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**M.Sc. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2022  
(AGPM)**

**Chemistry of Pesticides and Their Formulations – I**

Day & Date: Monday, 13-02-2023  
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.  
2) Attempt any three questions from Q. No. 3 to Q. No. 7.  
3) Figure to right indicate full marks.

**Q.1 A) Choose the correct alternatives from given option. 10**

- 1) Insect repellent activity of repellent is due to \_\_\_\_\_ chemical.
  - a) Dimethyl toluamide
  - b) Ethanol
  - c) Benzene
  - d) Toluene
- 2) Isomerisation of Malathion to thio form requires \_\_\_\_\_.
  - a) UV light
  - b) Heat
  - c) Sun light
  - d) Solvent
- 3) \_\_\_\_\_ formulation of pesticide is associated with the risk of drift to non-target area.
  - a) E. C
  - b) S. P
  - c) W. P
  - d) Dust
- 4) The type of ring system present in the structure of chlorpyrifos is \_\_\_\_\_.
  - a) Pyrimidine
  - b) Oxazole
  - c) Pyridine
  - d) Triazole
- 5) SN<sup>1</sup> reaction has transition state with \_\_\_\_\_ peaks.
  - a) Zero
  - b) One
  - c) Two
  - d) Three
- 6) Perkow reaction involves reaction between \_\_\_\_\_ and trialkyl phosphite ester.
  - a) Haloalkane
  - b) Haloketone
  - c) Ketone
  - d) Alkane
- 7) \_\_\_\_\_ from following is synthetic pyrethroid.
  - a) Malathion
  - b) Cypermethrin
  - c) Rogor
  - d) Phorate
- 8) Nitration of benzene is \_\_\_\_\_ reaction.
  - a) Electrophilic substitution
  - b) Electrophilic addition
  - c) Elimination
  - d) Nucleophilic addition
- 9) Benzoin condensation is shown by \_\_\_\_\_.
  - a) C<sub>6</sub>H<sub>5</sub>-CHO
  - b) H-CHO
  - c) CH<sub>3</sub>-CHO
  - d) CH<sub>3</sub>-CH<sub>2</sub>-CHO
- 10) In the conversion of pinacol to pinacolone \_\_\_\_\_ acts as catalyst.
  - a) KOH
  - b) NaOH
  - c) KI
  - d) H<sub>2</sub>SO<sub>4</sub>

- B) Fill in the blanks.** **06**
- 1) Neem extract contains \_\_\_\_\_, which shows insecticidal property.
  - 2) Cannizzaro reaction involves \_\_\_\_\_ ion shift.
  - 3) Ethyl bromide on reaction with alc.KOH gives ethene, is example of \_\_\_\_\_ reaction.
  - 4) Toxicity of pesticide is decided by it's \_\_\_\_\_ value.
  - 5) Constant agitation of solution is required while spraying \_\_\_\_\_ formulation.
  - 6) Bacillus thuringiensis is \_\_\_\_\_ origin insecticide.
- Q.2 Answer the following** **16**
- a) What is formulation? Discuss granules in detail.
  - b) Write Friedel-Crafts acylation reaction with mechanism.
  - c) Write a note : Classification of pesticides on the basis of target pests.
  - d) Give synthesis and uses of Cypermethrin.
- Q.3 Answer the following.** **16**
- a) Write SN<sup>2</sup> reaction with example, mechanism and energy profile diagram.
  - b) Write the uses of different Neem based products in agriculture.
- Q.4 Answer the following.** **16**
- a) What is addition reaction? Explain Markownikoffs addition with example.
  - b) Write synthesis, environmental fate and uses of Malathion.
- Q.5 Answer the following.** **16**
- a) What is rearrangement reaction? Write Pinacol-Pinacolone rearrangement reaction in detail.
  - b) Write a note on.
    - 1) Fumigants
    - 2) Rodenticides
- Q.6 Answer the following.** **16**
- a) Write Perkins reaction with mechanism
  - b) Write the examples of attractants, repellents and baits. Give their applications in pest management.
- Q.7 Answer the following.** **16**
- a) Write in detail different types of adjuvants used in pesticide formulation. Explain synergists and synergistic effect in detail.
  - b) Write the synthesis, environmental fate and uses of Monocrotophos.

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**M.Sc. (AGPM) (Sem-I) (New) (CBCS) Examination: Oct/Nov-2022**  
**Soil Science, Fertilizers, Micronutrients and Plant Growth Regulators**

Day & Date: Tuesday, 14-02-2023  
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.  
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.  
 3) Figure to right indicate full marks.

**Q.1 A) Multiple choice questions.**

**10**

- 1) Night soil is obtained from \_\_\_\_\_.  
 a) blood meal                              b) slaughter house  
 c) human excrement                      d) poultry manure
- 2) The percentage of  $P_2O_5$  in ammonium phosphate is \_\_\_\_\_.  
 a) 48%    b) 45%  
 c) 46%    d) 44%
- 3) Which of the following is micronutrients?  
 a) Boron    b) Nitrogen  
 c) Phosphorus                                      d) Potassium
- 4) Decomposition of organic matter in the soil is carried out by \_\_\_\_\_.  
 a) micronutrient                                      b) phytoplankton  
 c) macronutrients                                      d) microorganisms
- 5) Ethylene gas is used for \_\_\_\_\_.  
 a) fruit ripening                                      b) plant growth  
 c) soil development                                      d) none of these
- 6) Howard and word discovered the \_\_\_\_\_ process of composting.  
 a) Indore process  
 b) adco process  
 c) activated compost process  
 d) Bangalore process
- 7) \_\_\_\_\_ is growth retardants.  
 a) IAA    b) BAP  
 c) CCC    d) triconol
- 8) \_\_\_\_\_ deficiency causes acidity of soil.  
 a) Zinc    b) Iron  
 c) Calcium    d) Copper
- 9) Biogas plant produced \_\_\_\_\_ gas.  
 a) chlorine    b) butane  
 c) ethane    d) methane
- 10) Which of the following is concentrated organic manure?  
 a) F.Y.M.    b) Oil cake  
 c) Guano    d) Compost

