant produces _____ gas.
- d) Trough method is used for the production of _____

Q.2 Answer the following. (Any 6)**12**

- a) Define botanical pesticides with example.
- b) What are the potassic fertilizers?
- c) Write the advantages of BGA to crop fields.
- d) Write short note on normal superphosphate.
- e) Enlist selective and non selective herbicides.
- f) Write the examples of non toxic insect controlling agents.
- g) What is meant by alkaline soil?
- h) Define biofertilizers.

Q.3 Answer the following. (Any 3)**12**

- a) Write a note on fumigants.
- b) Describe the action of calcium cyanamide and calcium ammonium nitrate as fertilizers.
- c) What are plant growth regulators? Write the applications of ethylene and CCC.
- d) Explain effect of modern agro-technology and pesticides on soil.

Q.4 Answer the following. (Any 2)**12**

- a) Explain in brief humus and farm yard manure.
- b) Write in detail manufacture of sodium nitrate.
- c) Describe in brief soil micronutrients, acidic and alkaline soils.

Q.5 Answer the following. (Any 2)**12**

- a) What are potassic fertilizers? Write its types. Describe in brief muriate of.
- b) What is pest and pesticides? Write the classification of pesticides based on type of target.
- c) Explain in detail the process involved in the use of rhizobium as fertilizer.

Seat No.	
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Set **P**

M.Sc. (Agrochemicals and Pest Management) (Sem - I) (New) (NEP CBCS)
Examination: March/April - 2025
Introductory and Industrial Entomology (2301102)

Day & Date: Saturday, 17-May-2025
 Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternative. (MCQ) 08

- 1) Cockroach belongs to phylum _____
 a) Mollusca b) Echinodermata
 c) Arthropoda d) Brachiopoda

- 2) _____ Honey bee is called as Rock bee.
 a) *Apis floria* b) *Apis indica*
 c) *Apis Dorsata* d) *Apis mellifera*

- 3) Scientific name of name of Mango Stem borer is _____
 a) *Batocera rofumaculata*
 b) *Holotrichia serrate*
 c) *Apis gosipii*
 d) *Chilo zonellus*

- 4) _____ eyes are present in cockroach
 a) Cursorial b) Compound
 c) Raptorial d) Fossorial

- 5) Nosema Disease in honey bee is caused by _____
 a) Mycelia b) Protozoa
 c) Virus d) Fungus

- 6) _____ is the special diet for the honey bee Queen.
 a) Wax b) Pollen
 c) Royal jelly d) honey

- 7) _____ are the sensory Organs in Insect
 a) Wings b) Legs
 c) Pair of Antennae d) None of above

- 8) Snail and slug belongs to phylum _____
 a) Echinodermata b) Mollusca
 c) Arthropoda d) Lepidoptera

B) Fill in the blanks. 04

- a) Scientific name of mulberry silk worm is _____
- b) Life cycle including egg, nymph and adult is called as _____ metamorphosis.
- c) Bettie belongs to Order _____
- d) _____ are the fertile female in colony of Honey bee.

Q.2 Answer the following. (Any 6) 12

- a) Write the four types of silkworm
- b) Give the Taxonomic classification of the termite.
- c) Define the pest. Name any two sucking pest.
- d) Write the scientific name of Red hairy caterpillar.
- e) Write Economic importance of the Honey.
- f) Write any two brood diseases in the honey bee.
- g) Define Entomology.
- h) Which type of mouth parts are present in the House fly?

Q.3 Answer the following. (Any 3) 12

- a) Write the general description of Insect Abdomen
- b) Describe the general life cycle pattern of White grub.
- c) Write the note on insect parasitoids.
- d) Give the control measure for the Rat.

Q.4 Answer the following. (Any 2) 12

- a) Describe the colony organisation and life history of honey bee.
- b) Give the life cycle pattern of Aphid with nature of damage and control measure.
- c) Describe the nervous system of cockroach with neat labelled diagram.

Q.5 Answer the following. (Any 2) 12

- a) Explain the female reproductive system of cockroach with neat labelled diagram.
- b) Describe the lifecycle pattern, nature of damage and control measure of Nematode.
- c) Explain the Biting and chewing type of mouthpart in insect with labelled diagram.

Seat No.	
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Set	P
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M.Sc. (Agrochemicals and Pest Management) (Sem - I) (New) (NEP CBCS)
Examination: March/April - 2025
Plant Pathology and Weed Management (2301106)

Day & Date: Monday, 19-May-2025
 Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternative. (MCQ)

08

- 1) Leaf curl of chili caused by _____
 a) *Oidium* sp. b) *Plasmopara halstedii*
 c) *Gemini virus*. d) Wilt

- 2) Hoeing is _____ method of weed control.
 a) Biological b) Hot water
 c) Chemical d) Physical

- 3) The study of epidemics and the factors that influence them is a called as _____
 a) Plant Pathology b) Epidemiology
 c) Fungicide d) none of above

- 4) Papaya Ring spots are caused _____
 a) Virus b) Fungus
 c) MLOs d) Ergot

- 5) Most plant viruses are _____
 a) Rod shaped b) Curved shaped
 c) Parallel shaped d) none of above

- 6) Applications of appropriate foliar fungicides Thirum can help control the disease but care should be taken as some labels do not allow seeds from treated plants to be used as _____
 a) Food & Feed b) Sowing
 c) Transplanting d) Plantation

- 7) _____ are unwanted and undesirable plant which interfere with the utilization of land and water resources thus adversely affect human welfare.
 a) Weed b) Disease
 c) Rust d) *Cercospora*

- 8) Club rot of cabbage is _____ diseases
- a) *M*Los b) Fungal
c) Powdery mildew d) Viral

B) Fill in the blanks. 02

- a) Mancozeb is _____ type of fungicide.
b) Use as chemical is known as _____ method of weed control

B) Write the True and False 02

- a) 2- 4-D is non selective Herbicide
b) Red rot of Sugarcane caused by viruses

Q.2 Answer the following. (Any 6) 12

- a) Advantages of weed.
b) Write the Casual organism of leaf curl of chili.
c) Enlist the All fungal diseases in our syllabus.
d) Write the symptoms of Banana leaf spot.
e) Write the definition of weed.
f) Write the control method of leaf spot.
g) Defined epidemiology on plant disease.
h) Defined the plant Disease.

Q.3 Answer the following. (Any 3) 12

- a) Write Koch's postulates.
b) Explain the concept of plant disease.
c) Define the weed, write classification of weed.
d) Disadvantages of weed.

Q.4 Answer the following. (Any 2) 12

- a) Write the causal organism, symptoms and control method of Red rot of sugarcane.
b) Explain the factors affecting of epidemic development.
c) Enlist method of weed control write brief cultural method.

Q.5 Answer the following. (Any 2) 12

- a) Write the Common symptoms and control method of viral diseases.
b) Write the causal organism, symptoms and control method of yellow vein mosaic of beans.
c) Enlist the types of fungal diseases, write the common symptoms on fungal disease.

