

Seat No.	
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M.Phil./Ph.D. Entrance Examination, September - 2019**AGROCHEMICALS AND PEST MANAGEMENT**

Day and Date : Friday, 20 - 09 - 2019

Total Marks : 100

Time : 4.00 p.m. to 6.00 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Each question carries 2 marks.
 - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR Answer Sheet.
 - 5) Follow the instructions given on OMR Sheet.
 - 6) Rough work shall be done on the sheet provided at the end of question paper.
 - 7) Only non programmable calculators are allowed.

- 1) The main advantage of Fluorescence _____.
 - A) Its sensitivity
 - B) Its compatibility with separation techniques
 - C) Its compatibility with most analytes
 - D) None of these

- 2) Which of the following is not a feature of carrier gas used in gas chromatography?
 - A) It must be chemically inert
 - B) It should be suitable for the detector employed
 - C) It should not be completely pure
 - D) It should be cheap

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- 3) What must be done to the solid samples for it to be introduced into the column without using solid injection syringes in gas chromatography?
- A) Introduced in hot-zone of the column
 - B) Dissolved in volatile liquids
 - C) Introduced using rotary sample valve
 - D) Introduced using sampling loops
- 4) Which of the following is not a Column-type Liquid chromatography?
- A) Gel permeation
 - B) Ion exchange
 - C) Liquid-solid
 - D) Paper
- 5) Polarographic cells are not sensitive to which of the following gases?
- A) Carbon monoxide
 - B) Carbon dioxide
 - C) Nitrous oxide
 - D) Oxygen
- 6) What is the wavelength range for UV spectrum of light?
- A) 400 nm - 700 nm
 - B) 700 nm to 1mm
 - C) 0.01 nm to 10 nm
 - D) 10 nm to 400 nm
- 7) Which of the following main component of mass spectroscopy deal with resolving the ions into their characteristics mass components according to their mass-to-charge ratio?
- A) Ion Source
 - B) Analyzer
 - C) Detector System
 - D) Analyzer tube

- 13) Indolacetic acid is a
- A) Plant growth regulator B) Insecticide
C) Herbicide D) Fungicide
- 14) Haemoglobin contains which of the following element in its structure,
- A) Mg B) Fe
C) Na D) Zn
- 15) The compound which shows $M+2$ peak of $1/3$ intensity as compared to M in its mass spectrum. This indicates that it contains,
- A) Chlorine B) Bromine
C) Fluorine D) Phosphorus
- 16) Methyl orange is a
- A) Triphenyl methane dye B) Azo dye
C) Quinone dye D) Nitro dye
- 17) pH of 0.1M HCl is,
- A) 1 B) 10
C) 13 D) 6
- 18) Pyrethroids are used in agriculture because
- A) They are less toxic to mammals
B) Their quick knock-down action on insect
C) Small quantity is required for action on insects
D) All of the above

- 19) Tobacco contains which of the following chemicals
- A) Citral
 - B) Alpha-terpeneol
 - C) Rotenone
 - D) Nicotine
- 20) Endosulfan is used as a,
- A) Insecticide
 - B) Plant growth regulator
 - C) Herbicide
 - D) Fumigant
- 21) What benefit is served by using subheadings?
- A) They keep the material related to the major theme of the report
 - B) They keep the material in a meaningful order
 - C) They keep the material in a logical order
 - D) All of these
- 22) In the process of conducting research 'Formulation of Hypothesis" is followed by
- A) Statement of Objectives
 - B) Analysis of Data
 - C) Selection of Research Tools
 - D) Collection of Data
- 23) A common test in research demands much priority on
- A) Reliability
 - B) Useability
 - C) Objectivity
 - D) All of the above

- 29) Research is _____
- A) Searching again and again
 - B) Finding solution to any problem
 - C) Working in a scientific way to search for truth of any problem
 - D) None of the above
- 30) Content analysis uses which of the below methods?
- A) Classifying
 - B) Counting
 - C) Recording
 - D) All of these
- 31) Webbing, mines and brown patches on leaves of groundnut is due to _____
- A) *Stomopteryxnertaria*
 - B) *Sphenopteraperotetti*
 - C) *Athalialugens*
 - D) *Euproctislunata*
- 32) Chemicals that can't kill insects _____
- A) Stomach insecticides
 - B) Contact insecticides
 - C) Systemic insecticides
 - D) Attractants
- 33) Systemic insecticide is:
- A) Diffuses in to air
 - B) Absorbed through skin of the insect
 - C) First absorbed by plant and then enters into insect while feeding the plant juice
 - D) Absorbed into soil

- 34) The Premier research Institute in India that is exclusively engaged in Biological control research is _____
- A) National Bureau of Agricultural Insect Resources
 - B) National Center for Integrated Pest Management
 - C) Indian Agricultural Research Institute
 - D) Department of Plant Protection & Quarantine
- 35) Name the pest, the larva of which on hatching bores through leaf, peduncle, branch, stem, and finally reaches to the root system
- A) Cabbage caterpillar
 - B) Diamondback moth
 - C) Potato tuber moth
 - D) Brinjal fruit & stem borer
- 36) Which one of the following complete its life cycle inside the soil?
- A) Haddabeetle
 - B) Red pumpkin beetle
 - C) Tea mosquito
 - D) Hesperid caterpillar
- 37) Ploughing and Irrigation will kill the pupal stages of
- A) *Bemisiatabaci*
 - B) *Diacrisiaobliqua*
 - C) *Saissetianigra*
 - D) *M. hirsutus*

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- 38) *Camponotus chloridae* is a _____ parasitoid of *Helicoverpa armigera* in Redgram crop.
- A) Egg
B) Larval
C) Pupal
D) All
- 39) “Hooking” process dislodge the adults of _____ from coconut tree.
- A) *Oryctes rhinoceros*
B) *Xylosandrus compactus*
C) *Plocoederus ferrugineus*
D) *Xylotrechus quadripes*
- 40) Castor as border crop in cotton will prevent the infestation of _____.
- A) *Bemisia tabaci*
B) *Pectinophora gossypiella*
C) *Spodopteralitura*
D) *Helicoverpa armigera*
- 41) _____ imparts flavour of vegetables.
- A) Chlorine
B) Boron
C) Sulphur
D) Nitrogen
- 42) Deficiency of _____ causes brittle and thick leaves.
- A) Iron
B) Boron
C) Calcium
D) Sulphur

- 48) _____ produce mushrooms around the base of trees.
- A) *Hemeillia vastatric*
 - B) *Armillaria mellea*
 - C) *Aspergillus niger*
 - D) *Puccinia arachidis*
- 49) Blister blight of tea was first recorded from _____ (1868)
- A) Tamilnadu
 - B) Assam
 - C) Kerala
 - D) Madhya Pradesh
- 50) *Botryosphaeria* rot is also called as _____ rot of apple.
- A) White
 - B) Red
 - C) Pink
 - D) Blue



Rough Work