

Seat No.	
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P.G. Entrance Examination, June - 2022
M.Sc. Agro Chemical & Pest Management
Sub. Code : 58726

Day and Date : Saturday, 11 - 06 - 2022
Time : 01.00 p.m. to 02.30 p.m.

Total Marks : 100

- Instructions :**
- 1) All questions are compulsory.
 - 2) Each question carries one 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) Amnion, Chorion, Yolk sac & Allantois in this four elements one of it not take part in placenta formation_____
- (A) Chorion (B) Yolk sac
(C) Allantois (D) Amnion
- 2) The gills are covered by bony operculum in _____
- (A) Shark (B) Electric ray
(C) Labeo (D) Sting ray
- 3) Restriction enzymes are also called
- (A) molecular knives (B) molecular scissors
(C) molecular scalpels (D) all of these

- 4) Sagitta belongs to the Phylum _____.
- (A) Bryzoa (B) Pogonophora
(C) Branchiopoda (D) Chaetognatha
- 5) Saliva of Leech contains _____ an anticoagulation agent.
- (A) Haemoglobin (B) Hirudin
(C) Haemocyanin (D) Haemozoin
- 6) Tuberculosis in Man is caused by _____.
- (A) Spirochaetes (B) Plasmodium
(C) Salmonella (D) Mycobacterium
- 7) At the end of Spermatogenesis _____ number of motile sperms are produced.
- (A) 2 (B) 4
(C) 8 (D) 1
- 8) _____ National park in India is made for conservation of Rhinoceros.
- (A) Sanjay Gandhi (B) Chandoli
(C) Kaziranga (D) Tadoba
- 9) The geographical classification is based on the _____.
- (A) Time of it's occurrence (B) Location
(C) Well defined attribute (D) Quantity

- 10) The techniques used to analyse genes on the industrial scale resulting into new area of science is known as _____.
- (A) Genomics (B) Gene isolation
(C) Genetics (D) All of above
- 11) Sexual reproduction conjugation occurs in _____.
- (A) Plasmodium (B) Amoeba
(C) Paramoecium (D) Euglena
- 12) In DNA replication, Okazaki fragments are joined by _____.
- (A) Endonuclease (B) Ligase
(C) Gyrase (D) Exonuclease
- 13) _____ are fat soluble vitamins.
- (A) A and D (B) A, D, E & K
(C) B and C (D) A,B and C
- 14) According to Arrhenius, acid is the substance which in aqueous medium gives _____.
- (A) H^+ (B) OH^-
(C) Cl^- (D) O^{--}
- 15) Vibrational transition exists in
- (A) Infra-red (B) Microwave
(C) Radio wave region of the spectrum (D) Ultra violet

16) Internal reference used in NMR is

- | | |
|---------------------|-------------------------|
| (A) CHCl_3 | (B) Acetone |
| (C) Ethyl acetate | (D) Tetra-methyl silane |

17) Which of the following shows a triplet and quartet in NMR?

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|----------------|-----------------|
| (A) Acetone | (B) 3-Pentanone |
| (C) Chloroform | (D) Benzene |

18) The compound which shows $M+2$ peak of $1/3$ intensity as compared to M in its mass spectrum. This indicates that it contains.

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|--------------|----------------|
| (A) Chlorine | (B) Bromine |
| (C) Fluorine | (D) Phosphorus |

19) Ethyl acetoacetate reacts with hydrazine to give

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|-----------------|--------------------|
| (A) Anti-pyrene | (B) Aspirin |
| (C) Uracil | (D) Chloromycetine |

20) The starting materials for polyamide fibre is

- (A) Phenol and formaldehyde
- (B) Adipic acid & Hexamine
- (C) Dimethyl terephthalate and ethylene glycol
- (D) Hexamine & ethylene glycol

- 21)** Which of the following is used as a starting material for Vitamin-A?
- (A) Beta-ionone (B) Alpha-ionone
(C) Alpha-ionone (D) Geraniol
- 22)** Which of the following is a non-reducing sugar?
- (A) Sucrose (B) D-glucose
(C) Galactose (D) Maltose
- 23)** Endosulphan is used as a
- (A) Insecticide (B) Plant growth regulator
(C) Herbicide (D) Fumigant
- 24)** _____ node is known as pacemaker.
- (A) VA (B) AV
(C) SA (D) AS
- 25)** In the mass spectrum of benzene the base peak obtained at m/e,
- (A) 91 (B) 92
(C) 77 (D) 51
- 26)** The carbaryl is a,
- (A) Carbamate Insecticide (B) Organophosphorus insecticide
(C) Insecticide (D) Pyrethroid

27) Which of the following is basic in nature?

