

Seat No.	
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P.G. Entrance Examination, July - 2023**M.Sc. BOTANY****Sub. Code : 58714****Day and Date : Tuesday, 18 - 07 - 2023****Total Marks : 100****Time : 10.30 a.m. to 12.00 Noon**

- 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) Paramyxovirus is _____ in shape.
 - a) Elongated
 - b) Polyhedral
 - c) Pleomorphic
 - d) Cylindrical

- 2) In bacteria cell wall is made up of _____.
 - a) Cellulose
 - b) Pectin
 - c) Peptidoglycan
 - d) Polysaccharides

- 3) _____ is reserve food in Rhodophyta.
 - a) Starch
 - b) Floridean starch
 - c) Laminarin
 - d) Manitol

P.T.O.

10) The standard size of an herbarium sheet is _____

- | | |
|---------------|-------------|
| a) 32 × 20 cm | b) 42×29 cm |
| c) 32 × 32 cm | d) 10×20 cm |

11) Embryo sac of angiosperm is _____

- | | |
|----------------------------|----------------------------|
| a) 8- nucleated, 7- celled | b) 7- nucleated, 8- celled |
| c) 8- nucleated, 8- celled | d) 7- nucleated, 7- celled |

12) _____ is the best condition for autogeny.

- | | |
|--------------|----------------|
| a) Homogamy | b) Chasmogamy |
| c) Dichogamy | d) Cleistogamy |

13) The exine is made up of _____

- | | |
|-------------------------|-------------------|
| a) Pectin and cellulose | b) Sporopollenin |
| c) Pollenkit | d) Lignocellulose |

14) _____ are micronutrients essential for the plants.

- | | |
|--------------|-------------|
| a) Fe and Mn | b) Ca and K |
| c) P and K | d) C and O |

15) The chemical formula of Chlorophyll a is _____

- | | |
|---------------------------|---------------------------|
| a) $C_{55}H_{72}O_5N_4Mg$ | b) $C_{55}H_{74}O_6N_4Mg$ |
| c) $C_{52}H_{70}O_5N_4Mg$ | d) $C_{56}H_{72}O_5N_5Mg$ |

16) _____ is effective in closing of stomata.

- a) Indole Acetic Acid
- b) Gibberellic Acid
- c) Cytokinin
- d) Abscisic acid

17) _____ tissue is called a living mechanical tissue.

- a) Parenchyma
- b) Aerenchyma
- c) Collenchyma
- d) Chlorenchyma

18) The leptocentric type of concentric vascular bundle is found in_____

- a) Fern rachis
- b) Dracaena stem
- c) Sunflower stem
- d) Maize stem

19) Feedback inhibition of enzyme is also called as_____

- a) Bisteric
- b) Allosteric
- c) Tristeric
- d) Monosteric

20) The enzyme nitrogenase show _____ protein components.

- a) 4
- b) 3
- c) 2
- d) 1

21) The expected phenotype ratio of a dihybrid cross between two heterozygous pea plants is_____

- a) 9:3:3:1
- b) 1:2:1
- c) 3:1
- d) 1:1

22) When two or more genes interact to control a single trait, it is called as _____

- a) Epistasis
- b) Pleiotropy
- c) Codominance
- d) Incomplete dominance

23) Kernel colour in wheat is controlled by _____

- a) Autogenes
- b) Plasmagenes
- c) Plastogenes
- d) Polygenes

24) The interchange of parts between non-homologous chromosomes is called as _____

- a) Duplication
- b) Translocation
- c) Inversion
- d) Deletion

25) The genomic formula of trisomic is _____

- a) $2n-1$
- b) $2n+1$
- c) $2n-3$
- d) $n+1$

26) _____ is Hardy - Weinberg equation for equilibrium.

- a) $p^2 + 2pq + q^2 = 1$
- b) $p^2 + pq + q = 1$
- c) $p + 2pq + q = 1$
- d) $p + pq + q = 1$

27) _____ is the purpose of selecting parent plants in plant breeding.

- a) To increase genetic variation
- b) To decrease genetic variation
- c) To improve the quality of the offspring
- d) To reduce the number of offspring

- 28)** _____ is the male sterility in plant.
- a) Inability of plants to produce male gametes
 - b) Inability of plants to produce female gametes
 - c) Inability of plants to produce seeds
 - d) Inability of plants to produce flower
- 29)** Cytoplasmic inheritance was first reported by _____
- a) Correns
 - b) Sutton
 - c) Mendel
 - d) Johnson
- 30)** _____ is an example of a physical mutagenic agent.
- a) Formaldehyde
 - b) Diphenyl amine
 - c) UV radiation
 - d) Alcohol
- 31)** In autoclave _____ is used to sterilize the object.
- a) Electricity
 - b) Steam
 - c) Air
 - d) Humidity
- 32)** _____ is a semi synthetic culture medium.
- a) CzapekDox Agar
 - b) Potato Dextrose Agar
 - c) Hogland solution
 - d) Sabourd's medium
- 33)** The purification and recovery of the production after fermentation is called _____
- a) Upstream process
 - b) Downstream process
 - c) Surface fermentation
 - d) Open fermentation

