M.Sc. Biochemistry

13P/210/5

Question Booklet No. .....

(To be filled up by the candidate by ***blue/black ball-point pen***)

Roll No. | | | | | | | | | |

Roll No.
(Write the digits in words) .....

Serial No. of Answer Sheet .....

Day and Date .....

.....
(Signature of Invigilator)

INSTRUCTIONS TO CANDIDATES

(Use only ***blue/black ball-point pen*** in the space above and on both sides of the Answer Sheet)

1. Within 10 minutes of the issue of the Question Booklet, check the Question Booklet to ensure that it contains all the pages in correct sequence and that no page/question is missing. In case of faulty Question Booklet bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall *except the Admit Card without its envelope.*
3. A separate Answer Sheet is given. ***It should not be folded or mutilated. A second Answer Sheet shall not be provided. Only the Answer Sheet will be evaluated.***
4. Write your ***Roll Number and Serial Number of the Answer Sheet by pen*** in the space provided above.
5. ***On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.***
6. No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet No. on the Question Booklet.
7. Any changes in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfairmeans.
8. Each question in this Booklet is followed by four alternative answers. *For each question, **you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet.***
9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. ***Note that the answer once filled in ink cannot be changed.*** If you ***do not wish to attempt*** a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).
11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
12. Deposit ***only the OMR Answer Sheet*** at the end of the Test.
13. You are not permitted to leave the Examination Hall until the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

[उपर्युक्त निर्देश हिन्दी में अन्तिम आवरण-पृष्ठ पर दिये गये हैं।]

Total No. of Printed Pages : 24

No. of Questions : 150

[Full Marks : 450

me : 2 Hours]

te : (i) Attempt as many questions as you can. Each question carries 3 **(three)** marks. ***One mark will be deducted for each incorrect answer.*** **Zero** mark will be awarded for each unattempted question.

(ii) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one.

1. X-ray crystallography was developed by

(1) Bragg
(2) Krickptrick
(3) Astbury
(4) Watson and Crick

2. Sudan III is used for identification of :

(1) Glycogen
(2) Protein
(3) DNA
(4) Fat

3. Which one is a redox dye ?

(1) Janus green
(2) Methylene blue
(3) Neutral red
(4) Aniline blue

4. Metabolic processes can be studied by means of

(1) Light/Compound microscope
(2) Autoradiography
(3) Phase-contrast microscope
(4) Electron microscope

P. T. O.

5. Svedbrg unit is for
   (1) Molecular weight
   (2) Sedimentation coefficient
   (3) Density
   (4) Surface tension

6. Which one is a new structure obtained during cell fractionation
   (1) Microsomes
   (2) Microbodies
   (3) Endoplasmic reticulum
   (4) Ribosome unit

7. Various activities occurring in living beings are
   (1) Biological
   (2) Biophysical
   (3) Biochemical
   (4) Biophysicochemical

8. Which of the following is an example of serendipity
   (1) Discovery of penicillin
   (2) Discovery of microscope
   (3) Discovery of cell
   (4) Discovery of DNA

9. Highest resolving power is that of
   (1) Fluorescent microscope
   (2) Polarizing microscope
   (3) Ultraviolet microscope
   (4) Electron microscope

10. A student wants to study metaphasic behaviour of chromosome in living cell. The technique most suitable is
   (1) Phase contrast microscope
   (2) X-ray microscope
   (3) Cell fractionation
   (4) Scanning electron microscope

11. Retroviruses have
   (1) Only RNA as genetic material
   (2) Only DNA as genetic material
   (3) Both DNA and RNA as genetic material
   (4) Genes in nucleoprotein complexes as genetic material.

12. Arrangement of atoms and molecular groups in DNA and RNA can be studied through
   (1) Spectrophotometer
   (2) X-ray diffraction
   (3) Histochemistry
   (4) Electron microscope

13. Agent for flow of extrinsic information to cell is
(1) Hormone (2) RNA
(3) cAMP (4) $Na^+ K^+$ changes

14. The smallest human cell is
(1) Erythrocyte (2) Kidney cell (3) Liver cell (4) Sperms

15. Percentage of water present in extracellular fluids is
(1) 35% (2) 45% (3) 55% (4) 75%

16. Which one is high in case of water
(1) Surface tension
(2) Specific heat
(3) Heat of vaporization and heat of fusion
(4) All of the above

