Shivaji University , Kolhapur

Seat No.	

Paper Code(ENT202006)

M.Sc Entrance Exam , MAY-2020

58726-AGPM

Day And Date : Thursday 19/11/2020 **Total Marks :** 100

Time : 13:00 To 14:30

Marks

1 The NMR spectroscopy is useful for the detection of 1

A) Hydrogen bonding

B) Aromaticity

C) Geometrical isomers

D) all of above

2 Based on distribution of yolk the egg of insect is_____ 1

A) Centrolecithal

B) Isolecithal

C) Megalecithal

D) Telolecithal

3 The techniques used to analyse genes on the industrial scale resulting into new area of science is known as _____ 1

A) Genomics

B) Gene isolation

C) Genetics

D) All of above

4 Silver fish is the house hold pest of _____ 1

A) Stored grains

B) Vegetables

C) Kitchen Material

D) Old books

5 Muscle Fatigue is due to _____ 1

A) Na

B) Lactic acid

C) K

D) Citric acid

6 Fish scales are _____ in origin 1

A) Epidermal and dermal

B) Epidermal

C) Dermal

D) Endodermal

7 _____ type of cleavage is present in Mollusca 1

A) Superficial

B) Discoidal

C) Spiral

D) Radial

8	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	1
9	Cell wall is ..... A) Permeable B) Impermeable C) Partially permeable D) Semi-permeable	1
10	In Glycolysis Glucose converted into _____ A) Glycogen B) Pyruvic acid C) Acyl Co. A D) Lipid	1
11	_____ are fat soluble vitamins A) A and D B) A , D , E & K C) B and C D) A,B and C	1
12	_____ node is known as pacemaker A) VA B) AV C) SA D) AS	1
13	Tobacco contains which of the following chemicals A) Citral B) Alpha-terpeneol C) Rotenone D) Nicotine	1
14	Lactose is a ..... A) Monoscccaride B) Disaccharide C) Poly saccharide D) None of these	1
15	Alizarin is ..... A) Triphenyl methane dye B) Anthraquinone dye C) Azodye D) Pigment	1
16	A biocatalyst is …… A) Protein B) Lipid C) Carbohydrate D) None of these	1

17 Universal solvent is …….. 1

A) Water
B) Liquid NH3
C) Liquid SO2
D) Acidic acid

18 _____ is structural and functional unit of kidney 1

A) alveolus
B) nephron
C) neuron
D) villi

19 The disease Ascariasis is produced by _____ 1

A) Round worms
B) Filarial worms
C) Hook worm
D) Pin worm

20 Honey bee house is also called as _____ 1

A) Coral
B) Nest
C) Hive
D) None of these

21 The unit of measuring the BP is _____ 1

A) Hg
B) mmhg
C) Kg
D) micron

22 Milk , Egg , Meat is a good source of _____ 1

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

23 In chick embryo development of brain from _____ 1

A) Mesoderm
B) Ectoderm
C) Endoderm
D) Mesoendoderm

24 Chlorophyll contains which of the following in its structure? 1

A) Mg
B) Fe
C) Zn
D) Cu

25 The gills are covered by bony operculum in _____ 1

A) Shark
B) Electric ray
C) Labeo
D) Sting ray

26 Which of the following is the polymer of alpha-d-glucose ? 1

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

27 In paper chromatography paper acts as ……..phase. 1

A) Solid
B) Liquid
C) Stationary
D) Support

28 The wavelength range for uv-visible region of electromagnetic spectrum is …… 1

A) 200-800 Å
B) 200-800 m
C) 200-800 µm
D) 200-800 cm

29 According to Beer-Lamberts Law, the absorbance (A) of the solution is……. 1

A) Directly proportional to wavelength
B) Indirectly proportional to concentration of solution
C) Directly proportional to concentration of solution
D) Directly proportional to transmitted light

30 The carbonyl group in aldehyde is joined to…….. 1

A) Two H atoms only
B) At least one H atom
C) No H atoms
D) Either a or c

31 Fermentation is called anaerobic process because it occurs in……. 1

A) Presence of CO2
B) Absences of CO2
C) Presence of O2
D) Absences of O2

32 Optimum pH for yeast growth is…….. 1

A) 7.0
B) 9.6
C) Acidic
D) Neutral

33 Which of the following reagent converts an acid into alcohol Lindlar,s catalyst is 1

A) LiAlH4
B) Pd/BaSO4
C) ZnCl2
D) Aluminium isopropoxide in isopropanol

34 Which of the following is a purine base? 1

A) Thymine
B) Guanine
C) Uracil
D) Aadenine

35 Pyrethroids are used in agriculture because 1
A) They are less toxic to mammals
B) Their quick knock-down action on insect
C) Small quantity is required for action on insects
D) All the above

36 pH of 0.1M HCl is, 1
A) 1
B) 10
C) 13
D) 6

37 Reaction between acyl halide and benzene in presence of AlCl3 is known as, 1
A) Friedel-Craft,s reaction
B) Perkin's reaction
C) Diels- Alder reaction
D) Grignard reaction.

