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ENT-61

Total No. of Pages : 18

Entrance Examination, 2026
M.Sc. AGROCHEMICALS AND PEST MANAGEMENT
Subject Code: 58726

Day and Date : Tuesday, 21-07-2026

Total Marks : 100

Time : 04.30 p.m. to 06.00 p.m.

Instructions :

- 1) All questions are compulsory.
- 2) Each question carries 1 mark.
- 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
- 4) Follow the instructions given on OMR sheet.
- 5) Rough work shall be done on the sheet provided at the end of question paper.

1) The crystalline structure of NaCl is

A. Hexagonal close packing

B. Square planar

C. Face centered cubic

D. Body centered cubic

2) Which one of the following is not used as a detector in flame emission photometer?

A. Photovoltaic cell

B. Photo-emissive tube

C. Photonic cell

D. Chromatogram

3) of nitrogen (N) is present in Urea

A. 80

B. 70

C. 46

D. 0.3

- 4) Which of the following is the polymer of alpha-d-glucose?

A. Starch	B. Cellulose
C. Fructose	D. Glucose

- 5) Which of the following is the universal solvent?

A. Liquid NH_3	B. Acetic acid.
C. Liquid SO_2	D. Water

- 6) Bonding in metals is best explained by

A. valence bond theory	B. ligand field theory
C. Crystal field theory	D. Molecular orbital theory

- 7) Cyclo-octane is

A. Aromatic	B. Non-aromatic
C. Anti-aromatic	D. Pseudoaromatic

- 8) The distance between the centers of the peaks of doublet is called

A. Chemical shift	B. Spin-spin coupling
C. Spin constant	D. Coupling constant

- 9) Diethyl malonate reacts with urea to give

A. Butyric acid	B. Glutaric acid
C. Mandelic acid	D. Barbituric acid

- 10) The bacteria in intestinal lumen of ruminants hydrolyze to yield free glucose

A. cellulose	B. amylopectin
C. amylase	D. lactose

- 11) In single X-ray diffraction measurement, the crystal is mounted on
- | | |
|-----------------|----------------------|
| A. X-ray source | B. Diffraction Plate |
| C. Goniometer | D. Fluorescent plate |
- 12) Which chemical is the fungicide?
- | | |
|----------------|-----------------|
| A. Bavistin-50 | B. Chloropicrin |
| C. Roger | D. 2, 4-D |
- 13) Which of the following is not by-product of sugar cane?
- | | |
|------------------|-------------|
| A. Acetone | B. Bagasse |
| C. Ethyl alcohol | D. Molasses |
- 14) Simple collateral vascular bundles are found in
- | | |
|---------------|----------------|
| A. Pleopeltis | B. Selaginella |
| C. Equisetum | D. Lycopodium |
- 15) Fish scales are in origin
- | | |
|-------------------------|---------------|
| A. Epidermal and dermal | B. Dermal |
| C. Epidermal | D. Endodermal |
- 16) Which one is green manure
- | | |
|----------|-------------|
| A. Maize | B. Rice |
| C. Oat | D. Sesbania |
- 17) Wheat is an example of
- | | |
|------------------|------------------------|
| A. haploid plant | B. allopolyploid plant |
| C. diploid plant | D. autopolyploid |

18) In Glycolysis Glucose converted into

- | | |
|-----------------|---------------|
| A. Pyruvic acid | B. Acyl Co. A |
| C. Glycogen | D. Lipid |

19) Sexual reproduction conjugation occurs in

- | | |
|---------------|----------------|
| A. Plasmodium | B. Paramoecium |
| C. Amoeba | D. Euglena |

20) Mark the correct statement.

- A. Histones are basic proteins
- B. Histones are neutral proteins
- C. Histones are acidic proteins
- D. Histones are not neutral proteins

21) Lactose is a

- | | |
|-------------------|--------------------|
| A. Monosaccharide | B. Poly saccharide |
| C. Disaccharide | D. None of these |

22) How many classes are in the antibodies?

