

Seat No.	
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ENT - 05

Total No. of Pages : 18

PG ENTRANCE EXAMINATION, 2024
AGROCHEMICALS AND PEST MANAGEMENT
Subject Code : 58726

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Day and Date : Friday, 17-05-2024

Total Marks : 100

Time : 1.00 p.m. to 02.30 p.m.
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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.
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1) 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

2) 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

3) Tobacco contains which of the following chemicals?

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

- 4) Which of the following is the polymer of alpha-d-glucose?
- | | |
|-------------|--------------|
| A. Starch | B. Cellulose |
| C. Fructose | D. Glucose |
- 5) pH of 0.1M HCl is
- | | |
|-------|-------|
| A. 1 | B. 10 |
| C. 13 | D. 6 |
- 6) Wittig reaction is used to convert carbonyl compound into
- | | |
|-----------|----------|
| A. Ester | B. Amine |
| C. Olefin | D. Acid |
- 7) The NMR spectroscopy is useful for the detection of
- | | |
|-------------------------|-----------------|
| A. Hydrogen bonding | B. Aromaticity |
| C. Geometrical isomers. | D. all of above |
- 8) Lactose is a
- | | |
|-------------------|--------------------|
| A. Monosaccharide | B. Poly saccharide |
| C. Disaccharide | D. None of these |
- 9) Which of the following is the most stable conformation of cyclohexane?
- | | |
|----------|---------------|
| A. Boat | B. Skew |
| C. Chair | D. Half-chair |
- 10) Carbaryl is a type of pesticide,
- | | |
|---------------------|---------------|
| A. Organophosphorus | B. Pyrethroid |
| C. Organochlorine | D. Carbamate |

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

- | | |
|----------------------------|------------------------------|
| A. Azeotropic Distillation | B. Steam Distillation |
| C. Fractional Distillation | D. Distillation Distillation |

12) Ethephon is

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

13) Which of the following is the universal solvent?

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

14) Chemical name of washing soda is

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

15) Cyclo-octane is

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

16) Pure metallic solids are

- | | |
|---------------------|-------------------|
| A. super conductors | B. Semiconductors |
| C. good conductors | D. Insulators |

17) Bonding in metals is best explained by

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

- 25) Silicon is doped with trivalent impurity; then the resultant substance is.....
- A. Superconductor
 - B. n-type semiconductor
 - C. p-type semiconductor
 - D. insulator
- 26) Which of the following compounds is not aromatic?
- A. Naphthalene
 - B. Phenol
 - C. Benzene
 - D. Cyclohexane
- 27) Diethyl malonate reacts with urea to give
- A. Butyric acid
 - B. Glutaric acid
 - C. Mandelic acid
 - D. Barbituric acid
- 28) 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
- 29) Citral is a
- A. Monoterpene
 - B. Squiterpine
 - C. Diterpene Isoprene
 - D. Alkaloid
- 30) 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

- 31) 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
- 32) 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
- 33) Nucleus consists of
- A. Protons and Neutrons B. Protons and electrons
C. Only neutrons D. None of the above
- 34) of nitrogen (N) is present in Urea.
- A. 80 B. 70
C. 46 D. 0.3
- 35) The bacteria in intestinal lumen of ruminants hydrolyze to yield free glucose
- A. cellulose B. amylopectin
C. amylase D. lactose
- 36) Which of the following process initiate cleavage in egg?
- A. Ovulation B. Spermiogenesis
C. Fertilization D. Parturition

- 37) Ammonia is used in bulk for the production of
- A. Food items B. Fertilizer
C. Soap D. Pesticides
- 38) Chromatography is
- A. Physical method of separation
B. Analytical method of separation
C. Chemical method of separation
D. Both a and C
- 39) Stereo-isomers have same structure but different relative arrangement of in
- space.
- A. Ions B. Cations
C. Atoms of ligands D. Anions
- 40) The crystalline structure of NaCl is
- A. Hexagonal close packing
B. Square planar
C. Face centered cubic
D. Body centered cubic
- 41) 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

- 42) Metals are lustrous because of
- A. free electrons
 - B. free protons
 - C. free neutrons
 - D. free photon
- 43) Electrical conductivity of metal with rise in temperature.
- A. decreases
 - B. remains same
 - C. increases
 - D. first decreases then increases
- 44) Crystal structures are
- A. fcc
 - B. bcc
 - C. hcp
 - D. all of these
- 45) 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
- 46) Hydration of alkenes give
- A. Esters
 - B. Alcohols
 - C. Aldehydes
 - D. Amides
- 47) Which of the following is not by-product of sugar cane?
- A. Acetone
 - B. Bagasse
 - C. Ethyl alcohol
 - D. Molasses

- 48) In single X-ray diffraction measurement, the crystal is mounted on
- A. X-ray source B. Diffraction Plate
C. Goniometer D. Fluorescent plate
- 49) Example of vinyl polymer is
- A. Dacron B. Nylon 6,6
C. Polystyrene D. Polycarbonate
- 50) Which of the following vectors is used in crop improvement and crop management?
- A. Agrobacterium B. Cosmid
C. Plasmid D. Phasmid
- 51) Which of the following growth hormones produces apical dominance?
- A. Ethylene B. Cytokinin
C. Gibberellin D. Auxin
- 52) 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*
- 53) Which is the fungus causes blast disease on rice?
- A. *Cercospora oryzae* B. *Pyricularia oryzae*
C. *Alternaria oryzae* D. *Fusarium oryzae*

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

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

55) Which chemical is the fungicide?