- 40) Mushrooms are rich in _____
- a) Proteins
 - b) Lipids
 - c) Carbohydrates
 - d) Minerals
- 41) The phase contrast microscope was developed by _____
- a) Leeuwenhoek
 - b) Robert Hook
 - c) Zernike
 - d) Ornstein
- 42) Fluorescent dye Acridine orange gives _____ fluorescence for DNA.
- a) Red
 - b) Yellow
 - c) Green
 - d) Violet
- 43) Ribosomes of bacterial cell are of _____
- a) 80S
 - b) 70S
 - c) 60S
 - d) 50S
- 44) The crossing-over takes place in _____
- a) Leptotene
 - b) Zygotene
 - c) Pachytene
 - d) Diplotene
- 45) _____ are called cellular suicide bags.
- a) Mesosomes
 - b) Lysosomes
 - c) Dictyosomes
 - d) Peroxisomes

- 46) Fluid-mosaic model of cell membrane was described by _____
- a) Robertson b) Danielli-Davson
c) Singer-Nicholson d) Robertson-Davson
- 47) Patents are legal rights issued to inventors for period of _____ years.
- a) 10 years b) 20 years
c) 40 years d) 100 years
- 48) The replication of nuclear DNA occurs in _____
- a) G₁-phase b) G₂- phase
c) M- phase d) S-phase
- 49) The colorimeter is based on _____
- a) Newton's law b) Beer-Lambert's law
c) Dispersion law d) Huygens's principle
- 50) Programed cell death is also called as _____
- a) Cancer b) Tumor
c) Apoptosis d) Necrosis
- 51) _____ is mostly cultivated by shoot suckers.
- a) Rose b) Marigold
c) Gerbera d) Jasmine

- 52) _____ is referred as father of 'Pomology'.
- a) Charles Dowing
 - b) Sir Dalton Hooker
 - c) Carl Linnaeus
 - d) Thophrastus
- 53) In _____ scion and root stock is attached till the sprouting of new plant.
- a) Whip grafting
 - b) Air layering
 - c) 'T' budding
 - d) Approach grafting
- 54) Duranta plants are used as _____ in garden.
- a) Avenue
 - b) Edges
 - c) Hedges
 - d) Arches
- 55) Mughal garden is situated at _____
- a) Mysore
 - b) Delhi
 - c) Kolkatta
 - d) Lucknow
- 56) _____ soil is most suitable for nursery.
- a) Loamy and sandy
 - b) Black cotton
 - c) Regur
 - d) Rocky
- 57) Necrosis in Rose is due to _____ deficiency.
- a) Iron
 - b) Boron
 - c) Sodium
 - d) Potassium

64) _____ has 16 carbon atoms.

- a) Linolenic acid
- b) Oleic acid
- c) Palmitic acid
- d) Stearic acid

65) In plant cells, lipids are stored in_____

- a) Cytosol
- b) Lysosomes
- c) Ribosomes
- d) Sphaerosomes

66) Beta oxidation is the process by which fatty acids are processed progressively to release _____ carbon segments.

- a) 2
- b) 3
- c) 4
- d) 6

67) _____ is a start or initiation codon in protein synthesis.

- a) UGA
- b) UAA
- c) AUG
- d) UAG

68) Casein, the milk protein is_____

- a) Chromoprotein
- b) Phosphoprotein
- c) Glycoprotein
- d) Nucleoprotein

- 69)** Anticodon is located on_____
- a) t-RNA
 - b) m-RNA
 - c) r-RNA
 - d) DNA
- 70)** _____ phenomenon was experimentally proved by Meselson and Stahl.
- a) Transcription
 - b) Translation
 - c) Semi-conservation of DNA
 - d) Central dogma
- 71)** The first Bioinformatics database was created by_____
- a) Margaret Dayhoff
 - b) Pearson
 - c) Richard Durbin
 - d) Michael.J.Dunn
- 72)** _____ is molecular biology database and text data along with sequence data retrieval system developed by NCBI.
- a) Dbget
 - b) Dblink
 - c) Entrez
 - d) Srs
- 73)** In sequence alignment by BLAST, each word from query sequence is typically _____ residues for protein sequences and _____ residues for DNA sequences.
- a) Ten, Eleven
 - b) Three, Three
 - c) Three, Eleven
 - d) Three, Ten