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|---------------|-------------------|
| (A) Pyridine | (B) Furan |
| (C) Thiophene | (D) All the above |

28) NMR spectra are observed in _____ region.

- | | |
|--------------------|---------------|
| (A) Radiofrequency | (B) Microwave |
| (C) UV-Visible | (D) X-ray |

29) Two molecules of acetaldehyde undergo condensation to form a product in presence of alkali in

- | | |
|----------------------|--------------------------|
| (A) Perkin reaction | (B) Aldol condensation |
| (C) Mannich reaction | (D) Claisen condensation |

30) Reaction of carbonyl compound. With yield to form olefin is known as?

- | | |
|------------------------|--------------------------|
| (A) Cannizzro reaction | (B) Hoffman reaction |
| (C) Wittig reaction | (D) Diels Alder reaction |

31) Which of the following compounds is not aromatic?

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|-----------------|-----------------|
| (A) Naphthalene | (B) Benzene |
| (C) Phenol | (D) Cyclohexane |

32) Reduction means the addition of

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|--------------|-------------|
| (A) Hydrogen | (B) Oxygen |
| (C) Water | (D) Ammonia |

33) Which of the following constituent of bones and teeth?

- | | |
|----------------|-------------------|
| (A) Sulphur | (B) Calcium |
| (C) Phosphorus | (D) Carbohydrates |

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

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

35) _____ is structural and functional unit of kidney.

- | | |
|--------------|-------------|
| (A) alveolus | (B) nephron |
| (C) neuron | (D) villi |

36) Rectified spirit contains,

- | | |
|-----------------|------------------|
| (A) 70% ethanol | (B) 90% ethanol |
| (C) 96% ethanol | (D) 100% ethanol |

37) Indoleacetic acid is a

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|----------------------------|-----------------|
| (A) Plant growth regulator | (B) Insecticide |
| (C) Herbicide | (D) Fungicide |

38) Haemoglobin contains which of the following element in its structure

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|--------|--------|
| (A) Mg | (B) Fe |
| (C) Na | (D) Zn |

39) Cashew-nut shell oil contains

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|--------------|-----------------|
| (A) Benzene | (B) Naphthalene |
| (C) Cardanol | (D) Citral |

40) Ethophan is _____.

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

41) For a linear molecule such as HCl, the number of mode of vibration are

- | | |
|----------|-------|
| (A) Zero | (B) 1 |
| (C) 2 | (D) 3 |

42) Absolute alcohol contains

- | | |
|-----------------|------------------|
| (A) 96% alcohol | (B) 100% alcohol |
| (C) 90% alcohol | (D) 40% alcohol |

43) Aniline is separated from a mixture by _____.

- | | |
|--------------------------------|-----------------------------|
| (A) Fractional crystallization | (B) Fractional distillation |
| (C) Steam distillation | (D) Vacuum distillation |

44) VAM is a _____.

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|--------------|-----------|
| (A) Bacteria | (B) Fungi |
| (C) Virus | (D) Algae |

- 45)** Which of the following is not a common method used for purification?
- (A) Sublimation (B) Crystallization
(C) Electrolysis (D) Chromatography
- 46)** Honey bee house is also called as _____
- (A) Coral (B) Nest
(C) Hive (D) None of these
- 47)** Fluorescence is the property when X-ray falls on a material it emits _____.
- (A) Infrared Waves (B) Visible Light
(C) Gamma rays (D) UV light
- 48)** The materials which offer no resistance to the passage of electricity are _____.
- (A) Superconductors (B) Semiconductors
(C) Optical fibre (D) Smart material
- 49)** Which antibiotics was 1st time demonstrated by Fleming (1929)?
- (A) Penicillin (B) Streptomycin
(C) Tetracycline (D) Gliotioxin
- 50)** During the collection of e-h pairs, holes are collected by _____.
- (A) Front contact (B) Back contact
(C) Si-wafer (D) Finger electrodes

51) In single X-ray diffraction measurement, the crystal is mounted on _____.