- | | |
|---------|----------|
| A. Four | B. Seven |
| C. Six | D. Five |

23) 80s of eukaryotic ribosome dissociate into

- | | |
|----------------|----------------|
| A. 60s and 40s | B. 50s and 30s |
| C. 60s and 20s | D. 30s and 40s |

- 24) The disease Ascariasis is produced by
- | | |
|-------------------|----------------|
| A. Pin worm | B. Hook worm |
| C. Filarial worms | D. Round worms |
- 25) In metaphase chromosomes undergo
- | | |
|-------------------------|-----------------------|
| A. less condensation | B. no condensation |
| C. maximum condensation | D. least condensation |
- 26) Wind is important factor.
- | | |
|-------------|------------------|
| A. Climatic | B. Edaphic |
| C. Biotic | D. Physiographic |
- 27) Optically active complex must be
- | |
|---|
| A. Asymmetric |
| B. Their mirror images are not super impossible on each other |
| C. Chiral |
| D. all of the above |
- 28) Electrical conductivity of metal with rise in temperature.
- | | |
|--------------|-----------------------------------|
| A. decreases | B. remains same |
| C. increases | D. first decreases then increases |
- 29) Nucleus consists of and
- | | |
|-------------------------|--------------------------|
| A. Protons and Neutrons | B. Protons and electrons |
| C. Only neutrons | D. None of the above |

- 30) Which of the following is an organophosphorus insecticide?
- | | |
|-------------|------------|
| A. Azodrin | B. Thiodan |
| C. Carbaryl | D. Baygon |
- 31) Ethephon is
- | | |
|----------------|---------------------------|
| A. Insecticide | B. Plant growth regulator |
| C. Fungicide | D. Weedicide |
- 32) The NMR spectroscopy is useful for the detection of
- | | |
|------------------------|-----------------|
| A. Hydrogen bonding | B. Aromaticity |
| C. Geometrical isomers | D. all of above |
- 33) pH of 0.1M HCl is
- | | |
|-------|-------|
| A. 1 | B. 10 |
| C. 13 | D. 6 |
- 34) The pH of freshly extracted cane sugar juice is
- | | |
|---------------|------------------|
| A. 4.2 to 4.7 | B. 7.5 to 8.0 |
| C. 6.5 to 7.0 | D. None of these |
- 35) o-nitrophenol is separated from p-nitrophenol from the reaction mixture
- | | |
|----------------------------|------------------------------|
| A. Azeotropic Distillation | B. Steam Distillation |
| C. Fractional Distillation | D. Distillation Distillation |
- 36) Which of the following compounds is not aromatic?
- | | |
|----------------|----------------|
| A. Naphthalene | B. Phenol |
| C. Benzene | D. Cyclohexane |

- 37) The correct sequence of energy levels of a molecule in their increasing order is
- A. Electronic > Rotational > vibrational
 - B. Electronic > vibrational > rotational
 - C. Vibrational > electronic > rotational
 - D. Rotational > electronic > vibrational
- 38) Crystal structures are
- A. fcc
 - B. bcc
 - C. hcp
 - D. all of these
- 39) Which of the following vectors is used in crop improvement and crop management?
- A. Agrobacterium
 - B. Cosmid
 - C. Plasmid
 - D. Phasmid
- 40) is responsible for energy conservations reactions of aerobic respiration.
- A. E.R
 - B. Mitochondria
 - C. Golgi bodies
 - D. Chloroplast
- 41) The study of soil science is called
- A. Ecology
 - B. Phycology
 - C. Pedology
 - D. Mycology

- 42) Any sequences can be used to draw a phylogenetic tree.
- | | |
|----------------|------------------------|
| A. DNA and RNA | B. Protein |
| C. RNA | D. DNA, RNA or protein |
- 43) The disadvantage of introduction of plants is
- A. entry of diseases
- B. import of new crop variety
- C. exchange of established crops
- D. easy method to introduce new crops
- 44) Cell wall is
- | | |
|-------------------|------------------|
| A. Semi-permeable | B. non permeable |
| C. Impermeable | D. Permeable |
- 45) Tuberculosis in Man is caused by
- | | |
|------------------|-----------------|
| A. Mycobacterium | B. Salmonella |
| C. Plasmodium | D. Spirochaetes |
- 46) are required as building blocks for polypeptide chain synthesis.
- | | |
|----------------|---------------------|
| A. Fatty acids | B. Amino acids |
| C. Nucleotides | D. Phosphoric acids |
- 47) Which of the following fish is not edible?
- | | |
|----------|---------------|
| A. Catla | B. Silverfish |
| C. Ell | D. Rohu. |

48) Haemoglobin contains which of the following element in its structure?

- | | |
|-------|-------|
| A. Fe | B. Na |
| C. Mg | D. Zn |

49) node is known as pacemaker

- | | |
|-------|-------|
| A. VA | B. AV |
| C. AS | D. SA |

50) Saliva of Leech contains an anticoagulation agent.