- B) Fill in the blanks.** **06**
- 1) Red color of soil is associated with \_\_\_\_\_.
  - 2) Urea contains \_\_\_\_\_ percentage of amide nitrogen.
  - 3) Gibberella fujikoroii is source of \_\_\_\_\_.
  - 4) Water holding capacity is governed by \_\_\_\_\_.
  - 5) Fire hazards causes due to \_\_\_\_\_ fertilizer.
  - 6) Guano is obtained from the excreta and dead bodies of \_\_\_\_\_.
- Q.2 Answer the following** **16**
- a) Bangalore method of composting
  - b) Write note on F.Y.M.
  - c) Give uses of Auxin in agriculture
  - d) Describe the role of Mn and Mo
- Q.3 Answer the following.** **16**
- a) What is soil? Describe chemical and physical properties of soil.
  - b) Describe manufacture of Urea, gives properties & uses of urea.
- Q.4 Answer the following.** **16**
- a) Write note on acidic and alkaline soil. Describe reclamation of acidic and alkaline soil.
  - b) Describe in brief cytokinin.
- Q.5 Answer the following.** **16**
- a) Give manufacture of properties, uses of CAN.
  - b) Describe in brief nitrogenous fertilizers.
- Q.6 Answer the following.** **16**
- a) Describe the various, methods of production of BGA.
  - b) Write note on vermicompost and vermiwash.
- Q.7 Answer the following.** **16**
- a) Write note on Rhizobium as biofertilizer.
  - b) Write note on phosphatic fertilizer. Classification of phosphatic fertilizer. Describe in brief triple super phosphate.

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**M.Sc. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M)**

**Introductory and Industrial Entomology**

Day & Date: Wednesday, 15-02-2023  
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.  
2) Attempt any three questions from Q. No. 3 to Q. No. 7.  
3) Figure to right indicate full marks.

**Q.1 A) Choose the correct alternative. 10**

- 1) \_\_\_\_\_ eyes are present in cockroach.
  - a) Cursorial
  - b) Compound
  - c) Raptorial
  - d) Fossorial
- 2) \_\_\_\_\_ honey bee is called as Rock bee.
  - a) Apis floria
  - b) Apis indica
  - c) Apis dorsata
  - d) Apis melifera
- 3) Rearing of silkworm for the production of silk is called as \_\_\_\_\_.
  - a) Apiculture
  - b) Horticulture
  - c) Agriculture
  - d) Sericulture
- 4) \_\_\_\_\_ type of life cycle is present in the grasshopper.
  - a) Complete
  - b) Incomplete
  - c) Both a) and b)
  - d) None of Above
- 5) Scientific name of mango stem borer is \_\_\_\_\_.
  - a) chilo zonellus
  - b) Apis gossipii
  - c) Batocera rofumaculata
  - d) Holotrichia serrata
- 6) Nosema disease in honey bee is caused by \_\_\_\_\_.
  - a) mycelia
  - b) protozoa
  - c) virus
  - d) fungus
- 7) \_\_\_\_\_ is special diet feed for the Queen honey bee.
  - a) Honey
  - b) Wax
  - c) Pollen
  - d) Royal jelly
- 8) \_\_\_\_\_ are sensory organ in insect.
  - a) Wings
  - b) Legs
  - c) Pair of antenne
  - d) None of above
- 9) Cockroach belongs to phylum \_\_\_\_\_.
  - a) Arthropoda
  - b) Mollusca
  - c) Echinodermata
  - d) Brachiopod
- 10) Silkworm belongs to order \_\_\_\_\_.
  - a) Lepidoptera
  - b) Coleopteran
  - c) Arthropoda
  - d) Mollusca

- B) Fill in the blanks.** **06**
- 1) Body of cockroach is divided into \_\_\_\_\_.
  - 2) Nest of honey bee is called as \_\_\_\_\_.
  - 3) Scientific name of mulberry silk worm is \_\_\_\_\_.
  - 4) Life cycle including egg, larva, pupa and adult in insect is called as \_\_\_\_\_ metamorphosis.
  - 5) White grub beetle belongs to order \_\_\_\_\_.
  - 6) Chalk brood disease is caused by the fungus \_\_\_\_\_.

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

- a) Give the general description of the insect Thorax.
- b) Write the note on insect parasitoids.
- c) Describe the types of silkworm.
- d) Give the classification and general life cycle pattern of grasshopper.

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

- a) Describe the colony organization and life history of honey bee.
- b) Give the general life cycle of mango stem borer with nature of damage and control measure.

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

- a) Give the general life cycle pattern of white grub with control measure.
- b) Write a disease caused in honey bee with control measure.

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

- a) Describe the nervous system in cockroach.
- b) Give the general morphology of insect head.

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

- a) Describe the general life cycle of Rat and give its control measure.
- b) Write the classification of snail and slug and give its nature of damage and control measure.

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

- a) What is nuptial flight in honey bee? Give food and medicinal value of honey with its chemical composition.
- b) Describe the male reproductive system in cockroach with neat labeled diagram.

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**M.Sc. (Semester-I) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M)**

**Plant Pathology and Weed Management**

Day & Date: Thursday, 16-02-2023  
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Question No.1 and 2 are compulsory.  
2) Attempt any three questions from Q. No. 3 to Q. No. 7.  
3) Figure to right indicate full marks.

