

Seat No.	
-------------	--

ENT - 71

Total No. of Pages : 20

M. Sc. Entrance Examination, 2024
AGROCHEMICALS & PEST MANAGEMENT
Sub. Code: 58726

Day and Date : Monday, 29-07-2024

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) Sexual reproduction conjugation occurs in

A. Plasmodium

B. Paramoecium

C. Amoeba

D. Euglena

2) In DNA replication, Okazaki fragments are joined by

A. Endonuclease

B. Gyrase

C. Ligase

D. Exonuclease

3) Hyperthyroidism in adult individual result in

A. Myxedema

B. Basedow's disease

C. Gull's disease

D. Exophthalmic goiter

4) The double helicle structure of the DNA is proposed by

- | | |
|-------------------|---------------|
| A. F.Sanger | B. H. Khorana |
| C. Watson & Crick | D. A.Fleming |

5) are called suicide bags

- | | |
|----------------|-----------------|
| A. Lysosomes | B. Mesosomes |
| C. Dictyosomes | D. Mitochondria |

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

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

7) How many classes are in the antibodies?

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

8) 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

9)are required as building blocks for polypeptide chain synthesis.

- | | |
|----------------|---------------------|
| A. Fatty acids | B. Amino acids |
| C. Nucleotides | D. Phosphoric acids |

10) Which of the following fish is not edible?

- | | |
|----------|---------------|
| A. Catla | B. Silverfish |
| C. Ell | D. Rohu |

11) In chick embryo development of brain from

- | | |
|-------------|-----------------|
| A. Mesoderm | B. Endoderm |
| C. Ectoderm | D. Mesoendoderm |

12) Sagitta belongs to the Phylum

- | | |
|----------------|-----------------|
| A. Bryzoa | B. Branchiopoda |
| C. Pogonophora | D. Chaetognatha |

13) National Park in India is made for conservation of Rhinoceros.

- | | |
|------------------|--------------|
| A. Sanjay Gandhi | B. Tadoba |
| C. Chandoli | D. Kaziranga |

14) Saliva of Leech contains an anticoagulation agent.

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

15) Rattle snake is an example of habitat

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

16) Muscle Fatigue is due to

- | | |
|-------|----------------|
| A. Na | B. Lactic acid |
| C. K | D. Citric acid |

17) In Glycolysis Glucose converted into

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

18) node is known as pacemaker

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

19) 80s of eukaryotic ribosome dissociate into

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

20) Tuberculosis in Man is caused by

- A. Mycobacterium
- B. Salmonella
- C. Plasmodium
- D. Spirochaetes

21) 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

22) 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

23) Tobacco contains which of the following chemicals?

- | | |
|-------------|--------------------|
| A. Citral | B. Rotenone |
| C. Nicotine | D. Alpha-terpeneol |

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

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

25) pH of 0.1M HCl is

- | | |
|-------|-------|
| A. 1 | B. 10 |
| C. 13 | D. 6 |

26) Wittig reaction is used to convert carbonyl compound into.....

- | | |
|-----------|----------|
| A. Ester | B. Amine |
| C. Olefin | D. Acid |

27) The NMR spectroscopy is useful for the detection of

- | | |
|------------------------|-----------------|
| A. Hydrogen bonding | B. Aromaticity |
| C. Geometrical isomers | D. all of above |

28) Lactose is a

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

29) Which of the following is the most stable conformation of cyclohexane?

- | | |
|----------|---------------|
| A. Boat | B. Skew |
| C. Chair | D. Half-chair |

30) Carbaryl is a type of pesticide,

- A. Organophosphorus B. Pyrethroid
- C. Organochlorine D. Carbamate

31) o-nitrophenol is separated from p-nitrophenol from the reaction mixture

- A. Azeotropic Distillation
- B. Stearn Distillation
- C. Fractional Distillation
- D. Distillation Distillation

32) Ethephon is

- A. Insecticide B. Plant growth regulator
- C. Fungicide D. Weedicide

33) Which of the following is the universal solvent?

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

34) Chemical name of washing soda is

- A. Sodium carbonates B. Sodium hydrogen carbonates
- C. Sodium chloride D. Sodium hydroxide

35) Cyclo-octane is

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

36) Pure metallic solids are

- A. super conductors
- B. Semiconductors
- C. goodconductors
- D. Insulators

37) Bonding in metals is best explained by

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

38) In which region of the electromagnetic spectrum does absorption at 600 nm come?

- A. Visible
- B. Near-UV
- C. Vacuum-UV
- D. Infrared

39) Mass spectrometer separates ions on the basis of

- A. Mass
- B. Molecular weight
- C. Charge
- D. Mass to charge ratio

40) In Gas Chromatography gas acts as

- A. Stationary Phase
- B. Solvent
- C. Mobile phase
- D. Solute

41) pH of the fertile soil is in between

- A. 1 to 3
- B. 3 to 5
- C. 11 to 13
- D. 7 to 8

42) 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

43) Which of the following is an organophosphorus insecticide?

- A. Azodrin
- B. Thiodan
- C. Carbaryl
- D. Baygon

44) Alpha particles emitted in radioactive disintegration are

- A. Helium nuclei
- B. Hydrogen atoms
- C. Helium atoms
- D. Hydrogen nuclei

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

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

46) Which of the following compounds is not aromatic?