- | | |
|----------------|----------------|
| A. Haemoglobin | B. Haemocyanin |
| C. Hirudin | D. Haemozoin |

51) Which one is the major component of Bordeaux mixture

- | | |
|-----------------------|---------------------|
| A. Magnesium sulphate | B. Calcium chloride |
| C. Sodium chloride | D. Copper sulphate |

52) Which one is the largest particulate of the cytoplasm?

- | | |
|-----------------|--------------------------|
| A. Lysosomes | B. Golgi apparatus |
| C. Mitochondria | D. Endoplasmic reticulum |

53) The ability of a pathogen to cause disease is

- | | |
|------------------|------------------|
| A. Pathogenesis | B. pathovar |
| C. Parasexualism | D. Pathogenicity |

54) F1 particles are also called as

- | | |
|----------------|----------------------|
| A. Oxysomes | B. Peroxisomes |
| C. Dictyosomes | D. None of the above |

55) Which of the following is not a common method for purification?

- | | |
|--------------------|-------------------|
| A. Sublimation | B. Electrolysis |
| C. Crystallization | D. Chromatography |

56) Hydration of alkenes give

- | | |
|--------------|-------------|
| A. Esters | B. Alcohols |
| C. Aldehydes | D. Amides |

57) Metals are lustrous because of

- | | |
|-------------------|-----------------|
| A. free electrons | B. free protons |
| C. free neutrons | D. free photon |

58) Which of the following process initiate cleavage in egg?

- | | |
|------------------|-------------------|
| A. Ovulation | B. Spermiogenesis |
| C. Fertilization | D. Parturition |

59) Chromatography is

- A. Physical method of separation
- B. Analytical method of separation
- C. Chemical method of separation
- D. Both a and C

60) Ammonia is used in bulk for the production of

- | | |
|---------------|---------------|
| A. Food items | B. Fertilizer |
| C. Soap | D. Pesticides |

- 61) Laminar flow burner used in flame photometers is also known as
- | | |
|-----------------------------|----------------------|
| A. Turbulent burner | B. Premix burner |
| C. Total consumption burner | D. Nozzle mix burner |
- 62) In Kjeldhal's method nitrogen is liberated in the reduced form of
- | | |
|---------------------------------|-------------------|
| A. NO_2 | B. HNO_3 |
| C. $(\text{NH}_4)_2\text{SO}_4$ | D. HNO_2 |
- 63) pH of the fertile soil is in between
- | | |
|-------------|-----------|
| A. 1 to 3 | B. 3 to 5 |
| C. 11 to 13 | D. 7 to 8 |
- 64) Pure metallic solids are
- | | |
|---------------------|-------------------|
| A. super conductors | B. Semiconductors |
| C. Good conductors | D. Insulators |
- 65) Wittig reaction is used to convert carbonyl compound into
- | | |
|-----------|----------|
| A. Ester | B. Amine |
| C. Olefin | D. Acid |
- 66) Tobacco contains which of the following chemicals?
- | | |
|-------------|--------------------|
| A. Citral | B. Rotenone |
| C. Nicotine | D. Alpha-terpeneol |
- 67) Chemical name of washing soda is
- | | |
|----------------------|-------------------------------|
| A. Sodium carbonates | B. Sodium hydrogen carbonates |
| C. Sodium chloride | D. Sodium hydroxide |

- 68) In Gas Chromatography gas acts as
- | | |
|---------------------|------------|
| A. Stationary Phase | B. Solvent |
| C. Mobile phase | D. Solute |
- 69) Citral is a
- | | |
|-----------------------|----------------|
| A. Monoterpene | B. Squiterpine |
| C. Diterpene Isoprene | D. Alkaloid |
- 70) Stereo-isomers have same structure but different relative arrangement of space. in
- | | |
|---------------------|------------|
| A. Ions | B. Cations |
| C. Atoms of ligands | D. Anions |
- 71) Which is the causal organism of Tikka disease of ground nut?
- | | |
|-----------------------------------|--------------------------------|
| A. <i>Cercospora arachidicola</i> | B. <i>Cercospora personata</i> |
| C. Both A and B | D. <i>Alternaria alternate</i> |
- 72) soil is having rich water holding capacity.
- | | |
|----------|----------|
| A. Silt | B. Loamy |
| C. Sandy | D. Clay |
- 73) BLAST is
- | |
|--------------------------------|
| A. Basic Local Assessment Tool |
| B. Basic Legal Alignment Tool |
| C. Basic Local Assignment Tool |
| D. Basic Local Alignment Tool |