17. The most abundant intracellular mineral is
(1) Sodium (2) Potassium
(3) Phosphate (4) Chloride

18. The sweetest chemical is
(1) Fructose (2) Saccharin
(3) Monellin (4) Thaumatin

19. Laevulose present in honey is
(1) Disaccharide (2) Glucose (3) Fructose (4) Pentose

20. The melting point of unsaturated fatty acids
(1) Increases with increase double bonds
(2) Decreases with increase in double bonds
(3) Rises in some and falls in others
(4) There is no relationship between unsaturation and melting point

21. Antibiotics contain
(1) Protein amino acids (2) No amino acids
(3) Nonprotein amino acids (4) Both (1) and (2)

22. Cyclic AMP is

(1) Adenosine 1-3 monophosphate
(2) Adenosine 2-4 monophosphate
(3) Adenosine 3-5 monophosphate
(4) Adenosine 1-5 monophosphate

23. Mineral associated with cytochrome is

(1) *Cu*
(2) *Mg*
(3) *Fe* and *Mg*
(4) *Fe* and *Cu*

24. In blood, the main buffers are

(1) *Na* and *K*
(2) Sodium dihydrogen phosphate and sodium monohydrogen phosphate
(3) Carbonic acid and bicarbonate
(4) Ammonium acetate

25. A riboside is

(1) Base + Phosphate
(2) Ribose+Phosphate
(3) Ribose+Phosphate+Base
(4) Ribose+Base

26. Cholera patients are provided with saline drips as

(1) *NaCl* a component of blood, maintains RBCs and helps dissolve protein
(2) *Na*+ is required for water retention in the body and selective transport across plasma membrane
(3) *Cl* is essential component of blood plasma
(4) *Cl* helps from 1HCl in stomach

27. Which amino acid is required for haemoglobin

(1) Glutamate
(2) Valine
(3) Serine
(4) All of the above

28. Calmodulin is

(1) Carotene binding protein
(2) Cadmium binding protein
(3) Calcium binding protein
(4) Chlorophyll binding protein

29. The most essential fatty acid is

(1) Arachidonic acid
(2) Linolenic acid
(3) Linoleic acid
(4) Oleic acid

30. Formation of glycogen from glucose is an example of

(1) Catabolism
(2) Polymerization
(3) Dehydration synthesis
(4) Both (2) and (3)

31. An amino acid without asymmetrical carbon atom is

(1) Histidine
(2) Threonine
(3) Phenylalanine
(4) Glycine

32. A structural polysaccharide is

(1) Chitin
(2) Hyaluronic acid
(3) Heparin
(4) Keratin sulphate

33. An amphibolic pathway is

(1) Calvin cycle
(2) Terminal oxidation
(3) TCA cycle
(4) Electron transport chain

34. Molecular weight of smallest protein molecule ACTH (adrenocorticotropichormone) is

(1) 5600 (2) 4500 (3) 3100 (4) 6200

35. Amino acid binding site of tRNA occurs at

(1) Pseudouridine loop
(2) Dihydrouridine loop
(3) 5' end
(4) 3' end

36. Relation between amino acid protein is similar to the one found between

(1) Glucose and Fructose
(2) Thymine and Uracil
(3) Nucleosides and Nucleic acid
(4) Nucleotide and nucleic acid

37. Which is not consistent with double helical structure of DNA

(1) A=T, C=G
(2) Density of DNA decreases on heating
(3) A + T/C + G is not constant
(4) Both (1) and (2)

38. The most diverse chemicals are

(1) Polysaccharides
(2) Lipids
(3) Proteins
(4) Sugars

39. Functional protein is
(1) Enzymes (2) Collagen (3) Ossein (4) Vitamins

40. Maximum amount of cellulose occurs in
(1) Cotton (2) Coir (3) Hemp (4) Flax

41. Nongenetic RNA are
(1) One type (2) Two types (3) Three types (4) Four types

42. Which one is phosphoprotein
(1) Ferritin (2) Casein (3) Mucin (4) Albumin

43. Rod shaped bacteria are called
(1) Coccus (2) Spirillum (3) Bacillus (4) Actinomyces

44. A chemical where both D-galactose and L-galactose are present
(1) Hyaluronic acid (2) Agar-Agar
(3) Lactose (4) Raffinose

45. Most of the blood proteins are
(1) Acidic
(2) Basic
(3) Neutral
(4) All the above in equal proportion

46. Constitutive enzymes are
(1) Operational all the time
(2) Housekeeping enzymes
(3) Alloenzymes
(4) Both (1) and (2)

47. Spoilage of food material is prevented in cold storage due to
(1) Reduced temperature at low temperature
(2) Reduced enzyme activity in food articles
(3) Reduced enzyme activity in microbes as well as food articles
(4) Purified nature in air