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

52) Ammonia is _____ solvent.

- (A) non-polar
- (B) non-aqueous
- (C) non-ionizing
- (D) aqueous

53) Universal solvent is _____.

- (A) liquid NH_3
- (B) liquid SO_2
- (C) water
- (D) acetic acid

54) Which of the following Quantum number helps to distinguish the electrons of same orbitals _____ ?

- (A) Spin quantum no.
- (B) Azimuthal quantum no.
- (C) Magnetic quantum no.
- (D) Principal quantum no.

55) In SN_1 reaction is

- (A) first order
- (B) all the these
- (C) both 1 and 2
- (D) second order

56) What is S. I. unit of Surface tension?

- (A) Dyne/meter
- (B) Newton/meter
- (C) Newton-meter
- (D) Dyne-meter

- 57)** The disease Ascariasis is produced by _____
- (A) Round worms (B) Filarial worms
(C) Hook worm (D) Pin worm
- 58)** Tikka disease of groundnut is caused
- (A) *Cercosporidium personatum* (B) *Cercospora beticola*
(C) *Cercospora apii* (D) None of these
- 59)** Zn deficiency is a common problem in
- (A) Wheat (B) Maize
(C) Rice (D) Sugarcane
- 60)** Rod shaped, filamentous and straight bacteria are known as
- (A) *Bacillus* (B) *Staphylococcus*
(C) *Spirillus* (D) *Coccus*
- 61)** The nucleus is absent in _____
- (A) Green alga (B) Fungi
(C) Bacteria (D) All above
- 62)** Mark the correct statement.
- (A) Histones are acidic proteins (B) Histones are basic proteins
(C) Histones are neutral proteins (D) Histones are not neutral proteins

- 63)** 80s ribosome contain two subunits of 60s and _____.
(A) 20s (B) 30s
(C) 40s (D) 50s
- 64)** 80s of eukaryotic ribosome dissociate into _____.
(A) 60s and 40s (B) 60s and 20s
(C) 50s and 30s (D) 30s and 40s
- 65)** Catabolic enzymes are rich in _____.
(A) Chloroplast (B) Lysosomes
(C) Mitochondria (D) Ribosomes
- 66)** _____ particles are present on inner membrane of mitochondria.
(A) F1 particles (B) F2 particles
(C) F3 particles (D) F4 particles
- 67)** _____ is responsible for energy conservations reactions of aerobic respiration.
(A) Mitochondria (B) Chloroplast
(C) Golgi bodies (D) E.R
- 68)** The unit of measuring the BP is _____.
(A) Hg (B) mmhg
(C) Kg (D) micron

69) To know overall energy transformations knowledge of _____ is essential.

- (A) Biophysics
- (B) Biochemistry
- (C) Thermodynamics
- (D) None of the above

70) Enzymes are also called _____.

- (A) Biocatalyst
- (B) Bio-indicators
- (C) Bio-activators
- (D) All above

71) In electron microscopy _____ is used as a source of illumination.

- (A) Beam of electrons
- (B) Beam of light
- (C) Beam of ions
- (D) Beam of neutrons

72) In chromatography _____ paper is commonly used.

- (A) Filter paper
- (B) Graph paper
- (C) Whatmann no. 1
- (D) Bloating paper

73) Karyokinesis differs from cytokinesis because it involves _____.

- (A) Division of nucleus
- (B) Division of cytoplasm
- (C) Division of cell
- (D) None of the above

74) TLC is an _____ chromatography.

- (A) Absorption
- (B) Adsorption
- (C) Activation
- (D) None

75) The largest mitotic phase in onion root tip is _____.

- (A) Telophase
- (B) Prophase
- (C) Anaphase
- (D) Metaphase

76) Wind is important _____ factor.