Seat No.	
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Set **P**

M.Sc. (Agrochemicals and Pest Management) (Sem - I) (New) (NEP CBCS)
Examination: March/April - 2025
Research Methodology (2301103)

Day & Date: Saturday, 24-May-2025
 Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternative. (MCQ) **08**

- 1) A research paper is a brief report of research work based on _____
 a) Primary Data only
 b) Secondary Data only
 c) Both Primary and Secondary Data
 d) None of the above
- 2) The _____ is process not needed in experimental research.
 a) Controlling
 b) Observation
 c) Manipulation
 d) Reference collection
- 3) The formula $C_6H_4O_2.C_6H_4(OH)_2$ represent _____
 a) Quinhydrone
 b) Hydroquinone
 c) Quinine
 d) None of these
- 4) The electrolyte solution within the glass electrode (ref) of the pH meter is _____.
 a) Saturated KCL
 b) Con.HCL
 c) Dilute KCl
 d) Dilute HCL
- 5) Research objectives include _____.
 a) Decision making
 b) Build new concepts
 c) Eliminates old concepts
 d) Only a and b
- 6) Research process begins with _____.
 a) Identification of research problem
 b) Research design
 c) Collection of data
 d) Report writing

- 7) In the process of conducting research 'Formulation of Hypothesis' is followed by _____
- Statement of Objectives
 - Analysis of Data
 - Selection of Research Tools
 - Collection of Data
- 8) Research is considered to be more than just a way of skills, it is _____
- Planning to what, why & where type of question.
 - A way of critical thinking about professional aspects of relate to your work.
 - The research methods used within research methodology.
 - Discovering the relation between variables.

B) Write the True and False**04**

- If data is insufficient, then the research problem will exist.
- If the pH value is greater than 7, the solution is basic.
- Potentiometer does not draw any current from the unknown source of EMF.
- Last stage of research process is analysis of data.

Q.2 Answer the following. (Any Six)**12**

- Define research.
- Write the characteristics of good research.
- What is Scopus in research design?
- What is emf of cell?
- Write the application of potentiometer.
- Draw neat label diagram of quinhydrone electrode.
- What is sci-finder?
- Define research design.

Q.3 Answer the following. (Any Three)**12**

- Explain qualitative verses quantitative research.
- What are the qualities of good research?
- Explain in detail research problem.
- Write the application of pH meter.

Q.4 Answer the following. (Any Two)**12**

- What is secondary data collection. Explain it in detail.
- Explain computer-based application of pesticide development.
- Write note on online literature searching.

Q.5 Answer the following. (Any Two)**12**

- Write in detail the format of research paper writing.
- Explain the characteristics of good report writing.
- What are the different steps of writing a research paper?

Seat No.	
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Set P

**M.Sc. (A.G.P.M.) (Sem - II) (New) (NEP CBCS) Examination:
March/April - 2025
Chemistry of Pesticides and their Formulations (2301201)**

Day & Date: Wednesday, 14-May-2025
Time: 11:00 AM To 01:30 PM

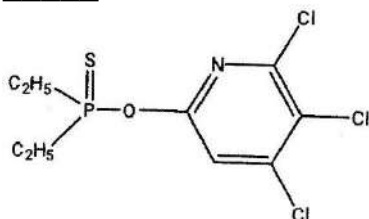
Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Multiple choice question.

08

- 1) Thiodan is trade name of ____
 a) dicofol b) ethephon
 c) endosulfan d) butachlor
- 2) Butachlor is produced by reaction of chloroacetic chloride and formaldehyde with ____ of 2,6 diethyl aniline.
 a) azodiene b) azomethiene
 c) aniline d) amine
- 3) ____ is prepared by chlorination of nitrobenzene.
 a) 2,4-D b) PCNB
 c) dimecron d) dicofol
- 4) ____ is the name of the following insecticide.



- a) Monocrotophos b) Chloropyrifos
 c) Phosphamidon d) Quinolphos
- 5) Reaction between alpha naphthol and methyl isocyanate gives ____
 a) Methomyl b) Carbofuran
 c) Carbaryl d) Aldicarb
- 6) Reaction of benzene with chlorine in presence of sunlight gives ____
 a) Chlorobenzene
 b) o,o-dichlorobenzene
 c) Pentachloronitrob
 d) benzene hexachloride

- 7)** Which of the following is organophosphorous pesticides.
- a) Aldicarb b) Phosphamidon
c) Begoan d) Carbaryl
- 8)** Phosphine gas is liberated by _____
- a) Herbicide b) Insecticide
c) Fungicide d) Bactericide

B) Fill in the blanks.

04

- Synthesis of carbofuran involves _____ rearrangement reaction.
- Carbamate contain _____ functional group.
- _____ is also known as lindane.
- Ziram acts as _____

Q.2 Answer the following questions. (any 6)

12

- The properties of methomyl.
- Give the synthesis of maneb.
- Draw the structure of Dimethoate.
- Write the uses of finitrothion.
- Give the synthesis of PCNB.
- Write the application of fungicide.
- Give the example of rodenticide.
- Write short note on Sodium chloride.

Q.3 Answer the following question. (Any 3)

12

- Give the synthesis and uses of zineb and maneb.
- Write the properties and uses of malathion.
- Write the note on tin compound.
- Give the synthesis of BHC.

Q.4 Answer the following question. (Any 2)

12

- Give the synthesis, properties and uses of carbaryl.
- Explain thiocarbamate and thiocarbamic acid. Give the structure of carbofuran.
- Write note on zinc oxide and zinc phosphide.

Q.5 Answer the following question. (Any 2)

12

- Write note on fumigants. Explain hydrogen cyanide and carbon disulphide.
- Explain persistence of pesticide in environment and Biota.
- Explain isomerism and kinetic studies of hydrolysis of pesticides.

Seat No.	
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Set P

M.Sc. (Agrochemicals and Pest Management) (Sem - II) (New)
(NEP CBCS) Examination: March/April - 2025
Analytical Techniques for Agrochemicals (2301202)

Day & Date: Friday, 16-May-2025
 Time: 11:00 AM To 01:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 A) Multiple choice question.

08

- 1) The region between _____ to _____ known as near ultraviolet region.

a) 200-400 nm	b) 800-1000nm
c) 300-600nm	d) 700-900nm
- 2) The paper chromatography is a special example of _____ chromatography.

a) Gas- Liquid	b) Solid- Liquid
c) Liquid- Liquid	d) Gas- Solid
- 3) The primary standard used in redox titration is _____.

a) $K_2Cr_2O_7$	b) KOH
c) NaOH	d) HCl
- 4) All chromatographic techniques are based on the principle of _____.

a) fixation	b) Separation
c) Diffraction	d) Grouping
- 5) Methyl red is _____ in acid solution.

a) Red	b) Yellow
c) Orange	d) Pink
- 6) In paper Chromatography, the R_f value is given by the equation.

a) Distance travelled by component divided by distance travelled by solvent
b) Distance travelled by solvent divided by distance travelled by solute
c) Distance moved by component divided by distance moved by solute
d) Distance moved by the substance divided by distance moved by solute

- 7) Flame photometer, mainly used for detecting _____.
a) N b) P
c) K d) All of these
- 8) IR spectroscopy is mainly useful in the determination of _____.
a) conjugation b) function group in molecule
c) photoanode d) none of the above.

