

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

**P.G. Entrance Examination, May - 2023**  
**M.Sc. AGROCHEMICALS AND PEST MANAGEMENT**  
**Sub. Code : 58726**

Day and Date : Tuesday, 09 - 05 - 2023

Total Marks : 100

Time : 01.00 p.m. to 02.30 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) Which of the following reagent converts an acid into alcohol Lindlar's catalyst is \_\_\_\_\_.  
A)  $\text{LiAlH}_4$   
B)  $\text{ZnCl}_2$   
C)  $\text{Pd/BaSO}_4$   
D) Aluminum isopropoxide in isopropanol
  
- 2) Tobacco contains which of the following chemicals?  
A) Citral  
B) Rotenone  
C) Alpha-terpeneol  
D) Nicotine
  
- 3) Which of the following is the polymer of alpha-d-glucose?  
A) Cellulose  
B) Starch  
C) Fructose  
D) Glucose

*P.T.O.*



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) Ethopphan is \_\_\_\_\_

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

13) Cyclo-octane is \_\_\_\_\_

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

14) Chemical name of washing soda is \_\_\_\_\_

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

15) Which of the following is the universal solvent?

- A) Liquid  $\text{NH}_3$                                       B) Water  
C) Liquid  $\text{SO}_2$                                       D) Acetic acid

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





- 32) The correct sequence of energy levels of a molecule in their increasing order is \_\_\_\_\_
- A) Electronic > rotational > vibrational
  - B) Rotational > electronic > vibrational
  - C) Vibrational > electronic > rotational
  - D) Electronic > vibrational > rotational
- 33) The degeneracy of rotational energy levels is \_\_\_\_\_
- A)  $J + 1$
  - B)  $2(J + 1)$
  - C)  $2J + 1$
  - D)  $J + 2$
- 34) The crystalline structure of NaCl is \_\_\_\_\_
- A) Hexagonal close packing
  - B) Face centered cubic
  - C) Square planar
  - D) Body centered cubic
- 35) \_\_\_\_\_ of nitrogen (N) is present in Urea
- A) 80
  - B) 70
  - C) 46
  - D) 0.3
- 36) The bacteria in intestinal lumen of ruminants hydrolyze \_\_\_\_\_ to yield free glucose.
- A) amylopectin
  - B) cellulose
  - C) amylose
  - D) lactose
- 37) Which of the following process initiate cleavage in egg?
- A) Ovulation
  - B) Spermiogenesis
  - C) Fertilization
  - D) Parturition







- 51) Which of the following vectors is used in crop improvement and crop management?
- A) Agrobacterium
  - B) Cosmid
  - C) Plasmid
  - D) Phasmid
- 52) Which of the following growth hormones produces apical dominance?
- A) Ethylene
  - B) Cytokinin
  - C) Auxin
  - D) Gibberellin
- 53) 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*
- 54) Which is the fungus causes blast disease on rice?
- A) *Pyricularia oryzae*
  - B) *Cercospora oryzae*
  - C) *Alternaria oryzae*
  - D) *Fusarium oryzae*
- 55) Which chemical is the fungicide?
- A) 2, 4.D
  - B) Chloropicrin
  - C) Roger
  - D) Blitox - 50
- 56) \_\_\_\_\_ is responsible for energy conservations reactions of aerobic respiration.
- A) Mitochondria
  - B) E.R
  - 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) Edaphic  
B) Climatic  
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) Clay  
C) Sandy  
D) Loamy
- 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) The ability of a pathogen to cause disease is \_\_\_\_\_  
A) Pathogenesis  
B) Pathovar  
C) Parasexualism  
D) Pathogenicity
- 64) In metaphase chromosomes undergo \_\_\_\_\_  
A) less condensation  
B) no condensation  
C) maximum condensation  
D) least condensation
- 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) Any \_\_\_\_\_ sequences can be used to draw a phylogenetic tree.
- A) DNA and RNA  
B) Protein  
C) RNA  
D) DNA, RNA or protein
- 68) BLAST is \_\_\_\_\_.
- A) Basic Local Alignment Tool  
B) Basic Legal Alignment Tool  
C) Basic Local Assignment Tool  
D) Basic Local Assessment Tool
- 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) Sesbania  
B) Rice  
C) Oat  
D) Maize
- 72) Which one is the major component of Bordeaux mixture \_\_\_\_\_
- A) Copper sulphate  
B) Calcium chloride  
C) Sodium chloride  
D) Magnesium sulphate

73) Elementary particles are also called as \_\_\_\_\_ particles.

- A) S1
- B) G1
- C) W1
- D) F1

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) Permeable
- B) Non permeable
- C) Impermeable
- D) Semi-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) Round worms    | B) Hook worm |
| C) Filarial worms | D) Pin worm  |
- 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)** Saliva of Leech contains \_\_\_\_\_ an anticoagulation agent.
- |                |                |
|----------------|----------------|
| A) Haemoglobin | B) Haemocyanin |
| C) Hirudin     | D) Haemozoin   |
- 84)** \_\_\_\_\_ National Park in India is made for conservation of Rhinoceros.
- |                  |              |
|------------------|--------------|
| A) Sanjay Gandhi | B) Kaziranga |
| C) Chandoli      | D) Tadoba    |
- 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) Glycogen  
B) Acyl Co. A  
C) Pyruvic acid  
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) \_\_\_\_\_ are called suicide bags  
A) Lysosomes  
B) Mesosomes  
C) Dictyosomes  
D) Mitochondria
- 91) Tuberculosis in Man is caused by \_\_\_\_\_  
A) Spirochaetes  
B) Salmonella  
C) Plasmodium  
D) Mycobacterium
- 92) Sexual reproduction conjugation occurs in \_\_\_\_\_  
A) Plasmodium  
B) Paramecium  
C) Amoeba  
D) Euglena
- 93) In DNA replication, Okazaki fragments are joined by \_\_\_\_\_  
A) Endonuclease  
B) Gyrase  
C) Ligase  
D) Exonuclease

- 94) Hyperthyroidism in adult individual result in \_\_\_\_\_  
A) Myxedema  
B) Exophthalmic goiter  
C) Gull's disease  
D) Basedow's disease
- 95) The double helicle structure of the DNA is proposed by  
A) F.Sanger  
B) H.Khorana  
C) Watson & Crick  
D) A.Fleming
- 96) Haemoglobin contains which of the following element in its structure  
A) Mg  
B) Na  
C) Fe  
D) Zn
- 97) How many classes are in the antibodies?  
A) Four  
B) Five  
C) Six  
D) Seven
- 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) Rohu  
C) Ell  
D) Silverfish



**Rough Work**