38 Carbaryl is a.....type of pesticide, 1
A) Organophosphorus
B) Carbamate
C) Organochlorine
D) Pyrethroid

39 Green chemistry is set to achieve ……principles 1
A) 10
B) 8
C) 12
D) 6

40 Pharmaceuticals are , 1
A) Organic pollutants
B) Biological pollutants
C) Thermal pollutants
D) Sediments

41 Soap and detergents are the sources of ……pollution 1
A) Sound
B) Air
C) Water
D) None of these

42 The substance which is present in smaller proportion in solution is known as…….. 1
A) solution
B) Solvent
C) Compound
D) Solute

43 Water molecule has distorted tetrahedral structure because it has…… 1
A) One lone pair
B) Two lone pairs
C) Three lone pairs
D) No lone pairs

44	The nucleus is absent in ---------. A) Green alga B) Fungi C) Bacteria D) All above	1
45	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	1
46	Which of the following is not basic in nature? A) Quinoline B) Naphthalene C) Pyrimidine D) Pyrrole	1
47	80s of eukaryotic ribosome dissociate into-------. A) 60s and 40s B) 60s and 20s C) 50s and 30s D) 30s and 40s	1
48	80s ribosome contain two subunits of 60s and --------. A) 20s B) 30s C) 40s D) 50s	1
49	---------- particles are present on inner membrane of mitochondria. A) F1 particles B) F2 particles C) F3 particles D) F4 particles	1
50	Catabolic enzymes are rich in ----------. A) Chloroplast B) Lysosomes C) Mitochondria D) Ribosomes	1
51	---------- are called suicide bags A) Lysosomes B) Dictyosomes C) Mesosomes D) Mitochondria	1
52	Energy supplied to metabolic processes of the cell is supplied by ---------- molecules A) AMP B) ATP C) Sugar D) Protein	1

53	Neutral pH has ---------- values. A) 5 B) 8 C) 7 D) 12	1
54	---------- molecule is considered as ‘energy currency’. A) Phosphate B) ATP C) Carbon D) AMP	1
55	Ibrufen is a..... A) Anti-inflammatory drug B) CHS drug C) Anti-malarial drug D) Anti-tubercular drug	1
56	Which of the following is the most stable conformation of cyclohexane A) Boat B) Skew C) Chair D) Half- chair	1
57	The enzyme catalase is found in ----------. A) Peroxisomes B) Glyoxysomes C) Mitochondria D) Lysosomes	1
58	Skraups synthesis is used to synthesize, A) Pyrrole B) Pyridine C) Quinoline D) Naphthalene	1
59	Soap is……molecule A) Hydrophilic B) Amphipathic C) Basic hydrophobic D) None of these	1
60	Bagasse is used for……. A) Seeding B) Extraction of juice C) Manufacture of celotex D) all of these	1
61	Aldol condensation is carried out in presence of……. A) Mild or dilute alkali B) Dilute acid C) Concentrated alkali D) AlCl3	1

62 The reaction by which benzene diazonium salt is prepared, is called …… 1
A) Diazotisation reaction
B) Sandmeyer reaction
C) Gatterman reaction
D) None of these

63 Bond angle in CH4 is……. 1
A) 104 degree 5 min
B) 107 degree 7 min
C) 109 degree 28 min
D) 90 degree

64 Usually eukaryotic cells are ----------. 1
A) Dikaryotic
B) Monokaryotic
C) Polykaryotic
D) Macrokaryotic

65 ---------- is responsible for energy conservations reactions of aerobic respiration. 1
A) Mitochondria
B) Chloroplast
C) Golgi bodies
D) E.R

66 F1 particles are also called as ----------. 1
A) Oxysomes
B) Dictyosomes
C) Peroxisomes
D) None of the above

67 ATP molecule contains high energy ---------- bonds. 1
A) Nitrogen
B) Carbon
C) Phosphate
D) Nucleotide

68 ---------- is a fundamental, structural and functional unit of living organisms. 1
A) Tissue
B) Cell
C) Organelle
D) Body