- 74) _____ is a value which occurs in maximum number of times in the data.
- a) Mean
 - b) Mode
 - c) Median
 - d) Standard Deviation
- 75) The term variance was first used by _____
- A) R.A. Fisher
 - B) Karl Pearson
 - C) Gossett
 - D) F. Galton
- 76) _____ is the difference between largest and smallest value of the data.
- a) Range
 - b) Deviation
 - c) Mean Deviation
 - d) Mean
- 77) Nipping in chick pea is a process _____
- a) To increase the branching
 - b) To reduce plant height
 - c) To protect plants against lodging
 - d) To reduce the root length
- 78) Soybean contains _____ as polyunsaturated fatty acid.
- a) Linoleic acid
 - b) Oleic acid
 - c) Both linoleic and oleic acid
 - d) Malic acid
- 79) _____ of the plant *Eugenia aromatica* used (in the form of cloves) as an aromatic spice.
- a) Dried fruit
 - b) Unopened dried floral bud
 - c) Dried leaf
 - d) Dried and roasted seed

- 80)** The bioflavonoid in tea are derived by the condensation reaction of _____ with 3- melonyl Co A groups.
- a) Cinnamic acid
 - b) Tannic acid
 - c) Acetic acid
 - d) Nicotinic acid
- 81)** Cosmid vectors are_____
- a) Plasmids that contain fragment of λ DNA including the cos site
 - b) Phages that lack cos site
 - c) Plasmids that have no selection marker.
 - d) Cryptic plasmids
- 82)** The blotting technique which is used to detect the RNA in a sample is_____
- a) Southern blotting
 - b) Eastern blotting
 - c) Northern blotting
 - d) Western blotting
- 83)** _____ enzymes are molecular scissors.
- a) Restriction endonuclease
 - b) Reverse transcriptase
 - c) DNA polymerase
 - d) RNA polymerase
- 84)** Topoisomerase is involved in_____
- a) Producing RNA primer
 - b) Secretion of DNA strand
 - c) Producing nick in DNA
 - d) T-RNA

- 85) PCR technique was invented by_____
- a) Karry Mullis
 - b) Boyer
 - c) Sanger
 - d) Cohn
- 86) In tissue culture of parenchyma, mitosis is accelerated in the presence of_____
- a) Auxin and abscisic acid
 - b) Cytokinin and gibberellin
 - c) Gibberellin and auxin
 - d) Auxin and cytokinin
- 87) All the cells in a callus are_____
- a) Genetically homogenous
 - b) Genetically heterogenous
 - c) Similar in size
 - d) Inefficient to grow organs
- 88) In plant tissue culture technique, surface sterilization made by_____
- a) Sulphuric acid
 - b) Mercuric chloride
 - c) Nitric acid
 - d) Hydrochloric acid
- 89) _____ era is known as ‘Age of Angiosperms’.
- a) Paleozoic
 - b) Mesozoic
 - c) Coenozoic
 - d) Archezoic
- 90) *Enigmocarpon* is a _____ genus.
- a) Stem
 - b) Root
 - c) Fruit
 - d) Leaf

- 91) Nitrogen fixing bacteria *Rhizobium* is _____
- a) Gram negative, motile and rod shaped
 - b) Gram negative, non motile and spiral shaped
 - c) Gram positive, motile and rod shaped
 - d) Gram positive, non motile and comma shaped
- 92) _____ is associated with fern *Azolla* and fix the atmospheric nitrogen.
- a) *Anabaena*
 - b) *Haplosiphon*
 - c) *Oscillatoria*
 - d) *Scytonema*
- 93) VAM fungi mostly helps to _____ by the plants.
- a) Increase the N₂ absorption
 - b) Increase the P absorption
 - c) Increase the K absorption
 - d) Increased the Mn absorption
- 94) Worm-farming means _____
- a) Apiculture
 - b) Fishery
 - c) Vermiculture
 - d) Sericulture
- 95) The symbiotic relationship between fungi and roots of higher plant is called _____
- a) Parasitism
 - b) Mycorrhiza
 - c) Helotism
 - d) Etiology

96) The term Pharmacognosy is coined by_____

- a) C. A. Seydler
- b) Oedum
- c) Hooker
- d) Watson

97) Botanical name of Tulsi is_____

- a) *Ocimum sanctum*
- b) *Annona squamosa*
- c) *Mangifera indica*
- d) *Solanum melongena*

98) Amala is the main source of_____

- a) Vitamin A
- b) Vitamin B
- c) Vitamin C
- d) Vitamin D

99) Usually shampoo is obtained from_____

- a) *Acacia concinna*
- b) *Senna tora*
- c) *Santalum album*
- d) *Mangifera indica*

100)_____ is a hair dye plant.

- a) *Parthenium hysterophorus*
- b) *Lawsonia inermis*
- c) *Sapindus laurifolius*
- d) *Jasminum sambac*



Rough Work

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