B) Fill in the blanks.

04

- 1) In complex formation titrations, the indicators used are generally known as _____ indicators.
- 2) The finger print region of the IR spectroscopy lies in the range of _____.
- 3) The ultraviolet region is subdivided into _____ spectral region.
- 4) _____ put forward the theory of acid- base indicators.

Q.2 Answer the following questions. (Any Six)

12

- a) Write the adsorbents used in TLC.
- b) Write the application of UV spectroscopy.
- c) Mention the various types of mode of vibration.
- d) Write the application of polarimetry.
- e) What is redox titration?
- f) Write the application of TLC.
- g) What is finger print region?
- h) What are the indicators?

Q.3 Answer the following. (Any Three)

12

- Write in detail types of vibration.
- Explain in detail acid - base titration.
- Write a note on metallochromic indicators.
- Explain the paper chromatography.

Q.4 Answer the following. (Any Two)

12

- Describe principle, instrumentation and applications of ion exchange chromatography.
- Describe instrumentation of Flame Photometry.
- Explain the precipitation titration method for Zn and Mg analysis in pesticide sample.

Q.5 Answer the following. (Any Two)

12

- Explain the method of gravimetric estimation of iron.
- Write the principle and instrumentation of atomic absorption spectroscopy.
- Describe principle, instrumentation and applications of column chromatography.

Seat No.	
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Set P

**M.Sc. (Agrochemicals and Pest Management) (Sem - II) (New)
(NEP CBCS) Examination: March/April - 2025
Agronomy, Biotechnology and Economic Entomology (2301206)**

Day & Date: Tuesday, 20-May-2025
Time: 11:00 AM To 01:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Multiple choice question.

08

- 1) _____ is the Father of tissue culture.

a) Bonner	b) Laibach
c) Haberlandt	d) Gautheret
- 2) _____ crop known Pulses.

a) Sorghum	b) Wheat
c) Soybean	d) groundnut
- 3) _____ is the pest of livestock

a) Cattle louse	b) Lesser grain borer
c) Rice weevil	d) Pentatomid bug
- 4) The crop does best soil for sorghum is _____ soil.

a) Black cotton	b) sandy loam
c) Red	d) Rocky
- 5) _____ belongs to phylum Mollusca

a) Grasshopper	b) white grub
c) Snail	d) Aphid
- 6) The botanical name of guava crop is _____

a) <i>Solan melongena</i>	b) <i>Solanum melong</i>
c) <i>Psidium guajava</i>	d) <i>Mangifera indica</i> .
- 7) Freedom from inert matter and defective seeds _____

a) Genetic purity	b) Physical purity
c) Germination purity	d) Disease free purity
- 8) Sparrow belongs to class _____

a) Insecta	b) Nematode
c) Aves	d) none of the above.

B) Fill in the blanks. 04

- a) Rice weevil is pest of _____
- b) _____ is economical plant part of Soybean.
- c) _____ culture is used to raise virus free plants
- d) Nematode are _____ In nature

Q.2 Answer the following. (any 6) 12

- a) Write ecological factor on Bajra
- b) Define cash crop.
- c) Write Nature of damage caused by lesser grain borer
- d) Write seed and sowing of Tomato crop
- e) Control measure for pest of livestock.
- f) Define Somatic Hybridization
- g) Write soil, climate of cabbage
- h) Enlist the types of crop plant.

Q.3 Answer the following. (Any 3) 12

- a) Define the pest and describe the mechanical method of pest control.
- b) Write the cultivation practices in sorghum crop
- c) Describe the damage caused by rodent
- d) Write the concept of genetic engineering

Q.4 Answer the following. (Any 2) 12

- a) Write soil, climate, seed and sowing, harvesting of wheat
- b) Write advantages and disadvantages of tissue culture technique
- c) Write agronomical practices of groundnut.

Q.5 Answer the following. (Any 2) 12

- a) Write agronomical practices of sugarcane
- b) Describe termites in brief with their colony organization
- c) Define seed technology explain classes of seed

Seat No.	
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Set P

**M.Sc. (Agrochemicals and Pest Management) (Sem - III) (New)
(NEP CBCS) Examination: March/April - 2025
Pesticide Residues and Analysis of Agrochemicals (2301301)**

Day & Date: Thursday, 15-May-2025
Time: 11:00 AM To 01:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ) 08

- 1) Pyrethrum, a naturally occurring pesticide is derived from ____
 - a) Crocus
 - b) Daffodil
 - c) Chrysanthemum
 - d) Buttercup
- 2) DDT is ____
 - a) Biodegradable
 - b) Non-biodegradable
 - c) Growth enhancer
 - d) Tranquilizer
- 3) The main component of high-performance liquid chromatography are ____
 - a) High pressure pump
 - b) Injector system
 - c) Detector
 - d) All
- 4) Which of the following doesn't give NMR Spectra?
 - a) Boron
 - b) Nitrogen-15
 - c) Oxygen 16
 - d) All
- 5) Pesticide can be divided into ____
 - a) 1
 - b) 4
 - c) 5
 - d) 3
- 6) Rate decrease with depth in soil, where condition such as moisture, temperature, and aeration are less favorable for ____
 - a) Microbial
 - b) Chemical
 - c) Physical
 - d) Not
- 7) HPLC used in ____
 - a) Pharmaceutical chemistry
 - b) Biochemical analysis
 - c) Chemical analysis
 - d) All

8) In mass spectroscopy the compound in vapour state is bombarded with energy.

- a) 17eV b) 70eV
- c) 13eV d) 50eV

B) Fill in the blanks.

04

- 1) _____ type of radiations are observed in NMR spectroscopy.
- 2) Transfer is the process in which the pesticide is _____
- 3) The actual value of nuclear spin depends on _____ and _____ number of nuclei.
- 4) HPLC stand for _____

Q.2 Answer the following question (Any Six)

12

- a) Used of HPLC.
- b) Definition of pesticide.
- c) Name of internal reference compound in proton NMR spectroscopy.
- d) The most intensive peak in the mass spectrum is called.
- e) Point and Non-point pollution.
- f) What is the effect of pesticide residue in soil?
- g) What is effect of pesticide on human life?
- h) Explain Pesticide residue in water.

Q.3 Answer the following question (Any Three)

12

- a) Explain Chemical degradation.
- b) Explain photochemistry of pesticide.
- c) Advantages of Thin layer chromatography.
- d) Explain microbial degradation.

Q.4 Answer the following question (Any Two)

12

- a) Schematic diagram of mass spectroscopy.
- b) Sketch the PMR spectrum of the Ethanol
- c) Explain point and non - point pollution.

Q.5 Answer the following question (Any Two)

12

- a) How are pesticide harmful to the environment and human being?
- b) Describe the principle of HPLC and explain briefly various types of detectors used in HPLC.
- c) Shielding and Deshielding in NMR.