- A. Naphthalene
- B. Phenol
- C. Benzene
- D. Cyclohexane

47) Diethyl malonate reacts with urea to give

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

48) 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 |

49) Citral is a

- | | |
|-----------------------|----------------|
| A. Monoterpene | B. Squiterpine |
| C. Diterpene Isoprene | D. Alkaloid |

50) 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 |

51) 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 |

52) 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

53) Nucleus consists of and

- A. Protons and Neutrons
- B. Protons and electrons
- C. Only neutrons
- D. None of the above

54) of nitrogen (N) is present in Urea

- A. 80
- B. 70
- C. 46
- D. 0.3

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

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

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

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

57) Ammonia is used in bulk for the production of

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

58) Chromatography is

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

59) Stereo-isomers have same structure but different relative arrangement of in space.

- A. Ions
- B. Cations
- C. Atoms of ligands
- D. Anions

60) The crystalline structure of NaCl is

- A. Hexagonal close packing
- B. Square planar
- C. Face centered cubic
- D. Body centered cubic

61) Optically active complex must be

- A. Asymmetric
- B. Their mirror images are not super imposable on each other
- C. Chiral
- D. all of the above

62) Metals are lustrous because of

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

63) Electrical conductivity of metal with rise in temperature.

- A. decreases
- B. remains same
- C. increases
- D. first decreases then increases

64) Crystal structures are

- A. fec
- B. bec
- C. hep
- D. all of these

65) 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

66) Hydration of alkenes give

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

67) Which of the following is not by-product of sugar cane?

- A. Acetone
- B. Bagasse
- C. Ethyl alcohol
- D. Molasses

68) In single X-ray diffraction measurement, the crystal is mounted on

- A. X-ray source
- B. Diffraction Plate
- C. Goniometer
- D. Fluorescent plate

69) Example of vinyl polymer is

- A. Dacron
- B. Nylon 6,6
- C. Polystyrene
- D. Polycarbonate

70) Which of the following vectors is used in crop improvement and crop management?

A. Agrobacterium

B. Cosmid

C. Plasmid

D. Phasmid

71) Which of the following growth hormones produces apical dominance?

A. Ethylene

B. Cytokinin

C. Gibberellin

D. Auxin

72) Which is the causal organism of Tikka disease of ground nut?

A. *Cercospora arachidicola*

B. *Cercospora personata*

C. Both A and B

D. *Alternaria alternate*

73) Which fungus causes blast disease on rice?

A. *Cercospora oryzae*

B. *Pyricularia oryzae*

C. *Alternaria oryzae*

D. *Fusarium oryzae*

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

A. Sublimation

B. Electrolysis

C. Crystallization

D. Chromatography

75) Which chemical is the fungicide?

A. Blitox-50

B. Chloropicrin

C. Roger

D. 2, 4-D

76) is responsible for energy conservations reactions of aerobic respiration.

- | | |
|-----------------|-----------------|
| A. E.R | B. Mitochondria |
| C. Golgi bodies | D. Chloroplast |

77) F1 particles are also called as.....

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

78) Wind is important factor.

- | | |
|-------------|------------------|
| A. Climatic | B. Edaphic |
| C. Biotic | D. Physiographic |

79) The study of soil science is called

- | | |
|-------------|--------------|
| A. Ecology | B. Phycology |
| C. Pedology | D. Mycology |

80) soil is having rich water holding capacity.

- | | |
|----------|----------|
| A. Silt | B. Loamy |
| C. Sandy | D. Clay |

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

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

82) Simple collateral vascular bundles are found in

- A. Pleopeltis B. Selaginella
- C. Equisetum D. Lycopodium

83) In metaphase chromosomes undergo

- A. less condensation B. no condensation
- C. maximum condensation D. least condensation

84) The ability of a pathogen to cause disease is

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

85) Chromosomes are most distinct during

- A. prophase B. metaphase
- C. anaphase D. telophase

86) Bioinformatics is an interdisciplinary field, which connects Mathematics,
Physics and Biology.

- A. History B. Geography
- C. Computer science D. Sociology

87) BLAST is

- A. Basic Local Assessment Tool
- B. Basic Legal Alignment Tool
- C. Basic Local Assignment Tool
- D. Basic Local Alignment Tool

88) Any sequences can be used to draw a phylogenetic tree.

- A. DNA and RNA
- B. Protein
- C. RNA
- D. DNA, RNA or protein

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

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

90) The degradative processes are categorized under the heading of

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

91) Which one is green manure

- A. Maize
- B. Rice
- C. Oat
- D. Sesbania

92) Elementary particles are also called as particles.

- A. SI
- B. GI
- C. WI
- D. FI

93) Which one is the major component of Bordeaux mixture

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

- 94) Wheat is an example of
- A. haploid plant B. allopolyploid plant
- C. diploid plant D. autopolyploid
- 95) 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
- 96) Based on distribution of yolk the egg of insect is
- A. Centrolecithal B. Megalecithal
- C. Isolecithal D. Telolecithal
- 97) Fish scales are in origin
- A. Epidermal and dermal B. Dermal
- C. Epidermal D. Endodermal
- 98) Cell wall is
- A. Semi-permeable B. non permeable
- C. Impermeable D. Permeable
- 99) is structural and functional unit of kidney
- A. Alveolus B. Neuron
- C. Nephron D. Villi

100) The disease Ascariasis is produced by

A. Pin worm

B. Hook worm

C. Filarial worms

D. Round worms

☐☐☐

- Rough Work -

ENT - 71

- Rough Work -

ENT - 71