**Q.1 A) Choose correct alternative.**

**10**

- 1) 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
- 2) \_\_\_\_\_ disease of sugarcane.
  - a) GSD
  - b) Leaf extract
  - c) Latex
  - d) Ergot
- 3) Sunflower seed are used as an \_\_\_\_\_ purposes.
  - a) Ornamental
  - b) Oil purpose
  - c) Fungicide
  - d) None of the above
- 4) Hand weeding is \_\_\_\_\_ method of weed control.
  - a) Biological
  - b) Hot water
  - c) Chemical
  - d) Physical
- 5) Spraying the fungicide is \_\_\_\_\_ method of disease control.
  - a) Chemical
  - b) Physical
  - c) Biological
  - d) None of the above
- 6) \_\_\_\_\_ is bacterial diseases on banana.
  - a) Odium sp.
  - b) Plasmopara halstedii
  - c) Both 'a' and 'b'
  - d) Wilt
- 7) Club rot of cabbage is \_\_\_\_\_ diseases.
  - a) MLOs
  - b) fungal
  - c) Powdery mildew
  - d) viral
- 8) Root development is reduced and finally seedlings die in \_\_\_\_\_ diseases.
  - a) Root rots
  - b) Alternaria alternate
  - c) Rust
  - d) Cercospora
- 9) Cercospora sp. causes \_\_\_\_\_ diseases.
  - a) Wilt
  - b) leaf spot
  - c) Powdery mildew
  - d) viral
- 10) Little leaf of brinjal caused due to \_\_\_\_\_.
  - a) MLOS
  - b) Cercospora sp.
  - c) Albugo Candida
  - d) None of the above

- B) Fill in the blanks.** **06**
- 1) Mancozeb is \_\_\_\_\_ type of fungicide.
  - 2) Any unwanted plant is known as \_\_\_\_\_.
  - 3) Crown gall disease is study on \_\_\_\_\_ crop in syllabus.
  - 4) Use the implements to control weed is known as \_\_\_\_\_ method of weed control.
  - 5) Soft rot of fruit are coursed due to \_\_\_\_\_ fungus.
  - 6) Papaya ring spot is \_\_\_\_\_ type of disease.

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

- a) Write the Leaf curl of chilly.
- b) Note the significance of plant diseases.
- c) Write the weed dispersal.
- d) Write symptoms on GSD.

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

- a) Define the weed write classification of weed.
- b) Explain the concept of plant disease.

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

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

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

- a) Write the symptoms and control method of viral diseases.
- b) Explain the factors affecting of epidemic.

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

- a) Define disease write the type of diseases.
- b) Write the causal organism, symptoms and control method of little leaf of brinjal.

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

- a) Define weed write the advantages and disadvantages of weed.
- b) Enlist method of weed control write brief cultural method.



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**M.Sc. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M )**

**Chemistry of Pesticides and Their Formulations-II**

Day & Date: Monday, 20-02-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) Q.No.1 and 2 are compulsory.  
2) Attempt any three questions from Q.No.3 to Q.No.7  
3) Figures to the right indicate full marks.

**Q.1 A) Choose the correct alternatives from the options. 10**

- 1) Methyl Isocyanate reacts with 1- naphthol and forms \_\_\_\_insecticide.
  - a) Carbofuran
  - b) Carbaryl
  - c) Baygon
  - d) Dinobuton
- 2) Phenyl dialkyl ureas are used as \_\_\_\_\_.
  - a) Herbicide
  - b) Insecticide
  - c) Fungicide
  - d) Bactericide
- 3) Phosphine gas is liberated by \_\_\_\_\_.
  - a) Herbicide
  - b) Insecticide
  - c) Rodenticide
  - d) Bactericide
- 4) Ziram acts as \_\_\_\_\_.
  - a) Fungicide
  - b) Herbicide
  - c) Insecticide
  - d) Nematicide
- 5) Catechol is starting material for synthesis of \_\_\_\_\_.
  - a) Carbaryl
  - b) Paraquat
  - c) Zineb
  - d) Baygon
- 6) Synthesis of Carbofuran involves \_\_\_\_\_ rearrangement reaction.
  - a) Perkin
  - b) Claisen
  - c) Benzoin
  - d) Aldol
- 7) Thallium sulphate is used as \_\_\_\_\_.
  - a) Rodenticide
  - b) Miticide
  - c) Algaecide
  - d) Acaricide
- 8) Antifungal and antibacterial compound used to protect seedlings contains \_\_\_\_\_metal.
  - a) Zn
  - b) Mg
  - c) Hg
  - d) Mn
- 9) Fluorine containing compound from following is \_\_\_\_\_.
  - a) Trifluralin
  - b) Dinoseb
  - c) Dinobuton
  - d) PCNB

## SLR-GA-6

- 10) Wettable Sulphur contains \_\_\_\_\_ agent along with Sulphur powder.
- a) Antioxidant
  - b) Anti-coagulant
  - c) Synergist
  - d) Wetting

**Q.1 B) Fill in the blanks. 06**

- 1) \_\_\_\_\_ Isomer of BHC is having highest insecticidal activity.
- 2) Pentachlorophenol on oxidation gives \_\_\_\_\_, which act as dehydrating agent.
- 3) Thallium sulphate is used as \_\_\_\_\_.
- 4) Mixture of copper sulphate and ammonium carbonate that control damping off is \_\_\_\_\_.
- 5) Carbamates contain \_\_\_\_\_ functional group.
- 6) Nitratin is used in agriculture as \_\_\_\_\_.

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

- a) Explain the use of computers in pesticide formulation.
- b) Write a note on Fumigants.
- c) Explain in detail Tin compounds as fungicides.
- d) Write synthesis and uses of endosulphon.

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

- a) Give the synthesis and uses of Ziram and Maneb.
- b) Discuss the role of azo compounds as pesticide.

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

- a) Explain synthesis, properties and uses of Aldicarb.
- b) What are fungicides? Explain the role of copper compounds as fungicides.

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

- a) Write in detail use of organic and inorganic mercury compounds in agriculture.
- b) Write synthesis, properties and uses of Bendiocarb.

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

- a) Write the synthesis, properties and uses of Paraquat and Captan.
- b) What are herbicides? Explain types of herbicides. Write synthesis, properties and uses of sodium Chlorate.

**Q.7 Answer the followings. 16**

- a) Give synthesis, properties and uses of Pentachloroanisol and Hexachlorophene.
- b) Explain in detail development methods for collaborative testing of pesticides.

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**M.Sc. (Semester - II) (New) (CBCS) Examination: Oct/Nov - 2022  
(A.G.P.M)**

**Analytical Techniques for Agrochemicals**

Day & Date: Tuesday, 21-02-2023  
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and 2 are compulsory.  
2) Attempt any three questions from Q. No. 3 to 7  
3) Figures to the right indicate full marks.