48. At temperature near freezing protein, the enzymes are

(1) Inactivated (2) Activated

(3) Slightly activated (4) Slightly inactivated

49. Modulators

(1) Inhibit enzyme activity (2) Stimulate enzyme activity

(3) Function as coenzyme (4) Both (1) and (2)

50. Energy released per gram would be

(1) Highest when Wheat starch is respiratory substrate

(2) Highest when potato starch is respiratory substrate

(3) Highest when rice starch is respiratory substrate

(4) Same in all cases

51. Which one is inhibited if the cells contain excess of ATP

(1) Kreb's cycle (2) Glycolysis

(3) Oxidative phosphorylation (4) Electron transport

52. A complex enzyme system of mitochondria functional outside, Kreb's cycle

(1) Pyruvate kinase

(2) Pyruvate dehydrogenase

(3) Enolase

(4) Alpha ketoglutrate dehydrogenase

53. Mineral activator of enzyme aconitase is

(1) *Mn* (2) *Mg* (3) *Fe* (4) *Cu*

54. Which one produce more energy per glucose molecule

(1) Alcoholic fermentation

(2) Glycolysis

(3) Pentose phosphate pathway

(4) Lactic acid fermentation

55. Pentose phosphate pathway is a mode of

(1) Amphibolic pathway (2) Anabolic pathway

(3) Aerobic respiration (4) Anaerobic respiration

56. Cyanide resistant respiration is found in

(1) Plants (2) Bacteria (3) Viruses (4) Animals

57. Mitochondrial marker enzyme is

(1) Pyruvate dehydrogenase (2) Aldolase

(3) Amylase (4) Succinic dehydrogenase

58. Which can readily respire without oxygen

(1) Anabaena (2) Sacchromyces

(3) Mushroom (4) Fish

59. In bacteria the site for respiration is

(1) Cytoplasm (2) Mesosomes

(3) Episome (4) Plasmid

60. Switch over from anaerobic to aerobic respiration is accompanied by reduction in consumption of respiratory substrate. The phenomenon is called

(1) Warburg's effect (2) Pasture effect

(3) Oxygen coefficient (4) Liebig's law

61. Autosomes present in human sperm are

(1) 46 (2) 44

(3) 23 (4) 22

62. Which one forms the continuous part of cell membrane

(1) Proteins (2) Carbohydrates

(3) Lipids (4) All the above

63. Main function of plasma membrane is to

(1) Control cell movements (2) Control cell activites

(3) Maintain cell shape and size (4) Regulate exchange of materials

64. Fusion of differently coloured mouse and human cells was undertaken by Frye and Edidin by means of

(1) Heating (2) Polyethylene glycol

(3) Fluoroscein (4) Rhodamine

65. Transfer cells are characteristic of
(1) Monera
(2) Protista
(3) Metazoa
(4) Metaphyta

66. Microvilli are supported by
(1) Collagen fibres
(2) Microfilaments
(3) Microtubules
(4) Connective tissue

67. Instead of intracellular thickening collagen fibrils are present in
(1) Terminal bars
(2) Hemidesmosomes
(3) Septate desmosomes
(4) Tight junctions

68. Plasmalemma is made up of
(1) A single protein layer
(2) Single lipid layer
(3) Single lipid layer and two protein layer
(4) Single protein and single lipid layer

69. Calmodulin is involved in
(1) Maintenance of He La cells
(2) Cell differentiation
(3) Synthesis of ATP
(4) Motility

70. With the increase in cell size, the surface volume ratio
(1) Remains same
(2) Decrease
(3) Increase
(4) Depends upon shape

71. In flowering plants meiosis occurs at the time of
(1) Germination of seed
(2) Formation of endosperm
(3) Formation of embryo
(4) Formation of pollen

72. Gene mutations are those which involve
(1) The change in nature and sequence of base triplets of DNA
(2) The change in genome
(3) The change in all the genes
(4) The disappearance of certain part of chromosome

73. Kappa particles make an animal killer when their number in an individual is
(1) 6 (2) 60 (3) 400 (4) 150

74. Improvement of mankind genetically
(1) Euthenics (2) Epigenetics
(3) Eugenics (4) Human genetics

75. Centromere possesses
(1) Alpha-heterochromatin on either side
(2) Beta-heterochromatin
(3) Little chromonemal coiling
(4) All the above