- 74) is structural and functional unit of kidney
- A. Alveolus
B. Neuron
C. Nephron
D. Villi
- 75) Muscle Fatigue is due to
- A. Na
B. Lactic acid
C. K
D. Citric acid
- 76) are called suicide bags
- A. Lysosomes
B. Mesosomes
C. Dictyosomes
D. Mitochondria
- 77) Sagitta belongs to the Phylum
- A. Bryzoa
B. Branchiopoda
C. Pogonophora
D. Chaetognatha
- 78) Based on distribution of yolk the egg of insect is
- A. Centrolecithal
B. Megalecithal
C. Isolecithal
D. Telolecithal
- 79) Chromosomes are most distinct during
- A. prophase
B. metaphase
C. anaphase
D. telophase
- 80) Which of the following growth hormones produces apical dominance?
- A. Ethylene
B. Cytokinin
C. Gibberellin
D. Auxin

- 81) Alpha particles emitted in radioactive disintegration are
- | | |
|------------------|--------------------|
| A. Helium nuclei | B. Hydrogen atoms |
| C. Helium atoms | D. Hydrogen nuclei |
- 82) Pyrethroids are used in agriculture because
- A. Their quick knock-down action on insect
- B. They are less toxic to mammals
- C. Small quantity is required for action on insects
- D. All the above
- 83) Mass spectrometer separates ions on the basis of
- | | |
|-----------|-------------------------|
| A. Mass | B. Molecular weight |
| C. Charge | D. Mass to charge ratio |
- 84) Example of vinyl polymer is
- | | |
|----------------|------------------|
| A. Dacron | B. Nylon 6,6 |
| C. Polystyrene | D. Polycarbonate |
- 85) Bioinformatics is an interdisciplinary field, which connects.....
Mathematics, Physics and Biology.
- | | |
|---------------------|--------------|
| A. History | B. Geography |
| C. Computer science | D. Sociology |
- 86) National Park in India is made for conservation of Rhinoceros.
- | | |
|------------------|--------------|
| A. Sanjay Gandhi | B. Tadoba |
| C. Chandoli | D. Kaziranga |

- 87) The double helicle structure of the DNA is proposed by
- | | |
|-------------------|---------------|
| A. F.Sanger | B. H. Khorana |
| C. Watson & Crick | D. A.Fleming |
- 88) In chick embryo development of brain from
- | | |
|-------------|-----------------|
| A. Mesoderm | B. Endoderm |
| C. Ectoderm | D. Mesoendoderm |
- 89) Which is the fungus causes blast disease on rice?
- | | |
|----------------------|-----------------------|
| A.Cercospora oryzae | B. Pyricularia oryzae |
| C. Alternaria oryzae | D. Fusarium oryzae |
- 90) In which region of the electromagnetic spectrum does absorption at 600 nm come?
- | | |
|--------------|-------------|
| A. Visible | B. Near-UV |
| C. Vacuum-UV | D. Infrared |
- 91) Which of the following is the most stable conformation of cyclohexane?
- | | |
|----------|---------------|
| A. Boat | B. Skew |
| C. Chair | D. Half-chair |
- 92) Amino acids react to form peptides and proteins this process is known as.....
- | |
|--------------------------------|
| A. Substitution polymerization |
| B. Addition polymerization |
| C. Condensation polymerization |
| D. Hydration polymerization |

93) Xylem and phloem patches lie side by side on the same radius is known as.....

- A. Bicollateral B. Collateral
C. Amphivasal D. Concentric

94) Hyperthyroidism in adult individual result in

- A. Myxedema
B. Basedow sdisease
C. Gull's disease
D. Exophthalmic goiter

95) Rattle snake is an example of habitat

- A. Desert
- B. Tropical rain forest
- C. Cave
- D. Grassland

96) The degradative processes are categorized under the heading of

- A. Anabolism
- B. Metabolism
- C. Catabolism
- D. None of the above

97) Elementary particles are also called as particles.

- A. Sl
- B. Gl
- C. Wl
- D. Fl

98) Silicon is doped with trivalent impurity; then the resultant substance is

- A. Superconductor
B. n-type semiconductor
C. p-type semiconductor
D. insulator

99) Carbaryl is a type of pesticide.

A. Organophosphorus

B. Pyrethroid

C. Organochlorine

D. Carbamate

100) In DNA replication, Okazaki fragments are joined by

A. Endonuclease

B. Gyrase

C. Ligase

D. Exonuclease



- Rough Work -