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| Seat No. | |
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P.G. Entrance Examination, May-2023
M.Sc. Biochemistry/ Biotechnology/Medical Information
Management

Sub. Code : 58725/58722/77888

Day and Date : Wednesday, 10/05/2023

Total Marks : 100

Time : 3.30 p.m. to 5.00 p.m.

- 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) Which of the following is not a step involved in gel filtration?
 - A) Gel preparation
 - B) Precipitation
 - C) Sample application
 - D) Elution of the sample

- 2) Which class of the following enzymes catalyzes Hydrolysis reactions?
 - A) Hydrolase
 - B) Oxidoreductase
 - C) Isomerase
 - D) Ligase

- 3) At what temperature does the denaturation of DNA double helix takes place?
 - A) 54°C
 - B) 72°C
 - C) 94°C
 - D) 60°C

P.T.O.

- 28) Totipotency refers to_____
- A) development of fruits from flowers in a culture
 - B) development of an organ from a cell in a culture medium
 - C) flowering in a culture medium
 - D) all of the above
- 29) Surface sterilisation of an explant in PTC is done by_____
- A) Sodium hypochlorite
 - B) Sodium hydroxide
 - C) Sodium chloride
 - D) All of the above
- 30) Which of the following is best suited method for production of virus free plants?
- A) Embryo culture
 - B) Meristem culture
 - C) Ovule culture
 - D) Anther culture
- 31) The pH indicator in an animal tissue culture medium is_____
- A) HEPES
 - B) Phenol red
 - C) FBS
 - D) L-Glutamine
- 32) Following are the methods of sterilization except_____
- A) Dry heat sterilization
 - B) Autoclaving
 - C) Sterilization by filters
 - D) Laminar airflow
- 33) Which of the following cell types retain highest biotransformation ability?
- A) Continuous cell lines
 - B) Finite cell lines
 - C) Primary cells
 - D) Secondary cell lines

- 34)** In 1955 the first ever developed chemically defined ATC medium was_____.
- A) Ham’s F12 medium
 - B) Eagle’s Minimum Essential Medium
 - C) Eagle’s Basal Medium
 - D) Dulbecco’s Modified Eagle’s Medium
- 35)** Trypan Blue is used to check_____
- A) Cell viability
 - B) Cell imaging
 - C) Cell density counting
 - D) All of the above
- 36)** The portion of the growth curve where a rapid growth of bacteria is observed is known as_____.
- A) Lag phase
 - B) Logarithmic phase
 - C) Stationary phase
 - D) Decline phase
- 37)** According to Bergey’s Manual of Systematic Bacteriology, Prokaryotes that lack a cell wall belong to the group?
- A) Gracilicutes
 - B) Firmicutes
 - C) Tenericutes
 - D) Mendosicutes
- 38)** In _____ bacteria percentage of peptidoglycan is high.
- A) Protozoa
 - B) Gram positive
 - C) Gram negative
 - D) Yeast

50) Which of the following regarding the basic mechanism of gene expression is correct?

- A) DNA → tRNA → protein B) DNA → mRNA → protein
C) RNA → mRNA → protein D) DNA → protein

51) Which of the ribosome subunit NOT present in prokaryotes?

- A) 50s B) 30s
C) 60s D) None of the above

52) Linking number is always a_____

- A) Whole number B) Prime number
C) Integer D) Even number

53) Primosome is the complex of_____

- A) Helicase + Topoisomerase B) Ligase + Helicase
C) Helicase + Primase D) Primase + Ligase

54) Which of the following is not a termination codon?

- A) UGA B) UAC
C) UAG D) UAA

55) Phycology is the study of_____

- A) Algae B) Fungi
C) Bacteria D) All the above

- 67) Arthropods excrete through _____.
- A) Malpighian tubules B) Pores
C) Nephridia D) Kidneys
- 68) Salamander is an example of _____.
- A) Reptile B) Osteichthyes
C) Amphibians D) Mammals
- 69) The pneumatic bones are characteristic of _____.
- A) Mammals B) Reptiles
C) Aves D) Lizards
- 70) The site of fertilization in the female Mammalian reproductive system is _____
- A) Vagina B) Uterus
C) Fallopian tube D) Ovarian fimbriae
- 71) Which is the anti-coagulant substance in blood?
- A) Thrombin B) Globin
C) Fibrinogen D) Heparin
- 72) The genotypic ratio of a dihybrid cross is _____
- A) 3:1 B) 1:2:1
C) 12:3:1 D) 9:3:3:1

91) Among following _____ term used to define all input and output devices in a computer system.

- A) Software
- B) Hardware
- C) Shared resources
- D) Monitor

92) _____ programme is written in high-level language.

- A) Office
- B) Source
- C) Perl
- D) AWK

93) Statistical and Mathematical operations are performed with the help of_____.

- A) Microsoft Word
- B) Microsoft Power Point
- C) Microsoft Excel
- D) None of these

94) Human Genome project was completed in_____

- A) April 2000
- B) March 1998
- C) December 2006
- D) April 2003

95) Following among ____ is a nucleotide sequence database.

- A) Swiss-Port
- B) PubMed
- C) DDBJ
- D) PDB

96) _____ is a hereditary disease?

- A) Rabies
- B) Colour blindness
- C) Polio
- D) Small pox

97) _____ is a viral disease.

- A) Alzheimer
- B) Diabetes
- C) Heart attack
- D) Influenza

98) The condition in which the platelet count of an individual is drastically reduced is called as_____.

- A) Leucopenia
- B) Thrombocytopenia
- C) Leukaemia
- D) AIDS

99) Which one of the following is not a function of kidney?

- A) Removal of metabolic wastes from body
- B) Regulation of blood pH
- C) Regulation of osmotic pressure of blood
- D) Production of antibodies

100) What is the approximate time required for a heart-beat?

- A) 0.8 second
- B) 0.6 second
- C) 0.5 second
- D) 0.7 second



Rough Work

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