- (A) Edaphic
- (B) Biotic
- (C) Climatic
- (D) Physiographic

77) _____ Plant is used as wind breaker plant.

- (A) Casuarina
- (B) Delonix
- (C) Azadirachta
- (D) Mangifera

78) Diffusion is the process _____

- (A) The movement of substance from high concentration to low concentration
- (B) The movement of substance from low concentration to high concentration
- (C) The movement of substance from medium concentration to high concentration
- (D) The movement of substance from medium concentration to low concentration

79) Milk, Egg, Meat is a good source of _____

- (A) Carbohydrates
- (B) Vitamins
- (C) Fats
- (D) Proteins

80) _____ soil is having rich water holding capacity.

- (A) Silt
- (B) Clay
- (C) Sandy
- (D) Loamy

81) Cell wall is _____.

- (A) Permeable
- (B) Impermeable
- (C) Partially permeable
- (D) Semi-permeable

82) Osmosis means _____.

- (A) Movement of solvent from low concentration to high concentration through semi-permeable membrane
- (B) Movement of solvent from low concentration to high concentration. through membrane
- (C) Movement of solvent of equal concentration
- (D) Movement of solvent from high concentration to low concentration through membrane

83) The upward movement of water and salts from root to aerial parts is called _____.

- (A) Ascent of sap
- (B) Formation of sap
- (C) Lifting of sap
- (D) Cohesion of sap

84) Transpiration mainly occurs through _____.

- (A) Stems
- (B) Leaves
- (C) Flowers
- (D) Roots

- 85)** Stomata is a natural _____.
(A) Cell (B) Pore
(C) Guard cell (D) Subsidiary cell
- 86)** The loss of water in the form of water vapor by aerial parts of the plant body is known as _____.
(A) Ascent of sap (B) Guttation
(C) Transpiration (D) Water movement
- 87)** Mycorrhizal roots are present in _____ carry out the role of absorption of water for plants.
(A) Taxus (B) Pinus
(C) Abies (D) Cycas
- 88)** *Cuscuta* is _____.
(A) Total parasite (B) Partial parasite
(C) Epiphyte (D) Symbioint
- 89)** _____ are called higher vascular plants.
(A) Bryophytes (B) Gymnosperms
(C) Angiosperms (D) Pteridophytes
- 90)** In chick embryo development of brain from _____.
(A) Mesoderm (B) Ectoderm
(C) Endoderm (D) Mesoendoderm

- 91)** Liver oil is obtained from the liver of _____ fish.
- (A) Sardine (B) Cod
(C) Mackere (D) Tuna
- 92)** Based on distribution of yolk the egg of insect is _____.
- (A) Centrolecithal (B) Isolecithal
(C) Megalecithal (D) Telolecithal
- 93)** _____ are required as building blocks for polypeptide chain synthesis.
- (A) Fatty acids (B) Nucleotides
(C) Amino acids (D) Phosphoric acids
- 94)** Great barrier reef is present in _____
- (A) South America (B) India
(C) Australia (D) England
- 95)** Southern blot is the technique for _____ blot
- (A) DNA (B) RNA
(C) Lipid (D) Protein
- 96)** Sea star is exclusively _____ animal.
- (A) Fresh water (B) Marine water
(C) Pond water (D) None of these

97) The radial canals of Sycon are lined with flagellated collar cells called _____.

- | | |
|-----------------|-----------------|
| (A) Pinacocytes | (B) Choanocytes |
| (C) Myocytes | (D) Scleroblast |

98) _____ is the combination of hardware and software that facilitates the sharing of information between computing devices.

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|----------------|---------------------|
| (A) Network | (B) Digital device |
| (C) Peripheral | (D) Expansion board |

99) Reproduction in Paramecium takes place by _____.

- | | |
|-----------------|----------------|
| (A) Sporulation | (B) Encystment |
| (C) Conjugation | (D) Budding |

100) _____ bird is threatened in India.

- | | |
|--------------------|-------------|
| (A) Jungle fowl | (B) Crow |
| (C) Indian Bustard | (D) Parrots |



Rough Work

Rough Work