

Seat No.	
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M.Phil./Ph.D. Entrance Examination, August - 2018
AGROCHEMICALS AND PEST MANAGEMENT

Day and Date : Saturday, 11 - 08 - 2018

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) 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

- 2) A common test in research demands much priority_____.
A) Reliability
B) Usability
C) Objectivity
D) All of the above

- 3) _____ is a way to systematically solve the research problem
A) Technique
B) Operations
C) Research methodology
D) Research process

- 4) Statistical Hypothesis is derived from_____.
A) Frame
B) Data
C) Sample
D) Facts

P.T.O.

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- 5) _____ research is designed to add to an organized body of scientific knowledge and does not necessarily produce results of immediate practical value
- A) Applied
B) Novel
C) Basic
D) Qualitative
- 6) _____ are what you hope to achieve by the end of your dissertation. They should be clear and concise statements, but expressed in general terms.
- A) Objectives
B) Hypothesis
C) A and B
D) Aims
- 7) _____ are how you intend to achieve those aims. They will include the specific means of answering the research question that you have posed and details of the key issues involved.
- A) Objectives
B) Aims
C) Hypothesis
D) A and B
- 8) A Hypothesis from which no generalization can be made is_____.
- A) Null Hypothesis
B) Barren Hypothesis
C) Descriptive Hypothesis
D) Analytical Hypothesis
- 9) 8) Items bought by a trader for Rs. 80 are sold for Rs. 100. The profit expressed as a percentage of cost price is_____.
- A) 2.5%
B) 20%
C) 25%
D) 50%
- 10) Which search method takes less memory?
- A) Depth-First Search
B) Breadth-First search
C) Both (A) and (B)
D) Linear Search
- 11) The essential qualities of a researcher are_____.
- A) Spirit of free enquiry
B) Reliance on observation and evidence
C) Systematization or theorizing of knowledge
D) All the above

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- 12) Which is not a property of representation of knowledge?
A) Representational Verification B) Representational Adequacy
C) Inferential adequacy D) Inferential Efficiency
- 13) The bacterial resistance gene from resistant variety of Rice has been transferred to *Oryza sativa* sp. japonica and *sativa* sp. Indica by_____.
A) Martin et. al. 1993 B) Whittan et. al. 1996
C) Wang et. al. 1996 D) Zhou et. al. 1995
- 14) The gene for gene concept was first proved in case of flax and flax rust *Melampsora lini* by ___ in 1946.
A) Bateson B) Flor
C) Punctu D) Morgon
- 15) Hydrazine's contain which of the following group_____.
A) CHO B) CONH₂
C) COOH D) NHNH₂
- 16) Many small meristems developed at the periphery of the callus called_____.
A) Plant lets B) Meristemoids
C) Phytomoids D) Plantamoids
- 17) The coupling constant in NMR is expressed as,_____.
A) Delta B) Gauss
C) Tau D) Hertz
- 18) The hydroxyl group absorption frequency in IR has been observed at cm⁻¹_____.
A) 3500 B) 2250
C) 1630 D) 1600
- 19) The GC is used to analyze the sample in_____.
A) Solid B) Liquid
C) Gas D) All of these
- 20) How many signals will you get in NMR of impure ethanol?
A) One B) Two
C) Three D) Four

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- 21) Which of the following compound is IR active?
A) Methane
B) Carbon tetra chloride
C) Chloroform
D) None of these
- 22) Hydrogen bonding shifts the UV absorption bands to _____.
A) Longer wavelength
B) Shorter wavelength
C) Microwave region
D) Radio wave region
- 23) The resign of electromagnetic radiation ____ is called as vacuum UV region.
A) $< 2000 \text{ \AA}$
B) $> 2100 \text{ \AA}$
C) $> 2200 \text{ \AA}$
D) $< 2300 \text{ \AA}$
- 24) Which of the following pheromone of Gypsy moth?
A) Bombykol
B) Grand lure
C) Dispalure
D) None of the above
- 25) Which of the following compound act as an insect Chemosterilants?
A) Tepha
B) DDT
C) Penta chlorophenol
D) Captan
- 26) _____ pairs of thoracic spiracles are present in insect.
A) Three
B) Two
C) Four
D) One
- 27) Ophisthognathus position of mouth parts are found in _____.
A) Cockroach
B) Grasshopper
C) Termites
D) Red cotton bug
- 28) Membranous type of wings is the characteristics of _____.
A) Isoptera
B) Lepidoptera
C) Thysanoptera
D) Hymenoptera
- 29) Number of insect species known _____.
A) About 50,000
B) About 1 million
C) About 2 million
D) About 3 million

- 30) Conductance of solution is _____ of solution.
A) Inversely proportional to resistance B) Reciprocal of resistance
C) Directly proportional to resistance D) Equal to resistance
- 31) _____ as posted as first govt. Entomologist.
A) Lionel de Nicevelle B) Mithan lal Roonwal
C) T.B.Fletcher D) Hem singh pruthi
- 32) The body of insect generally consist of _____ segments.
A) 14 B) 17
C) 20 D) 22
- 33) _____ is also called as *Phymatotrichum* root rot of groundnut.
A) Web blotch of groundnut B) Texas root rot of groundnut
C) Damping off of groundnut D) Sclerotinia rot of groundnut
- 34) How many types of resistance are known in plants?
A) One B) Two
C) Three D) Four
- 35) Kalyansona and Sonalica were the two varieties selected from _____ germ plasma for large scale cultivation in India during 1964.
A) Mexican B) Russian
C) European D) Italian
- 36) The conidia stage of fungus *Venturia inaequalis* is _____.
A) *Spilocaea pomi* B) *Glomerella cingulata*
C) *Macrophoma pomi* D) *Euphemia pomi*
- 37) The Panama disease on Banana was first reported from _____.
A) Costa ricia B) West Indies
C) East indies D) Honolula
- 38) Chickoo leaf spot disease was first reported from _____.
A) Assam B) Kolhapur
C) Dharwar D) Poona
- 39) _____ Company (USA) was developed male sterile rape seed, maize, cotton etc.
A) Monsanto B) IDB
C) FAO D) HAL

Rough Work