Seat No.	
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Set **P**

M.Sc. (Agrochemicals and Pest Management) (Sem - III) (New)
(NEP CBCS) Examination: March/April - 2025
Advances in Pest Control (2301302)

Day & Date: Saturday, 17-May-2025
 Time: 11:00 AM To 01:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ)**08**

- 1) Neem leaves is the example of _____
 a) Attractant b) Repellant
 c) Chemosterilant d) Pheromones
- 2) Trial pheromones are released by insect for _____ purpose
 a) Mating b) Feeding
 c) Protection d) none of above
- 3) _____ is included under pesticide
 a) Avicide b) Insecticide
 c) Fungicide d) All of above
- 4) Sandwich method is the known amount of insecticide is put in between _____ of batch of insect.
 a) Two leaves b) Two insect
 c) Two crops d) Two flowers
- 5) Antibiosis refers to the adverse effect of the host plant on the _____ of insect
 a) Biology b) Mating
 c) Oviposition d) tolerance
- 6) The Photomigration method of bioassay is performed by using _____ response of insect.
 a) Photo reflection b) Dry film
 c) Phototoxic d) photo merge
- 7) Chemical which causes the sterility in insect is called as _____
 a) Antixenons b) Repellant
 c) Pheromones d) Chemosterilants
- 8) Azadirectin is chemical compound found in _____ plant
 a) Mango b) Cycus
 c) Chilli d) Neem

B) Fill in the blanks.

- a) Scientific name of Neem is _____
- b) Technique of growing the plant in water by using nutrient material is called as _____
- c) Pheromones released by one sex but elicits response in both sexes of species is called as _____
- d) _____ is used for spraying dust formulation pesticide.

Q.2 Answer the following. (any 6)**12**

- a) Write the four types of Pheromones.
- b) Give the Taxonomic classification of the *chrysanthemum*.
- c) Define Bioassay.
- d) Define Hydophonics.
- e) Write Application of Neem as biofertilizer.
- f) Write two types of chemosterolants.
- g) Define Attractant.
- h) Write the type of sprayer.

Q.3 Answer the following. (Any 3)**12**

- a) Write the factors affecting the plant resistance.
- b) write the note on green chemistry in pesticide.
- c) Write the note on IPM.
- d) Define Repellant give any two examples of repellants.

Q.4 Answer the following. (Any 2)**12**

- a) Explain the cultural method and Mechanical of the pest control.
- b) Give the importance of Neem based preparation in insect pest management.
- c) Explain in detail bio-efficacy of pesticide.

Q.5 Answer the following. (Any 2)**12**

- a) Explain insect insecticide resistance and resistance management.
- b) Explain type of damage caused by insect to plant and their estimation.
- c) Write the methods of Hydophonics.

Seat No.	
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Set	P
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M.Sc. (Agrochemicals and Pest Management) (Sem - III) (New) (NEP CBCS) Examination: March/April - 2025
Diseases of Crop Plants (2301306)

Day & Date: Monday, 19-May-2025
 Time: 11:00 AM To 01:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ)

08

- 1) Weed control is _____ method of disease control.

a) preventive	b) chemical
c) biological	d) black spot
- 2) _____ is the economic product of wheat.

a) Wood	b) Leaf extract
c) Latex	d) Seed
- 3) An abnormality in the structure and/or function of the host plant cells and/or tissue as a result of a continuous irritation caused by a pathogenic agent or an environmental factor is known as _____

a) plant disease	b) Plasm Opara halstedii
c) fusarium	d) none of above
- 4) Applications of appropriate foliar fungicides can help control the disease but care should be taken as some labels do not allow seeds from treated plants to be used as food or feed _____

a) Acitamapride	b) Benzer
c) Nuvan	d) Thirum
- 5) _____ causes Anthracnose.

a) Colletotrichum truncatum
b) Gleosporium ampelfagum
c) Melanoconium fulgenium
d) Wilt
- 6) _____ seed are used as an oil purpose.

a) Bajra	b) Sunflower
c) Maize	d) none of above

7) Remove and destroy the diseased plants is _____ method of disease control.

- | | |
|---------------|------------------|
| a) Chemical | b) Physical |
| c) Biological | d) none of above |

8) *Albugo Candida* caused due to _____

- | | |
|---------------|--------------|
| a) wilt | b) root rot |
| c) white rust | d) leaf spot |

B) Fill in the blanks.

04

- 1) Leaf spot of castor caused _____.
- 2) Drip irrigation method is control _____ disease.
- 3) Clean cultivation is _____ method of disease control.
- 4) Wilt is _____ seed born disease.

Q.2 Answer the following. (Any Six)

12

- a) Write the symptoms of onion Downey mildew.
- b) Write the common physical control method of disease.
- c) Enlist the fungal diseases on our syllabus.
- d) Write the control of Powdery mildew Sunflower.
- e) White rust of cruciferous.
- f) Control methods of rust of castor.
- g) Write causal organism of powdery mildew of chilli.
- h) Write the long form of GSD.

Q.3 Answer the following. (Any Three)

12

- a) Write the causal organism, symptoms and management wilt of Tobacco.
- b) Explain the Rust of Bajra.
- c) Write the general symptoms and control on Downy mildew.
- d) Explain the Blight of Tomato.

Q.4 Answer the following. (Any Two)

12

- a) Enlist the diseases of Sorghum explain in detail Rust.
- b) Enlist the diseases of sugarcane write details Red rot.
- c) Enlist the diseases of Cotton explain any one.

Q.5 Answer the following. (Any Two)

12

- a) Explain the diseases of Gram.
- b) Write the diseases of Groundnut details Tikka of Groundnut.
- c) Write the diseases of Okra details Powdery mildew of Okra.

Seat No.	
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Set	P
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M.Sc. (Agrochemicals and Pest Management) (Sem - III) (Old) (CBCS)
Examination: March/April - 2025
Pesticide Residues and Toxicology (MSC26301)

Day & Date: Thursday, 15-May-2025
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) Questions no. 1 & 2 are compulsory.
 2) Attempt any **Three** Question from Q No.3 to Q No.7
 3) Figures to the right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ) 10

- 1) Pesticides enters in atmosphere due to _____.
 a) Spraying b) Dusting
 c) Handling d) all of these

- 2) _____ poison affect the nervous system of man.
 a) Corrosive b) Irritants
 c) Neurotics d) Cardiac

- 3) Sterility in organisms is caused due to _____.
 a) Zinc b) Copper
 c) Mercury d) Manganese

- 4) Which of the following radiations are used for the generations of mutation?
 a) gamma rays b) X – rays
 c) both a and b d) none of these

- 5) _____toxicology is used in the detection of cause of mortality.
 a) Environmental b) Economic
 c) Irritants d) Cardiac poison

- 6) The research institute of toxicology is established in _____.
 a) Mumbai b) Pune
 c) Delhi d) Lucknow

- 7) Metal involved in Minamata disease is _____.
 a) Cd b) As
 c) Zn d) Hg

- 8) A component does not occur in nature but introduced by common activity is called _____.
 a) Poison b) Contaminant
 c) Pollutant d) Corrosion

- 9) Break-down of pesticides is done by microorganisms this process is known as _____
 a) Bioamplification b) Bioconcentration
 c) Biodegradation d) Biomagnification
- 10) Easily identified source or place of pollution is called as _____
 a) Non point b) Point
 c) Water d) Air

B) Fill in the blanks.**06**

- a) _____ is the father of toxicology.
 b) Hepatic necrosis is disorder of _____.
 c) The chemical which causes the cancer is known as _____.
 d) The full form of WHO is _____.
 e) _____ toxicology is the study of how drugs and chemicals affect biological systems.
 f) _____ is the process by which a substance's concentration increases as it moves up a food chain.