**Q.1 A) Choose the correct alternatives from the options. 10**

- 1) The molecule which rotates plane of plane polarised light in clockwise direction is molecule \_\_\_\_\_.  
a) Laevo rotator                      b) Meso  
c) Dextro rotator                      d) Inactive
- 2) In gravimetric estimation of iron \_\_\_\_\_ hydroxide is used as reagent.  
a) Potassium                      b) Barium  
c) Ammonium                      d) Sodium
- 3) First step in stripping analysis is \_\_\_\_\_.  
a) Oxidation                      b) Stripping  
c) Dilution                      d) Concentration
- 4) In simple flame photometer, the monochromator is \_\_\_\_\_.  
a) Photocathode                      b) Photoanode  
c) Prism                      d) Slit
- 5) The primary standard used in redox titration is \_\_\_\_\_.  
a)  $K_2Cr_2O_7$                       b) KOH  
c) NaOH                      d) HCl
- 6) In \_\_\_\_\_ titrations, end point is determined by emf measurement.  
a) Colorimetric                      b) Potentiometric  
c) Conductometric                      d) Iodometric
- 7) \_\_\_\_\_ is the principle of chromatography.  
a) Salvation                      b) Concentration  
c) Oxidation                      d) Separation
- 8) Reference electrode from following is \_\_\_\_\_.  
a) Hydrogen                      b) Amalgam  
c) Silver                      d) Copper

## SLR-GA-7

- 9) Spraying reagent used to detect amino acid by paper chromatography is \_\_\_\_\_.
- |         |              |
|---------|--------------|
| a) Acid | b) Ninhydrin |
| c) Base | d) Aluminon  |
- 10) \_\_\_\_\_ is mixture of quinone and hydroquinone.
- |            |                |
|------------|----------------|
| a) Quinol  | b) Quinoxaline |
| c) Aniline | d) Quinhydrone |

**Q.1 B) Fill in the blanks. 16**

- 1) \_\_\_\_\_ electrolyte is used to determine cell constant.
- 2) In strong acid-strong base titration, \_\_\_\_\_ indicator is used.
- 3) Silica gel acts as \_\_\_\_\_ phase in TLC.
- 4) Flame photometry is also known as \_\_\_\_\_ spectroscopy.
- 5) In stripping voltametry, the working electrode is \_\_\_\_\_ film electrode.
- 6) Component with small value of distribution coefficient has affinity for \_\_\_\_\_ phase.

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

- a) Explain the theory and principle of solvent extraction.
- b) Write the applications of voltametry in trace analysis.
- c) Write a note on metallochromic indicators.
- d) Write a note on Redox titrations.

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

- a) Explain in detail, analysis by flame photometry method.
- b) What are indicators? Explain in detail acid - base indicators.

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

- a) Explain the precipitation titration method for Zn and Mg analysis in pesticide sample.
- b) Write the applications of Nephelometry and turbidimetry.

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

- a) Explain the method of gravimetric estimation of iron.
- b) Describe the principle, procedure, and applications of TLC.

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

- a) Write the principle and instrumentation of atomic absorption spectroscopy.
- b) Write the method and applications of PH metry in pesticide analysis.

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

- a) Write the applications of polarimetry and potentiometry in pesticide analysis.
- b) Write the principle, instrumentation and applications of column chromatography.

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M.Sc. (Semester - II) (New) (CBCS) Examination: Oct/Nov - 2022  
(A.G.P.M)

Economic Entomology

Day & Date: Wednesday, 22-02-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

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

**Q.1 A) Choose the correct alternatives from the options.**

**10**

- 1) Porcupine is \_\_\_\_\_ pest.  
a) stored grain                      b) vertebrate  
c) medicinal                          d) forest
- 2) Lady bird beetle act as \_\_\_\_\_.  
a) pest                                      b) predator  
c) biocontrol agent                  d) None of the above
- 3) Common green bee eater is the enemy of \_\_\_\_\_.  
a) Apiculture                          b) Sericulture  
c) Maricultural                        d) Nematode
- 4) Bt. is included in \_\_\_\_\_ method of pest control.  
a) cultural                                b) chemical  
c) microbial                              d) all of the above
- 5) The scientific name of Housefly is \_\_\_\_\_.  
a) *Musca demistica*                  b) *Periplaneta Americana*  
c) *Sesamia inferens*                  d) *Trogoderma granarium*
- 6) Bed bug belongs to the family \_\_\_\_\_.  
a) pentatomidae                      b) cimicidae  
c) podopinae                            d) pseudococcidae
- 7) Chemicals used to control arthropods are known as \_\_\_\_\_.  
a) herbicide                              b) Insecticides  
c) avicides                                d) sprayers
- 8) Dengue caused by \_\_\_\_\_ species of mosquito.  
a) Male *Aedes*                          b) female *Aedes*  
c) both 'a' and 'b'                      d) none of the above
- 9) \_\_\_\_\_ is the polyphagous pest.  
a) Aphid                                    b) Black fly  
c) Blow fly                                d) Horsefly

- 10) *Lipisma saccharina* is the scientific name of \_\_\_\_\_.  
a) Termite                                      b) Thrips  
c) Tobacco caterpillar      d) Silver fish

**Q.1 B) Fill in the blanks. 06**

- 1) Spiracle in insects is \_\_\_\_\_ organ.
- 2) Chemicals used to control birds are known as \_\_\_\_\_.
- 3) Anopheles mosquito is act as vector of \_\_\_\_\_ disease.
- 4) Lace wing is used for controlling the \_\_\_\_\_.
- 5) Sand fly is \_\_\_\_\_ pest.
- 6) *Sitophilus oryzae* is the scientific name of \_\_\_\_\_.

**Q.2 Answer the followings. 16**

- a) Control measures on termites.
- b) Explain different species of rodents.
- c) Explain economic importance of Blowfly.
- d) Damages caused by Monkey.

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

- a) Describe the life cycle pattern of Mealy Bug.
- b) Control measures on sucking cattel Louse.

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

- a) Describe white grub in details.
- b) Write note on economic Entomology.

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

- a) Explain biological control measures used in agricultural field.
- b) Describe the insects which causes the viral diseases.