76. Basic structural unit of eukaryotic chromosome is
(1) Chromatin fiber
(2) DNA
(3) Chromonema
(4) Nucleosome

77. An example of disease of molecular mutation is
(1) Sickle cell anaemia
(2) Erythroblastosis
(3) Haemophilia
(4) Anaemia

78. Cigarette smoke contains the carcinogen
(1) N- ntrosodiummethylene
(2) Aflatoxin
(3) Vinyl chloride
(4) Diethylstilbestrol

79. Which type of cancer occurs in lymph nodes and spleen

(1) Carcinoma (2) Sarcoma

(3) Leukemia (4) Lymphoma

80. Prophylactic drug for malaria is

(1) Tetracycline (2) Nux vomica

(3) Aspirin (4) Paludrin

81. Cryopreservation is carried out at

(1) – 10 to – 20°C (2) – 50 to – 60°C

(3) – 196°C (4) – 100°C

82. Gene banks are part of

(1) Ex situ conservation

(2) In situ conservation

(3) Both ex situ and in situ conservation

(4) Tribal diet

83. The most abundant protein on earth is

(1) Casein

(2) RUBP Carboxylase/ oxygenase

(3) Pyruvate kinase

(4) Haemoglobin

84. Restriction enzyme EcoR 1 cleavage DNA at the sequences

(1) AAGCTT (2) AAGTTC

(3) GTATATC (4) GAATTC

85. In lac operon, lactose acts as :

(1) Inducer (2) Co-inducer

(3) Repressor (4) Co-repressor

86. Genetic engineering is

(1) Plastic surgery (2) Addition or removal of genes

(3) Study of extranuclear genes (4) All the above

87. Which is correctly matched
(1) Ligase-Breaking of DNA strand
(2) Flame cells-Rocendworm
(3) Rouse sarcoma-Reverse transcriptase
(4) Thyroxin-Adrenal

88. During lytic cycle, viral DNA is not affected by nucleases produced by it as
(1) Eukaryotic nucleases differ from prokaryotic nucleases
(2) Cytosine bases of viral DNA are methylated
(3) Thymine bases of viral DNA are alkylated
(4) Cytosine is replaced by uracil

89. Which is a genetic vector
(1) Phage
(2) Plasmid
(3) Mosquito
(4) All the above

90. Genes of antibiotic resistance are located in
(1) Plasmid
(2) Nucleus
(3) Chromosome
(4) Plastid

91. The strain of Neurospora, which grows on minimal medium is called
(1) Autotroph
(2) Prototroph
(3) Auxotroph
(4) Heterotrophy

92. Polypeptide chain is initiated by
(1) Glycine
(2) Leucine
(3) Methionine
(4) Lysine

93. Transition mutation is due to
(1) GC by TA
(2) AT by GC
(3) AT by CG
(4) CG by GC

94. Antibiotic inhibiting translation in eukaryotes is
(1) Tetracycline
(2) Puromycin
(3) Penicillin
(4) Chloromycetin

95. Wobble hypothesis establishes

(1) Peptide chain formation
(2) Initiation of peptide chain
(3) Termination of peptide chain
(4) Economy in tRNA molecule

96. Circular DNA is present in

(1) E. R. and ribosome
(2) Ribosomes and chloroplast
(3) Ribosomes and mitochondria
(4) Mitochondria and chloroplast

97. DNA synthesis can be measured by estimating incorporation of radiolabelled

(1) Uracil
(2) Ribose sugar
(3) Thymidine
(4) Adenine

98. Mutation caused by a mutagen

(1) Induced
(2) Natural
(3) Spontaneous
(4) Chemical mutation

99. Cryptogram is

(1) Arrangement of chromosome
(2) Bringing out hereditary similarities
(3) Coded information of hereditary traits
(4) Arrangement of genes on a chromosome

100. Growth is a

(1) Reversible increase in size
(2) Reversible increase in shape
(3) Irreversible increase in size
(4) None of the above

101. Germination of some seeds is prompted by

(1) Green light
(2) Red light
(3) Far red light
(4) Blue light

102. The carbon dioxide acceptor in CAM plants is

(1) Malic acid
(2) Oxalo-acetic acid
(3) Pyruvic acid
(4) Phosphoenol pyruvic acid