Q.2 Answer the following.**16**

- a) Define and explain toxicology.
 b) What is bioconcentration?
 c) Write a note on cardiac poison.
 d) What is point and non-point source?

Q.3 Answer the following.**16**

- a) Explain in detail HPLC technique for pesticide residue analysis.
 b) Explain in detail classification of poisons, their symptoms and treatments.

Q.4 Answer the following.**16**

- a) Explain in detail pesticide residue water system.
 b) Describe the effect of pesticides on life in general and consequent effect on human life.

Q.5 Answer the following.**16**

- a) Explain in detail transport of vapours, precipitation and photochemistry of pesticides.
 b) Enlist and explain various disciplines of toxicology.

Q.6 Answer the following.**16**

- a) Explain in brief biological magnification of pesticide with two examples.
 b) Write the action of toxicant on enzymes, coenzymes and nucleic acid.

Q.7 Answer the following.**16**

- a) Explain in detail gas chromatographic analysis of pesticide residues in fruits.
 b) Write notes on: 1) Minamata 2) Itai - Itai disease

Seat No.	
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Set P

M.Sc. (Agrochemicals and Pest Management) (Sem - III) (Old) (CBCS)
Examination: March/April - 2025
Advances In Pest Control - I (MSC26302)

Day & Date: Saturday, 17-May-2025
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Questions no. 1 & 2 are compulsory.
 2) Attempt any Three Question from Q No.3 to Q No.7
 3) Figures to the right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ) 10

- 1) Sandwich method is the known amount of insecticide is put between _____ of the batch of insect.
 a) two leaves b) two insect
 c) two crop d) two flower
- 2) _____ pests are controlled by Neem based pesticides.
 a) Stored grain b) live stock
 c) Household d) all of the above
- 3) Chemicals that cause insects to make oriented movements towards their source are called _____.
 a) Antifeedants b) Chemosterilents
 c) Repellent d) Attractant
- 4) _____ is the cultural method of pest control.
 a) hand picking b) Dusting
 c) Spraying d) crop rotation
- 5) Radiant energies are the _____ method of pest control.
 a) physical b) Chemical
 c) Natural d) none of these
- 6) DDT inorganic synthetic insecticide was discovered by _____.
 a) Paul Muller b) W.H. Luckman
 c) Paul Mullter d) Paul Waller
- 7) _____ is included under the pesticides.
 a) Avicides b) Insecticides
 c) Fungicides d) All of the above

- 8) Pheromone released by one sex only but elicits response in both the sexes of the species is called as _____.
a) Sex pheromone
b) Aggregation pheromone
c) Communication pheromone
d) Symbiotic association
- 9) Hydraulic energy sprayer is a type of _____.
a) air sprayer b) blast sprayer
c) power sprayer d) rocking sprayer
- 10) In polygenic resistance the resistance is governed by _____.
a) Single gene b) Many gene
c) Various gene d) Small gene

B) Fill in the blanks.**06**

- a) In toxicity of insecticides how many numbers of entry routes are there _____.
b) Bucket pump sprayer have _____ shaped handle.
c) Yellow sticky trap is used to control _____.
d) Chemicals that cause insects to make oriented movements towards their source are called as _____.
e) IPM stands for _____.
f) Trichogramma is _____ parasitoid.

Q.2 Answer the following.**16**

- a) Write a note on Antixenosis and Antibiosis.
b) Write a note on power operated sprayer.
c) Define Bioassay and write a note on sandwich method of bioassay.
d) Write a note on types of nozzles.

Q.3 Answer the following.**16**

- a) What are pheromones? Give the classification of pheromones.
b) Explain types of damage caused by insects to plants and their estimation.

Q.4 Answer the following.**16**

- a) Give importance and side effects of Neem based preparations in insect pest management.
b) Write a note on attractants and repellents.

Q.5 Answer the following.**16**

- a) Explain in detail Host plant resistance.
b) Write in brief mode of action of neem in plant protection.

Q.6 Answer the following**16**

- a) Define bio-efficacy of pesticides and explain any five methods of bioassay.
b) Define IPM. Explain the cultural method of pest control.

Q.7 Answer the following.

16

- a)** Define hydroponics. Write a note on hydroponic technique.
- b)** Explain with neat labeled diagram parts of Knapsack type of sprayer.

Diseases of Crop Plants -i (MSC26307)

Max. Marks: 80

Q.1 A) Choose correct alternative. (MCQ) 10

- Page 1 of 3

- 7) Rust caused due to fungus _____
 a) *Gleosporium ampelfagum*
 b) *Alternaria alternate*
 c) *Puccinia carthami*
 d) *Ceratocystis fimbriata*
- 8) Root development is reduced and finally seedlings die in _____ diseases'.
 a) Root rots
 b) *Alternaria alternate*
 c) Rust
 d) *Cercospora*
- 9) Remove and destroy the diseased plants is _____ method of disease control
 a) Chemical
 b) Physical
 c) Biological
 d) none of above
- 10) *Albugo Candida* caused due to _____
 a) Wilt
 b) Root rot
 c) White rust
 d) Leaf spot

B) Fill in the blanks.**06**

- 1) M-45 is _____ Type of fungicide.
- 2) Clean cultivation is _____ method of disease control.
- 3) Drip irrigation method is control _____ disease.
- 4) Leaf spot of castor caused _____.
- 5) Bajra is _____ Type of crop.
- 6) Wilt is _____ seed born disease.

Q.2 Answer the following.**16**

- a) Write the symptoms and control rust of Maize.
- b) Write the common control method of disease.
- c) Enlist the fungal diseases on our syllabus.
- d) Write the symptoms and control of Powdery mildew Sunflower.

Q.3 Answer the following.**16**

- a) Write the causal organism, symptoms, Disease cycle and management wilt of Tobacco
- b) Explain the Rust and grain smut of Bajra.

Q.4 Answer the following.**16**

- a) Enlist the diseases of Sorghum explain in detail Rust.
- b) Write the general symptoms and control on Downy mildew.

Q.5 Answer the following.**16**

- a) Write the diseases of rice details blast on rice.
- b) Write the diseases of Groundnut details Tikka of Groundnut.