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

- a) Explain Snail as a Molluscan pest.
- b) Describe the life cycle pattern of Rice Weevil.

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

- a) Describe damages caused by Indian field mouse.
- b) Describe the Life cycle pattern of cotton white fly.

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Set P

**M.Sc. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2022  
(AGPM)**

**Pesticide Residues and Toxicology**

Day &amp; Date: Monday, 13-02-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) Question 1 and 2 are compulsory.  
2) Attempt any Three from Q.3 to Q.7  
3) Figures to the right indicate full marks.

**Q.1 A) Choose correct alternative from the given option. 10**

- 1) Mercury binds to DNA of organism so its acts as \_\_\_\_\_.  
a) Teratogen                                  b) Hepatotoxin  
c) Carcinogen                                 d) Mutagen
- 2) The fruit of Datura contains the substance which affects \_\_\_\_\_ system.  
a) Nervous                                        b) Circulatory  
c) Excretory                                      d) Digestive
- 3) Dose-response relationship was established by \_\_\_\_\_.  
a) Orfilla    b) Paracelsus  
c) Hippocrates                                  d) Socrates
- 4) Substance that binds with receptor is \_\_\_\_\_.  
a) Insecticide                                    b) Polutant  
c) Agonist                                         d) Mutagen
- 5) Halogenated hydrocarbons has effect on \_\_\_\_\_.  
a) Heart    b) Brain  
c) Immunity                                      d) Kidney
- 6) Chlorine gas leaked in environment is environmental \_\_\_\_\_.  
a) Contaminant                                  b) Pollutant  
c) Carcinogen                                  d) Mutagen
- 7) Continuous increase in concentration of toxicant at successive the level in food chain is called as \_\_\_\_\_.  
a) Biotransformation                         b) Bioconversion  
c) Biomagnification                             d) Bioaccumulation
- 8) Hydrated ferric oxide is used as antidote for \_\_\_\_\_ poisoning.  
a) Lead     b) Arsenic  
c) Cadmium                                        d) Mercury
- 9) Mode of action of carbamates is similar to \_\_\_\_\_.  
a) Organochlorines                             b) Pyrethroids  
c) Biologicals                                    d) Organophosphate
- 10) \_\_\_\_\_ radiation is responsible for genetic mutation.  
a) Microwave                                     b) Radio wave  
c) Radar    d) X-rays

- B) Fill in the blanks** **06**
- 1) Vinyl chloride is \_\_\_\_\_ carcinogen.
  - 2) Arsenic poisoning resembles with \_\_\_\_\_ disease.
  - 3) Tumor formation is called as \_\_\_\_\_.
  - 4) \_\_\_\_\_ causes abnormalities in human embryo.
  - 5) Sterility in organisms is caused due to high doses of \_\_\_\_\_ metal.
  - 6) \_\_\_\_\_ gas is responsible for Bhopal gas tragedy.
- Q.2 Answer the following.** **16**
- 1) Write a note on Bhopal gas tragedy.
  - 2) Explain the process of biodegradation.
  - 3) What are point and non point sources of water pollution?
  - 4) Write in detail definition and scope of toxicology.
- Q.3 Answer the following.** **16**
- a) Explain in detail analysis of fruit residues by GC technique.
  - b) Write note on Biomagnification and Bioconcentration.
- Q.4 Answer the following.** **16**
- a) What is poison? Write symptoms and treatment of corrosive poison.
  - b) Write the mechanism of action of Organophosphate and Pyrethroid insecticides.
- Q.5 Answer the following.** **16**
- a) Write the symptoms and treatment of Arsenic and Cadmium poisoning.
  - b) Write a note on
    - 1) Neurotics
    - 2) Irritants
- Q.6 Answer the following.** **16**
- a) Explain in detail HPLC technique for pesticide residue analysis.
  - b) Write in detail different disciplines of toxicology.
- Q.7 Answer the following.** **16**
- a) What is the action of toxicant on Enzymes, Coenzymes and nucleic acids?
  - b) Write a note on.
    - 1) Minamata
    - 2) Itai - Itai disease.



Seat  
No.**M.Sc. (AGPM) (Sem - III) (New) (CBCS) Examination: Oct/Nov - 2022  
Advance in Pest Control – I**Day & Date: Tuesday, 14-02-2023  
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q.Nos.1 and 2 are compulsory  
2) Attempt any three questions from Q.No.3 to Q.No.7  
3) Figure to right indicate full marks.

**Q.1 A) Choose correct alternative.****10**

- 1) Yellow sticky trap is used to control \_\_\_\_\_
  - a) Fruit fly
  - b) White fly
  - c) Stem borer
  - d) Hairy caterpillar
- 2) 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
- 3) \_\_\_\_\_ is the mechanical method of pest control.
  - a) Trap crop
  - b) Cooling
  - c) Heating
  - d) Trench digging
- 4) \_\_\_\_\_ is an organism which is usually much larger than its prey and a single individual able to kill their prey.
  - a) predators
  - b) parasites
  - c) parasitoids
  - d) All of the above
- 5) Neem leaves is the example of \_\_\_\_\_
  - a) attractants
  - b) repellent
  - c) chemosterilant
  - d) pheromones
- 6) \_\_\_\_\_ allele of this gene for DDT resistance found in American strain of housefly.
  - a) Kd
  - b) Kdr-O
  - c) KD-O
  - d) Kdr-D
- 7) In Rotary Duster the air blast is produced by employing a \_\_\_\_\_ enclosed in a box.
  - a) hopper
  - b) blower
  - c) agitator
  - d) compressor
- 8) Bucket pump sprayer have \_\_\_\_\_ shaped handel.
  - a) M or W
  - b) L or T
  - c) D or O
  - d) D or T
- 9) While handling duster or sprayer one should have knowledge of \_\_\_\_\_.
  - a) Insecticides Mode of action
  - b) Insect pest habitat
  - c) Technique of handling agriculture appliances
  - d) All of the above

- 10) Plants with larger roots can be cultivated with which of the following types of hydroponics
- a) Ebb and flow system
  - b) Drip system
  - c) Nutrient Film technique
  - d) None of these

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

- 1) Sandwich method is the known amount of insecticide is put between \_\_\_\_\_ of the batch of insect.
- 2) Hydraulic energy sprayer is a type of \_\_\_\_\_
- 3) Trichogramma is \_\_\_\_\_
- 4) In Integrate Pest Management HPR stands for \_\_\_\_\_
- 5) In toxicity of insecticides how many numbers of entry routes are there \_\_\_\_\_.
- 6) The form of hydroponics that does not require a growing medium at all is \_\_\_\_\_

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

- 1) Write a note on attractants.
- 2) Write a note on power operated sprayer.
- 3) Define Bioassay and write a note on sandwich method of bioassay.
- 4) Write a note on hand rotator duster.