69 To know overall energy transformations knowledge of ---------- is essential. 1
A) Biophysics
B) Biochemistry
C) Thermodynamics
D) None of the above

70 Enzymes are also called ----------. 1
A) Biocatalyst
B) Bio-indicators
C) Bio-activators
D) All above

71	Enzymes are ---------- in nature. A) Carbohydrates B) Lipids C) Proteins D) Sugars	1
72	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	1
73	Chromatography technique is used to separate mixture of ----------. A) Compounds B) Ions C) Molecules D) None	1
74	In chromatography ---------- paper is commonly used. A) Filter paper B) Graph paper C) Whatmann no. 1 D) Bloating paper	1
75	TLC is an ---------- chromatography. A) Absorption B) Adsorption C) Activation D) None	1
76	Karyokinesis differs from cytokinesis because it involves ----------. A) Division of nucleus B) Division of cytoplasm C) Division of cell D) None of the above	1
77	DNA doubles during ----------. A) Interphase B) Anaphase C) Prophase D) Telophase	1
78	The largest mitotic phase in onion root tip is ----------. A) Telophase B) Prophase C) Anaphase D) Metaphase	1
79	---------- plant is used as wind breaker plant. A) Casuarina B) Delonix C) Azadirachta D) Mangifera	1

80 Wind is important ---------- factor. 1
A) Edaphic
B) Biotic
C) Climatic
D) Physiographic

81 Light is important for ---------- process. 1
A) Hormonial
B) Photosynthesis
C) Enzymatic
D) Cell division

82 The study of soil science is called ----------. 1
A) Ecology
B) Pedology
C) Phycology
D) Mycology

83 The deficiency of insulin leads to a disease 1
A) AIDS
B) Goiter
C) Leukemia
D) diabetes

84 Indol acetic acid is a …..... 1
A) Plant growth regulator
B) Insecticide
C) Rodenticide
D) Fungicide

85 Absolute alcohol contains 1
A) 96% alcohol
B) 100% alcohol
C) 90% alcohol
D) 40% alcohol

86 Hofmann rearrangement involves the conversion of amide into, 1
A) Acid and CO_2
B) Amine and CO_2
C) Ester and CO_2
D) Aldehyde and CO_2

87 Wittig reaction is used to convert carbonyl compound into..... 1
A) Ester
B) Amine
C) Olefin
D) Acid

88 Osmium tetroxide is used to convert olefin into..... 1
A) Aldehyde
B) ketone
C) Cis-diol
D) Trans-diol

89 Sagitta belongs to the Phylum_____ 1

A) Bryzoa

B) Pogonophora

C) Branchiopoda

D) Chaetognatha

90 Liver oil is obtained from the liver of _____fish 1

A) Sardine

B) Cod

C) Mackerel

D) Tuna

91 Saliva of Leech contains_____ an anticoagulation agent. 1

A) Haemoglobin

B) Hirudin

C) Haemocyanin

D) Haemozoin

92 Tuberculosis in Man is caused by _____ 1

A) Spirochaetes

B) Plasmodium

C) Salmonella

D) Mycobacterium

93 At the end of Spermatogenesis _____number of motile sperms are produced 1

A) 2

B) 4

C) 8

D) 1

94 _____ National park in India is made for conservation of Rhinoceros 1

A) Sanjay Gandhi

B) Chandoli

C) Kaziranga

D) Tadoba

95 Rattle snake is an example of _____habitat 1

A) Desert

B) Cave

C) Tropical rain forest

D) Grassland

96 The geographical classification is based on the_____ 1

A) Time of it’s occurrence

B) Location

C) Well defined attribute

D) Quantity

97 Sexual reproduction conjugation occurs in_____ 1

A) Plasmodium

B) Amoeba

C) Paramoecium

D) Euglena

98 In DNA replication, Okazaki fragments are joined by _____ 1

A) Endonuclease

B) Ligase

C) Gyrase

D) Exonuclease

99 Graphical representation of the data in the form of adjacent rectangle is called as_____ 1

A) Histogram

B) Bar diagram

C) Polygon

D) Scatter diagram

100 Hyperthyroidism in adult individual result in _____ 1

A) Myxedema

B) Gull’s disease

C) Exophthalmic goiter

D) Basedow’s disease