- Q.6 Answer the following** **16**
- a) Explain the diseases of Gram.
 - b) Enlist the diseases of sugarcane write details Red rot.
- Q.7 Answer the following** **16**
- a) Explain the diseases of Beans.
 - b) Enlist the diseases of Cotton explain any one .

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Set	P
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**M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (New) (NEP
CBCS) Examination: March/April - 2025
Manufacture of Agrochemicals (2301401)**

Day & Date: Wednesday, 14-May-2025
Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ)

08

- 1) Distillation is a process in which _____ component are separated from the mixture.

a) Water	b) Solid
c) Volatile	d) Gas
- 2) Drying involves the removal of relatively small amount of _____ from the solute.

a) Solute	b) Solution
c) Moisture	d) All of these
- 3) Captan is manufactured by using _____.

a) Phthalic acid	b) Tetrahydrophthalimide
c) Phthalimide	d) None
- 4) The BSI kitemark is applied to _____ goods.

a) Mechanical	b) Chemical
c) Electrical	d) Non electrical & electrical
- 5) A generalized fragment usually an ion produced by a disconnection is _____.

a) Synthon	b) Synthetic equivalent
c) Reagent	d) Target molecule
- 6) Gas absorption is known as _____.

a) Absorption of gas in solid
b) Absorption of gas in solid surface
c) Absorption of gas in liquid phase
d) All of these
- 7) The performance of an evaporator is evaluated in terms of _____.

a) Economy	b) Efficiency
c) Capacity	d) Capacity & Economy
- 8) Which of the following is occupational skin disease?

a) Asthma	b) lung disease
c) Dermatitis	d) none of these

B) Fill in the blanks: 04

- a) Two solvents involved in solvent extraction should be ____.
- b) Synthon is ____ species.
- c) Rogar is also called as ____.
- d) Asthma is ____ disease.

Q.2 Answer the following. (Any Six) 12

- a) Write the principle of Extraction.
- b) Write the synthesis of maneb.
- c) What causes asthma and pulmonary diseases?
- d) What is distillation?
- e) What is quality Control?
- f) What is retro synthetic analysis?
- g) Give the application of chlorothalonil.
- h) What is chemo selectivity?

Q.3 Answer the following. (Any Three) 12

- a) Write a note on industrial safety.
- b) Describe types of disconnections.
- c) Explain types of dryers.
- d) Write note on occupational cancer.

Q.4 Answer the following questions (Any Two) 12

- a) What is evaporation? Describe the Operation of multiple effect evaporator.
- b) Describe R&D laboratory specification.
- c) Write note on handling of chemicals.

Q.5 Answer the following questions (Any Two) 12

- a) Explain synthesis & unit process of dimethoate.
- b) Explain in detail working of centrifuge machine.
- c) Write note on occupational health management & industrial safety.

Seat No.	
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Set **P**

**M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (New)
(NEP CBCS) Examination: March/April - 2025
Agro-Based Marketing Management (2301402)**

Day & Date: Friday, 16-May-2025
Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Choose the correct answer from options given below. 08

- 1) The term market is derived from the _____ word.
 - a) Sanskrit
 - b) Persian
 - c) Latin
 - d) English
- 2) From the following is _____ not a basis for market segmentation.
 - a) Geographic
 - b) Behavioral
 - c) Product quality
 - d) Demographic
- 3) _____ is a component of a market plan.
 - a) Financial forecast
 - b) Data analysis
 - c) Trend analysis
 - d) All of the above
- 4) _____ is a key challenge in rural marketing.
 - a) High literacy rates
 - b) Easy access to technology
 - c) Limited infrastructure
 - d) Homogeneous demographics
- 5) Which of the following is a benefit of social media marketing _____?
 - a) Increased website traffic
 - b) Improved customer engagement
 - c) Enhanced brand awareness
 - d) All of the above
- 6) _____ is social media marketing.
 - a) Using traditional media to promote products
 - b) Using social media platforms to promote products or services
 - c) Creating print advertisements
 - d) Conducting market research
- 7) _____ is the primary role of marketing in agro-based businesses
 - a) To increase crop yields
 - b) To promote and sell agricultural products
 - c) To manage farm operations
 - d) To develop new farming techniques

8) _____ is a key benefit of marketing in agro-based businesses.

- a) Increased farm productivity
- b) Improved product quality
- c) Enhanced customer satisfaction
- d) All of the above

B) State whether the following statement true or false. 04

- 1) Social media marketing is a form of offline marketing.
- 2) Rural consumers are highly influenced by traditional media.
- 3) Green marketing focuses on promoting product that is environmentally friendly.
- 4) Traditional values and cultural norms have little influence on consumer behavior in India.

Q.2 Answer the followings (Any six) 12

- a) Agro-marketing
- b) Rural Market
- c) Social Media Marketing
- d) Market
- e) Green Marketing
- f) Market Segmentation
- g) Consumer Behavior
- h) Market Research

Q.3 Answer the following (Any Three) 12

- a) Importance of Marketing
- b) Problems of Rural Market
- c) Nature of Green Marketing
- d) Importance of Social Media Marketing

Q.4 Answer the following (Any Two) 12

- a) Functions of Marketing
- b) Elements of Marketing Environment
- c) Factors Determining the Consumer Behavior

Q.5 Answer the following (Any Two) 12

- a) Base of Market Segmentation
- b) Role of marketing in agro-based business
- c) Steps of Marketing Research

Seat No.	
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Set **P**

**M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (New) (NEP
CBCS) Examination: March/April - 2025
Advances in Pest Control and Diseases of Crop Plant (2301405)**

Day & Date: Tuesday, 20-May-2025
Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Choose correct alternatives**08**

- 1) Leaf spot caused due to fungus _____
 a) *Fusarium oxysporium* b) *Alternaria alternata*
 c) *Alternaria solani* d) none of above
- 2) Which of the following is an example of a biocontrol agent?
 a) Rotenone b) *Bacillus thuringiensis*
 c) DDT d) Carbaryl
- 3) Seed treatment is _____ method of disease control
 a) Preventive b) Post emergence
 c) Leaf spot d) *Cercospora*
- 4) Powdery mildew caused due to _____.
 a) *Oidium* sp. b) *Cercospora* sp.
 c) Both 'a' and 'b' d) none of above
- 5) What is the term for the use of a natural predator or parasitoid to control a pest?
 a) Genetic engineering b) Biological control
 c) Chemical control d) Mechanical control
- 6) Powdery mildew caused due to _____.
 a) *Oidium* sp. b) *Cercospora* sp.
 c) both 'a' and 'b' d) none of above
- 7) Which of the following is a natural enemy used in biological control?
 a) Chemical pesticide b) Natural predator
 c) Synthetic insecticide d) Herbicides
- 8) Gladiolus flowers are used as an _____ purposes.
 a) Cash crop b) Medicinal
 c) Food d) Ornamental

- B) Fill in the blanks** **04**
- 1) Brain hormone secreted by gland _____
 - 2) Use the fungicide to control _____ diseases
 - 3) Wilt are caused _____
 - 4) chitin is made of _____