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

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

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

- 1) Explain cultural and mechanical method of pest control.
- 2) Explain types of damage caused by insects to plants and their estimation.

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

- 1) Define bio-efficacy of pesticides and explain any four methods of bioassay.
- 2) Explain insect insecticide resistance and resistance management.

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

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

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

- 1) Explain with neat labeled diagram parts of Bucket and Knapsack type of sprayer.
- 2) Define hydroponics. Write a note on hydroponic technique.

Seat No.	
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Set P

**M.Sc. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M)**

**Diseases of Crop Plants- I**

Day & Date: Wednesday, 15-02-2023  
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question 1 and 2 are compulsory.  
2) Attempt any Three from Q.3 to Q.7  
3) Figures to the right indicate full marks.

- Q.1 A) Choose Correct Alternative. 10**
- 1) \_\_\_\_\_ of the given diseases is related to Bajra.
    - a) Leaf Rust
    - b) Late Blight
    - c) Canker
    - d) Ergot
  - 2) \_\_\_\_\_ of the given is an example of Fungal disease in plants.
    - a) Bud Blight
    - b) Powdery Mildew
    - c) Chlorosis
    - d) Curly top
  - 3) \_\_\_\_\_ of the given is an example of a disease caused by a virus.
    - a) Cankers
    - b) Fire Blight
    - c) Spotted Wilt
    - d) Leaf spot
  - 4) \_\_\_\_\_ of the given diseases is caused by nematodes in plants.
    - a) Wilts
    - b) Cavity spot
    - c) Scab
    - d) Root-knot
  - 5) \_\_\_\_\_ of the given diseases is related to Groundnut.
    - a) Tikka
    - b) Phomopsis blight
    - c) Leaf rust
    - d) Alternaria blight
  - 6) \_\_\_\_\_ of the given diseases is related to Sugarcane.
    - a) Ergot
    - b) Canker
    - c) Red rot
    - d) Late blight
  - 7) Find the odd one from the given options: \_\_\_\_\_.
    - a) Downy mildew
    - b) Leaf scaled
    - c) Mottled stripe
    - d) Ratoon stunting
  - 8) \_\_\_\_\_ of the given diseases is related to Potatoes.
    - a) Downy mildew
    - b) Late blight
    - c) Tikka
    - d) Leaf rust
  - 9) "Black spot, Black stripe, Brown spot" are the diseases related to \_\_\_\_\_.
    - a) Bajra
    - b) Paddy
    - c) Wheat
    - d) Sugarcane
  - 10) 'Fire blight' disease is related to which of the given fruits?
    - a) Pineapple
    - b) Orange
    - c) Apple
    - d) Banana

- B) Fill in the blanks OR write true/false** **06**
- 1) Plant diseases are broadly classified into nonparasitic and parasitic.  
a) True b) False
  - 2) Wilting is the loss of turgidity and drooping of leaves.  
a) True b) False
  - 3) Citrus Canker disease of plant is known as ring disease.  
a) True b) False
  - 4) Necrosis cannot be in the form of \_\_\_\_\_.
  - 5) In \_\_\_\_\_ disease of plant white mildew appears typically on underside of leaves.
  - 6) Bacterial blight of Rice disease of plant is caused due to \_\_\_\_\_ Bacteria.
- Q.2 Answer the following.** **16**
- 1) What is plant disease?
  - 2) Enlist the common fungal diseases in our region.
  - 3) Write down causal organisms of: 1. Blast of rice & 2. Leaf spot of Sesame.
  - 4) Enlist common fungicides
- Q.3 Answer the following.** **16**
- a) Comment upon:
    - 1) Disease cycle of False smut of rice.
    - 2) Control measures of Grainmold disease of Sorghum
  - b) Comment upon:
    - 1) Enlist the common symptoms of Tikka disease of groundnut.
    - 2) Enlist the common symptoms of Smut disease of Maize
- Q.4 Answer the following.** **16**
- a) Write down symptoms, Disease cycles, Nature of Damage and Management of Root knots in legumes.
  - b) Write down symptoms, Disease cycles, Nature of Damage and Management of GSD in sugarcane.
- Q.5 Answer the following.** **16**
- a) Comment upon:
    - 1) Symptoms of Powdery mildew disease.
    - 2) Control measures of Helminthosporium disease of rice.
  - b) Comment upon:
    - 1) Symptoms of Downy mildew disease in Sorghum.
    - 2) Control measures of Rust disease in Bajra.
- Q.6 Answer the following.** **16**
- a) Write down symptoms, Disease cycles, Nature of Damage and Management of powdery mildew disease of Sunflower.
  - b) Write down symptoms, Disease cycles, Nature of Damage and Management of Rust disease of Cotton.
- Q.7 Answer the following.** **16**
- a) Comment upon:
    - 1) Common symptoms of Leafspots disease.
    - 2) Common symptoms of wilts disease.
  - b) Comment upon:
    - 1) Common symptoms of Anthracnose disease.
    - 2) Common control measures of bacterial diseases

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**M.Sc. (Semester - IV) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M)**

**Agro-Based Marketing Management**

Day & Date: Monday, 20-02-2023

Max. Marks: 80

Time: 03:00 PM To 06:00 PM

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.  
2) Attempt any Three questions from Q.No.3 to Q.No.7.  
3) Figures to the right indicate full marks.