- A. Blitox-50
- B. Chloropicrin
- C. Roger
- D. 2, 4-D

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

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

57) F1 particles are also called as

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

58) Wind is important factor.

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

59) The study of soil science is called

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

60) soil is having rich water holding capacity.

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

- 61) Xylem and phloem patches lie side by side on the same radius is known as
- A. Bicollateral B. Collateral
C. Amphivasal D. Concentric
- 62) Simple collateral vascular bundles are found in
- A. Pleopeltis B. Selaginella
C. Equisetum D. Lycopodium
- 63) In metaphase chromosomes undergo.....
- A. less condensation
B. no condensation
C. maximum condensation
D. least condensation
- 64) The ability of a pathogen to cause disease is
- A. Pathogenesis B. pathovar
C. Parasexualism D. Pathogenicity
- 65) Chromosomes are most distinct during
- A. prophase B. metaphase
C. anaphase D. telophase
- 66) Bioinformatics is an interdisciplinary field, which connects
- Mathematics, Physics and Biology.
- A. History B. Geography
C. Computer science D. Sociology

- 67) BLAST is.....
- A. Basic Local Assessment Tool
 - B. Basic Legal Alignment Tool
 - C. Basic Local Assignment Tool
 - D. Basic Local Alignment Tool
- 68) Any sequences can be used to draw a phylogenetic tree.
- A. DNA and RNA
 - B. Protein
 - C. RNA
 - D. DNA, RNA or protein
- 69) Which one is the largest particulate of the cytoplasm?
- A. Lysosomes
 - B. Golgi apparatus
 - C. Mitochondria
 - D. Endoplasmic reticulum
- 70) The degradative processes are categorized under the heading of
- A. Anabolism
 - B. Metabolism
 - C. Catabolism
 - D. None of the above
- 71) Which one is green manure
- A. Maize
 - B. Rice
 - C. Oat
 - D. Sesbania
- 72) Elementary particles are also called as particles.
- A. SI
 - B. GI
 - C. WI
 - D. FI

73) Which one is the major component of Bordeaux mixture

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

74) Wheat is an example of

- A. haploid plant
- B. allopolyploid plant
- C. diploid plant
- D. autopolyploid

75) 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

76) Based on distribution of yolk the egg of insect is

- A. Centrolecithal
- B. Megalecithal
- C. Isolecithal
- D. Telolecithal

77) Fish scales are in origin

- A. Epidermal and dermal
- B. Dermal
- C. Epidermal
- D. Endodermal

78) Cell wall is

- A. Semi-permeable
- B. non permeable
- C. Impermeable
- D. Permeable

- 79) is structural and functional unit of kidney
- A. Alveolus
 - B. Neuron
 - C. Nephron
 - D. Villi
- 80) The disease Ascariasis is produced by
- A. Pin worm
 - B. Hook worm
 - C. Filarial worms
 - D. Round worms
- 81) In chick embryo development of brain from
- A. Mesoderm
 - B. Endoderm
 - C. Ectoderm
 - D. Mesoendoderm
- 82) Sagitta belongs to the Phylum
- A. Bryzoa
 - B. Branchiopoda
 - C. Pogonophora
 - D. Chaetognatha
- 83) National Park in India is made for conservation of Rhinoceros.
- A. Sanjay Gandhi
 - B. Tadoba
 - C. Chandoli
 - D. Kaziranga
- 84) Saliva of Leech contains an anticoagulation agent.
- A. Haemoglobin
 - B. Haemocyanin
 - C. Hirudin
 - D. Haemozoin
- 85) Rattle snake is an example of habitat
- A. Desert
 - B. Tropical rain forest
 - C. Cave
 - D. Grassland

- 86) Muscle Fatigue is due to
- A. Na B. Lactic acid
- C. K D. Citric acid
- 87) In Glycolysis Glucose converted into
- A. Pyruvic acid B. Acyl Co. A
- C. Glycogen D. Lipid
- 88) node is known as pacemaker
- A. VA B. AV
- C. AS D. SA
- 89) 80s of eukaryotic ribosome dissociate into
- A. 60s and 40s B. 50s and 30s
- C. 60s and 20s D. 30s and 40s
- 90) Tuberculosis in Man is caused by
- A. Mycobacterium B. Salmonella
- C. Plasmodium D. Spirochaetes
- 91) Sexual reproduction conjugation occurs in
- A. Plasmodium B. Paramoecium
- C. Amoeba D. Euglena
- 92) In DNA replication, Okazaki fragments are joined by
- A. Endonuclease B. Gyrase
- C. Ligase D. Exonuclease

- 93) Hyperthyroidism in adult individual result in
- A. Myxedema
 - B. Basedow's disease
 - C. Gull's disease
 - D. Exophthalmic goiter
- 94) The double helix structure of the DNA is proposed by
- A. F. Sanger
 - B. H. Khorana
 - C. Watson & Crick
 - D. A. Fleming
- 95) are called suicide bags
- A. Lysosomes
 - B. Mesosomes
 - C. Dictyosomes
 - D. Mitochondria
- 96) Haemoglobin contains which of the following element in its structure?
- A. Fe
 - B. Na
 - C. Mg
 - D. Zn
- 97) How many classes are in the antibodies?
- A. Four
 - B. Seven
 - C. Six
 - D. Five
- 98) 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

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

A. Fatty acids

B. Amino acids

C. Nucleotides

D. Phosphoric acids

100) Which of the following fish is not edible?

A. Catla

B. Silverfish

C. Ell

D. Rohu

□□□

- Rough Work -

ENT - 05