- Q.2 Answer the following (Any six)** **12**
- a) Define the predator
 - b) Enlist and write its causal organism on diseases of Teak plant
 - c) Write the types of diseases
 - d) Causal organism on wilt of Guava
 - e) Define Microbial control
 - f) Write the types of Microbial Pathogen
 - g) Enlist and write its causal organism on diseases of chrysanthemum
 - h) Write the chemical formula of BPU

- Q.3 Answer the following.(Any three)** **12**
- a) Write the chemicals based on insect cuticle .
 - b) Common control method of fungal diseases
 - c) Give Role of predator in pest controlling
 - d) Leaf spot of Sapota

- Q.4 Answer the following.(Any two)** **12**
- a) Write the diseases of Ber explain any one.
 - b) Give Role of entomophagus insect in management of insect pest
 - c) Write concept of juvenile and moulting hormones

- Q.5 Answer the following.(Any two)** **12**
- a) Write the powdery mildew and leaf spot of Mango crop
 - b) Write the diseases of Pomegranate explain any one
 - c) Write a note on biological control and give its example

Seat No.	
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Set P

M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (Old) (CBCS)
Examination: March/April - 2025
Agro-Based Marketing Management (MSC26401)

Day & Date: Wednesday, 14-May-2025
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Questions no. 1 & 2 are compulsory.
 2) Attempt any Three Question from Q No.3 to Q No.7
 3) Figures to the right indicate full marks.

Q.1 A) Choose the correct answer from options given below: 10

- 1) Existence of _____ is the main feature of market.
 a) sellable product b) transportation
 c) mediator d) buyer and seller
- 2) Competition is _____ factors which affect the price of product.
 a) internal b) external
 c) only one d) all of these
- 3) Dividing the total market in to different small parts is known as market _____.
 a) research b) analysis
 c) segmentation d) differentiation
- 4) _____ is a delivery of standard of living to the societies.
 a) Marketing b) Production
 c) Consumption d) Purchasing power
- 5) Product installation service is an example of _____.
 a) after sales service
 b) impersonal selling
 c) indirect selling
 d) direct selling
- 6) _____ Problems are/is faced by agro-based marketing.
 a) Competition b) Education
 c) Govt. Policy d) All of above
- 7) Agro based marketing management used for _____.
 a) Social Development
 b) growth of agro sector
 c) increase in sales
 d) none of above

- 8) Producer to Consumer _____ channel.
a) one level b) two level
c) three level d) four level
- 9) The term market is derived from the _____ word
a) Sanskrit b) Persian
c) Latin d) English
- 10) The goods which are purchased by the consumer for improve standard of life is known as _____ goods.
a) industrial b) consumer
c) luxurious d) unsought

B) Fill in the blanks.**06**

- a) The term _____ refers not a place but a commodity or commodities and buyers and sellers who are indirect competition with one another.
- b) The term _____ is generally used with reference to the steps taken externally apart from general advertising for raising the existing level of sales to higher levels.
- c) Channels of _____ is a set of independent organization involved in the process of making a product or services available for use of consumption.
- d) E-business means use of _____ for purchase & sales of goods & services.
- e) Generally the price of luxurious goods are _____.
- f) The third stage of product life cycle is related to _____.

Q.2 Answer the following.**16**

- a) Nature of marketing
b) Types of consumer goods
c) Explain marketing planning process.
d) Importance of price in 4p's

Q.3 Answer the following.**16**

- a) Important of marketing
b) Problems of agro base marketing

Q.4 Answer the following.**16**

- a) Explain the types of market.
b) Explain various stages in product life cycle.

Q.5 Answer the following.**16**

- a) Use of 5 p's for Shubham Agro Service.
b) What is consumer behavior and explain factor affecting consumer behavior?

- Q.6 Answer the following** **16**
- a) Role of Marketing in agro based business.
 - b) Types of e-business
- Q.7 Answer the following** **16**
- a) Describe the marketing research procedure.
 - b) Explain the base of Market Segmentation.

Seat No.	
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Set **P**

M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (Old) (CBCS)
Examination: March/April – 2025
Advances in Pest Control -II (MSC26402)

Day & Date: Friday, 16-May-2025
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

Instructions: 1) Questions no. 1 & 2 are compulsory.
 2) Attempt any Three Question from Q No.3 to Q No.7
 3) Figures to the right indicate full marks.

Q.1 A) Choose the correct answer from options given below: 10

- 1) _____ is a type of parasitism in which a parasitoid attacks another parasitoid.
 a) super parasitism b) multiple parasitism
 c) hyper parasitism d) extreme parasitism
- 2) Light activated pesticide does the effect on pest by using _____.
 a) lamp b) water
 c) fertilizers d) sunlight
- 3) A _____ is a free-living organism it kills the prey, which is smaller than him.
 a) parasite b) predator
 c) parasitoid d) host
- 4) Biological control refers to use of natural enemies such as _____ for the management of insect pests.
 a) pathogens b) predator
 c) parasitoid d) all of these
- 5) Trichogramma is _____.
 a) Egg parasitoid b) Larval parasitoid
 c) Predator d) All the above.
- 6) Somaclonal variation refers to variation observed in _____ derived progenies.
 a) Anther culture b) Root culture
 c) Tissue culture d) Callus culture
- 7) In genetic engineering, practically any gene from any organism can be _____ into a simple prokaryotic system.
 a) Isolated b) Sequenced
 c) Cloned d) All of the above

- 8) The full form of NPV is _____
 a) Nuclear Polyhedrosis Virus
 b) Nuclear Polyhy Virus
 c) Nuclear Porous Virus
 d) none of the above
- 9) Alarm pheromone released by insect for _____ purpose.
 a) feeding
 b) protection
 c) sex
 d) shelter
- 10) 'Bt' insecticidal formulations act as _____
 a) Contact poison
 b) Stomach poison
 c) Respiratory poison
 d) All the above

B) Fill in the blanks.**06**

- 1) IPM stands for _____
- 2) _____ are the main source of active ingredient of neem.
- 3) Use of fungi, Bacteria and viruses against pest is the example of _____ control.
- 4) The full form of "Bt" _____
- 5) Insect having complete life cycle has _____ stages.
- 6) Hormonal IGRs work by mimicking or inhibiting _____ hormone.

Q.2 Answer the following.**16**

- a) Write a note on pheromones.
- b) Explain in short attractants and repellants.
- c) Genetical method of pest control.
- d) Nuclear Polyhedrosis Virus.

Q.3 Answer the following.**16**

- a) Describe the importance of biotechnological applications in pest management.
- b) Describe in brief the methodology of genetic engineering to introduce gene into plant so as to produce transgenic plants.

Q.4 Answer the following.**16**

- a) Define parasite & predators. Write a note role of parasitoid in insect pest management.
- b) Define the biological control. Explain the different techniques used in Biological control with suitable example.

Q.5 Answer the following.**16**

- a) Describe the importance of IPM in pest management.
- b) Describe in detail insect growth regulators.