**Q.1 A) Choose the correct alternatives from the options.** 10

- 1) The art and science of choosing target markets and building profitable relationships with them is called \_\_\_\_\_.  
a) marketing management  
b) positioning  
c) segmentation  
d) selling
- 2) A \_\_\_\_\_ is the set of actual and potential buyers of a product.  
a) audience                      b) group  
c) market                         d) segment
- 3) \_\_\_\_\_ is part of promotional tools of marketing.  
a) Process                         b) Sales promotion  
c) People                         d) Product
- 4) NABARD form in \_\_\_\_\_.  
a) 1990                              b) 1982  
c) 1987                              d) 1986
- 5) The set of marketing tools a firm uses to implement its marketing strategy is called as \_\_\_\_\_.  
a) product mix                      b) promotion mix  
c) marketing mix                      d) advertisement mix
- 6) WTO stands for \_\_\_\_\_.  
a) World Trade Organization  
b) World Tariff Organization  
c) World Transport Organization  
d) None of these
- 7) Producer to consumer \_\_\_\_\_ channel.  
a) one level                         b) two level  
c) three level                         d) four level

- 8) T.V. is \_\_\_\_\_ tool of marketing.  
a) personal selling      b) advertising  
c) brand                      d) None of these
- 9) Which tool vital in Agri business \_\_\_\_\_.  
a) place                      b) price  
c) promotion                d) All of these
- 10) \_\_\_\_\_ is not part of 4ps.  
a) Product                    b) Price  
c) Promotion                d) People

**Q.1 B) Fill in the blanks. 06**

- 1) E-business means use of \_\_\_\_\_ for purchase & sales of goods & services.
- 2) The study of consumer behavior helps the marketer to decide \_\_\_\_\_ policy.
- 3) Dividing the total market in to different small parts is known as market \_\_\_\_\_.
- 4) Agro based marketing management used for \_\_\_\_\_.
- 5) Product installation service is an example of \_\_\_\_\_.
- 6) In \_\_\_\_\_ market the possession of goods in immediately given to the buyer after sale.

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

- a) Write a note Market Segmentation.  
b) Enlist 7p's in marketing.  
c) Define Industrial goods.  
d) Write definition of price.

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

- a) Explain marketing planning Process.  
b) Define marketing. Write a note on Target Marketing.

**Q.4 Answer the followings. 16**

- a) Explain the Function of WTO.  
b) Describe the Function of NABARD.

**Q.5 Answer the followings. 16**

- a) Problems of agri-business marketing in India.  
b) Explain the importance of marketing ethics.

**Q.6 Answer the followings. 16**

- a) Define Marketing audit. Explain the concept of marketing.  
b) Write type of distribution channels.

**Q.7 Answer the followings. 16**

- a) Define Marketing research. Explain the Product mix.  
b) Define Marketing planning. Describe target marketing.

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**M.Sc. (Semester - IV) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M)**

**Advances in Pest Control-II**

Day & Date: Tuesday, 21-02-2023

Max. Marks: 80

Time: 03:00 PM To 06:00 PM

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.  
2) Attempt any Three questions from Q.No.3 to Q.No.7.  
3) Figures to the right indicate full marks.

**Q.1 A) Choose the correct alternatives from the options. 10**

- 1) The full form of "Bt" \_\_\_\_\_.  
a) Bacillus thuringiensis  
b) Bacillus thuringeness  
c) Bacillus thuringe  
d) Bacillus thusudusis
- 2) Due to Cytoplasmic incompatibility \_\_\_\_\_ type of insect control occurred.  
a) mechanical                      b) legal  
c) genetic                              d) all the above
- 3) Chemicals released by insect for mating purpose is called \_\_\_\_\_.  
a) aggregation                      b) sex  
c) alarm                                 d) none of the above
- 4) The transgenic plant is simply a normal plant with one or more \_\_\_\_\_ from diverse sources.  
a) clones                                b) vector  
c) mediator                              d) additional gene
- 5) \_\_\_\_\_ pest is destroyed by Lacewing.  
a) Sucking pest                      b) Forest pest  
c) Vertebrate pest                      d) Molluscan pest
- 6) Chemicals that cause insects to make oriented movements towards their source are called \_\_\_\_\_.  
a) Antifeedants                      b) Chemosterilents  
c) Repellent                              d) Attractant
- 7) Bacillus thuringiensis bacterium produces a crystal toxic substance called \_\_\_\_\_.  
a) alpha endotoxin                      b) beta endotoxin  
c) gamma endotoxin                      d) delta endotoxin

- 8) \_\_\_\_\_ is included under the pesticides.  
a) Avicides                      b) Insecticides  
c) Fungicides                  d) All of the above
- 9) Juvenile hormone is secreted by \_\_\_\_\_ of the brain.  
a) pituitary                      b) prothoracic  
c) corpora alata                d) corpora cardiac
- 10) The full form of CPV is \_\_\_\_\_.  
a) Cytoplasmic Polyhydrosis Virus  
b) Cytophagous virus  
c) Cytochrome polished virus  
d) none of the above

**Q.1 B) Fill in the blanks. 06**

- 1) The full form of NPV is \_\_\_\_\_.
- 2) Use of fungi, Bacteria and viruses against pest is the example of \_\_\_\_\_ control.
- 3) \_\_\_\_\_ are the main source of active ingredient of neem.
- 4) \_\_\_\_\_ chemicals induce permanent sterility in both sexes.
- 5) Bacteria mostly infect \_\_\_\_\_ of insect body.
- 6) Harmonal IGRs work by mimicking or inhibiting \_\_\_\_\_ hormone.

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

- a) Write a note on Protease inhibitor.
- b) Comment upon use of Repellants in insect management.
- c) Genetic method of pest control.
- d) Mode of action of viruses in insect control.

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

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

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

- a) Define prey & predators. Write a note role of parasitoid in insect pest management.
- b) Describe the importance of IPM in pest management.

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

- a) Define Allelochemicals. Write a note chemicals based on insect cuticle chitin.
- b) Write a note on light activated pesticides.