Q.6 Answer the following**16**

- a) Explain in detail use of Bacteria in pest management.
- b) Write a note Light activated pesticides.

Q.7 Answer the following**16**

- a) What are the semiochemicals? Discuss the importance of pheromones.
- b) Define Somaclonal variability. Explain use of Fungus in pest control.

Seat No.	
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Set	P
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M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (Old) (CBCS)
Examination: March/April - 2025
Manufacture of Agrochemicals (MSC26403)

Day & Date: Tuesday, 20-May-2025
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Questions no. 1 & 2 are compulsory.
 2) Attempt any Three Question from Q No.3 to Q No.7
 3) Figures to the right indicate full marks.

Q.1 A) Choose the correct answer from options given below: 10

- 1) Gas absorption is known as _____.
 - a) Absorption of gas in solid
 - b) Absorption of gas in solid surface
 - c) Absorption of gas in liquid phase
 - d) All of these
- 2) The reaction in which only one set of stereoisomers is formed predominantly as called _____ reaction.
 - a) Stereospecific
 - b) Public union
 - c) Stoichiometric
 - d) None of these
- 3) _____ cost include the cost of interaction and testing of goods at various stages of manufacture.
 - a) Failure
 - b) Optimizing
 - c) Prevention
 - d) Appraisal
- 4) Chlorothalonil is used as _____.
 - a) Herbicide
 - b) Fungicide
 - c) Rodenticide
 - d) Insecticide
- 5) Drying involves the removal of relatively small amount of _____ from the solute.
 - a) Solute
 - b) Solution
 - c) Moisture
 - d) All of these.
- 6) Captan is manufactured by using _____.
 - a) Phthalic acid
 - b) Tetrahydrophthalimide
 - c) Phthalimide
 - d) None
- 7) In food and agriculture sector, how many Indian standards has been formulated by BIS?
 - a) 2330 standards
 - b) 2150 standards
 - c) 2610 standards
 - d) 2510 standards

8) The performance of an evaporator is evaluated in terms of _____

- a) Economy
- b) Efficiency
- c) Capacity
- d) Capacity & Economy

9) A generalized fragment usually an ion produced by a disconnection is _____

- a) Synthons
- b) Synthetic equivalent
- c) Reagent
- d) Target molecule

10) Distillation is a process in which _____ component are separated from the mixture.

- a) Water
- b) Solid
- c) Volatile
- d) Gas

B) Fill in the blanks.

06

- 1) Rogar is also called as _____
- 2) Synthons are _____ Species
- 3) Two solvents involved in solvent extraction should be _____
- 4) The liquid which undergoes decomposition at the boiling points can be separated by _____
- 5) Development is the _____ Step between applied research and production.
- 6) Maneb is manufactured by using ethylene diamine and _____

Q.2 Answer the following.

16

- a) Describe purpose of HRD.
- b) Describe contaminates crystallizer.
- c) Write note on chemo selectivity.
- d) Write a note on spray dryer.

Q.3 Answer the following.

16

- a) Define disconnection. Explain different types of disconnections.
- b) Describe R & D laboratory specification.

Q.4 Answer the following.

16

- a) Write synthesis & unit process of phosphamidon.
- b) Explain gas absorption in towers.

Q.5 Answer the following.

16

- a) Describe solid - liquid and liquid - liquid extraction.
- b) Explain health education for workers.

- Q.6 Answer the following** **16**
- a) Explain the small scale industry, administration & planning of small scale industry.
 - b) Define synthon, synthetic equivalent, FGI & Target molecule.
- Q.7 Answer the following** **16**
- a) Explain synthesis & unit process of dimethoate.
 - b) Write note on BIS & ISI specification and standard.

Seat No.	
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Set **P**

M.Sc. (Agrochemicals and Pest Management) (Sem - IV) (Old) (CBCS)
Examination: March/April - 2025
Diseases of Crop Plants - II (MSC26407)

Day & Date: Thursday, 22-May-2025
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

Instructions: 1) Questions no. 1 & 2 are compulsory.
 2) Attempt any Three Question from Q No.3 to Q No.7
 3) Figures to the right indicate full marks.

Q.1 A) Choose the correct answer from options given below: 10

- 1) Carbendazim 50% WP is _____ fungicide
 - a) Herbicide
 - b) Broad spectrum contact
 - c) Systemic
 - d) black spot
- 2) _____ causes Anthracnose of Mango.
 - a) Wilt
 - b) *Gleosporium ampelfagum*
 - c) *Melanoconium fulgenium*
 - d) *Collectotrichum gleosporioides*
- 3) Powdery mildew caused due to _____

a) <i>Oidium</i> sp.	b) <i>Cercospora</i> sp.
c) both 'a' and 'b'	d) none of above
- 4) Leaf spot caused due to fungus _____
 - a) *Fusarium oxysporium*
 - b) *Alternaria alternate*
 - c) *Alternaria solani*
 - d) none of above
- 5) Black rot of sweet potato caused due to fungus _____
 - a) *Gleosporium ampelfagum*
 - b) *Alternaria alternate*
 - c) *Synchytrium endobioticum*
 - d) *Ceratocystis fimbriata*
- 6) Gladiolus flowers are used as an _____ purposes.

a) Ornamental	b) Medicinal
c) Edible	d) None of above

- 7) _____ is the economic product of Rubber tree.

a) Wood	b) Leaf extract
c) Latex	d) None of above
- 8) Seed treatment is _____ method of disease

a) Preventive	b) Post emergence
c) Leaf spot	d) Cercospora
- 9) Gladiolus flowers are used as an _____ purposes

a) Ornamental	b) Medicinal
c) Edible	d) None of above
- 10) Powdery mildew of Grapes caused due to _____

a) Uncinula necator	b) Cercospora sp.
c) Both a and b	d) None of above

B) Fill in the blanks.

06

- Use the _____ to control fungal diseases
- Disease free planting material is _____ method of disease control.
- Fusarium are caused by _____ disease
- White Rust course due to _____
- Seed and soil are _____ infection
- Leaf spot are caused _____

Q.2 Answer the following.

16

- Write symptoms and control on powdery mildew of cucurbits
- Comment on the Downy mildew on onion
- Enlist and write its causal organism on diseases of Forage crop plant
- Common control method of fungal diseases

Q.3 Answer the following.

16

- Write the diseases of Chili explain any one.
- Explain the Downey mildew and White rust of Crucifies.

Q.4 Answer the following.

16

- Enlist the diseases of Pomegranate write brief Anthracnose.
- Write symptoms and control measure on Anthracnose and stem rot of papaya.

Q.5 Answer the following.

16

- Explain the general symptoms of fungal diseases on crop plant.
- Explain brief black spot and Powdery mildew on rose.

- Q.6 Answer the following** **16**
- a) Write the Anthracnose and leaf spot of Mango crop
 - b) Write the diseases of Pomegranate explain any one
- Q.7 Answer the following** **16**
- a) Explain brief leaf spot and Powdery mildew on Gladiolus
 - b) Explain brief Leaf spot and Powdery mildew on crop plant