**Q.6 Answer the following.**

**16**

- a) Explain in detail mode of action of *Bacillus thuringiensis* in pest management.
- b) Define Microbial insect control. Explain mode of action of fungus in pest management.

**Q.7 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.

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**M.Sc. (Semester - IV) (New) (CBCS) Examination: Oct/Nov-2022  
(A.G.P.M)**

**Manufacture of Agrochemicals**

Day & Date: Wednesday, 22-02-2023

Max. Marks: 80

Time: 03:00 PM To 06:00 PM

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.  
2) Attempt any three questions from Q. No. 3 to Q. No. 7  
3) Figure to right indicate full marks.

**Q.1 A) Choose the correct alternatives from the options.** 10

- 1) Captan is manufactured by using \_\_\_\_\_.  
a) Phthalic acid                      b) Tetrahydrophthalimide  
c) Phthalimide                      d) None
- 2) The BSI kitemark is applied to \_\_\_\_\_ goods.  
a) Mechanical                      b) Chemical  
c) Electrical                      d) Non electrical & electrical
- 3) The performance of an evaporator is evaluated in terms of \_\_\_\_\_.  
a) Economy                      b) Efficiency  
c) Capacity                      d) Capacity & Economy
- 4) A generalized fragment usually an ion produced by a disconnection is \_\_\_\_\_.  
a) Synthone                      b) Synthetic equivalent  
c) Reagent                      d) Target molecule
- 5) Distillation is a process in which \_\_\_\_\_ component are separated from the mixture.  
a) Water                      b) Solid  
c) Volatile                      d) Gas
- 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 reaction in which only one set of stereoisomers is formed predominantly as called \_\_\_\_\_ reaction.  
a) Stereospecific                      b) Public union  
c) Stiochiomertic                      d) None of these
- 8) \_\_\_\_\_ cost include the cost of interaction and testing of goods at various stages of manufacture.  
a) Failure                      b) Optimizing  
c) Prevention                      d) Appraisal

- 9) Chlorothalonil is used as \_\_\_\_\_.  
a) Herbicide                      b) Fungicide  
c) Rodenticide                    d) Insecticide
- 10) Drying involves the removal of relatively small amount of \_\_\_\_\_ from the solute.  
a) Solute                            b) Solution  
c) Moisture                        d) All of these

**Q.1 B) Fill in the blanks.****06**

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

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

- a) Describe purpose of HRD.
- b) Describe contaminates crystallizer.
- c) Write note on chemoselectivity.
- d) Write Synthesis & unit process of captan.

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

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

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

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

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

- a) Describe batch & contaminates crystallizers.
- b) Explain health education for workers.

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

- a) Explain the main features of industrial licensing policy.
- 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 ASTM & BIS specification.

Seat No.	
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Set **P**

**M.Sc. (Semester - IV) (New) (CBCS) Examination: Oct/Nov - 2022  
(A.G.P.M)**

**Diseases of Crop Plants – II**

Day & Date: Thursday, 23-02-2023  
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

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

**Q.1 A) Choose the correct alternatives from the options. 10**

- 1) Cercospora sp. causes \_\_\_\_\_ in Sugar beet.
  - a) Wilt
  - b) leaf spot
  - c) Powdery mildew
  - d) black spot
- 2) \_\_\_\_\_ causes leaf spot of Chickoo.
  - a) Phamoploeospora indica
  - b) Gleosporium ampelfagum
  - c) Melanoconium fulgenium
  - d) None of above
- 3) Rose flowers are used as an \_\_\_\_\_ purposes.
  - a) Only edible
  - b) Pulses
  - c) Ornamental
  - d) Food
- 4) \_\_\_\_\_ is the economic product of Cashew nut tree.
  - a) Fruit
  - b) Nuts
  - c) Leaf
  - d) Branches
- 5) Blight of tomato caused due to fungus \_\_\_\_\_.
  - a) Nurospora crassa
  - b) Alternaria alternata
  - c) Alternaria solani
  - d) None of above
- 6) Black scurf of potato affects \_\_\_\_\_ fungus.
  - a) Corky outgrowth on stem
  - b) Corky outgrowth on leaves
  - c) Rhizoctonia solani
  - d) Nurospora crassa
- 7) Powdery mildew found on \_\_\_\_\_ side of Bhendi.
  - a) upper leaf
  - b) lower leaf
  - c) both 'a' and 'b'
  - d) None of above
- 8) The chain of events in the disease development with the development of pathogen and affecting host tissue is called \_\_\_\_\_.
  - a) Disease intensity
  - b) Disease cycle
  - c) Disease tolerance
  - d) Disease endurance

- 9) \_\_\_\_\_ causes Stem end rot of Mango.
  - a) Collectotrichum gleosporioides
  - b) Gleosporium ampelfagum
  - c) Melanoconium fulgenium
  - d) Diplodia natalensis
- 10) Bird's Eye Spot is the particular disease of \_\_\_\_\_.
  - a) Tea
  - b) Coffee
  - c) Grapes
  - d) Guava

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

- 1) Mancozeb is \_\_\_\_\_ type of fungicide.
- 2) Alternaria solani caused due to \_\_\_\_\_ disease of tomato.
- 3) Crop rotation is \_\_\_\_\_ method of disease control.
- 4) White rust disease communally attacks on \_\_\_\_\_ family crop.
- 5) \_\_\_\_\_ is economical plant part of gladiolus.
- 6) Treat the seed is \_\_\_\_\_ method of disease control.

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

- a) Write symptoms and control on Wilt of Tomato.
- b) Comment on the Downy mildew on Grape.
- c) Enlist and write its causal organism on diseases of Rose.
- d) Powdery mildew of Chili.

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

- a) Write the diseases of Mango explain any one.
- b) Explain the Downey mildew and White rust of Crucifies.

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

- a) Enlist the diseases of Banana write brief Anthracnose.
- b) Write symptoms and control measure on Rust and Powdery mildew of Teak.

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

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

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

- a) Write the general method of fungal disease control.
- b) Enlist the diseases of Cucurbits explain Downey mildew.

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

- a) Explain the common symptoms and control seed born diseases.
- b) Write the powdery mildew and leaf spot of Ber crop.