103. The process of photosynthesis is

(1) Reductive, exergonic and catabolic

(2) Reductive, endergonic and catabolic

(3) Reductive, exergonic and anabolic

(4) Reductive, endergonic and anabolic

104. Main difference between chlorophyll a and chlorophyll b is

(1) $-CH_3$ of chlorophyll a is replaced by $-CHO$ in chlorophyll b

(2) Chlorophyll a is linear while chlorophyll b is branched

(3) Chlorophyll a has no Mg

(4) All the above

105. A mitogen of plant origin is

(1) Colchicines

(2) Epidermal growth factor

(3) Cytokinin

(4) Lymphokinin

106. Amitosis occurs during cell division in

(1) Foetal membrane

(2) Endosperms

(3) Cartilage cells

(4) All the above

107. Besl stage to observe shape, size and number of chromosome

(1) Interphase

(2) Metaphase

(3) Prophase

(4) Telophase

108. Dinomitosis is characterized by

(1) Intranuclear spindle

(2) Absence of spindle

(3) Absence of chromosome movement

(4) All the above

109. Restriction endonucleases from two different organisms that recognize the same DNA sequences for cleavage are called

(1) Isoschizomers

(2) Neoschizomers

(3) Concatamers

(4) Palindromes

110. Caspases are involved in the process of

(1) DNA replication (2) Mutation and Recombination

(3) Antibody synthesis (4) Apoptosis

111. Enzymes that do not follow Km value are

(1) Exoenzymes (2) Allosteric enzymes

(3) Isoenzymes (4) Pepsin

112. Nerve gas (DFP) inhibits neurotransmission as it reacts with

(1) Serine of acetyl choline esterase (2) Choline of acetyl choline esterase

(3) Acetylcholine (4) Noraderanaline

113. In competitive inhibition

(1) Km decreases (2) Km increases

(3) Remains unchanged (4) Km and Vmax both altered

114. Significance of mitosis is in

(1) Increasing cellular mass

(2) Swift division

(3) Occurrence in every tissue of body

(4) Producing cells genetically similar to parent cell

115. Balbiani rings(puffs) are sites of

(1) DNA replication (2) RNA and protein synthesis

(3) Synthesis of polysaccharide (4) Synthesis of lipids

116. Centriole replication occurs during

(1) G1- phase (2) S-phase

(3) G2-phase (4) Early prophase

117. RNA polymerase has polypeptide chains

(1) 1 (2) 2 (3) 4 (4) 5

118. Antibiotics destroy or inhibit

(1) Bacteria, fungi and viruses (2) Bacteria, algae and viruses

(3) Bacteria and fungi (4) Bacteria and viruses

119. Interferon is a glycoprotein which is

(1) Antibacterial (2) Antiviral

(3) Antianimal cell (4) Bacterium

120. Hybridoma cells are

(1) Nerve cells

(2) Hybrid cells formed from myeloma cells

(3) Cells having oncogene

(4) Product of spore formation in bacteria

121. Germinating barley seeds are used in preparation of

(1) Lactic acid (2) Wine (3) Cheese (4) Beer

122. Prednisolone is

(1) Antibiotic (2) Steroid (3) Enzyme (4) Vitamin

123. Enzyme immobilization is

(1) Conversion of active enzyme into inactive form

(2) Providing enzyme with protective covering

(3) Changing a soluble enzyme into insoluble state

(4) Changing pH so that enzyme is not able to carry out its function

124. In DNA finger printing, the sequences which are matched are

(1) Minisatellite DNA (2) Moderately repetitive sequences

(3) Microsatellite DNA (4) Satellite DNA

125. Normal value of blood cholesterol is

(1) 150-250 mg/dl (2) 100-150 mg/dl

(3) 50- 100 mg/dl (4) 20-50 mg/dl

126. Cancer is

(1) Nonmalignant tumors (2) Controlled cell division

(3) Uncontrolled cell division (4) Viral infection

127. Cells affected by leukemia are

(1) Plasma cells (2) Thrombocytes

(3) Leukocytes (4) Erythrocytes

128. In split genes, the coding sequences are called

(1) Exons (2) Introns

(3) Cistrons (4) Operons

129. Enzymes that cut DNA at specific sites is

(1) DNA ligase

(2) Restriction endonuclease

(3) DNA polymerase

(4) Reverse transcriptase

130. Polysomes is a chain of

(1) Oxysomes

(2) Sphareosomes

(3) Ribosomes

(4) Dictyosomes

131. Chloramphenicol prevents protein synthesis over

(1) Prokaryotic ribosomes

(2) Organelle ribosomes

(3) Both (1) and (2)

(4) 80S ribosomes

132. A eukaryotic aerobic cell that does not possess mitochondria is

(1) Liver cell

(2) Kidney cell

(3) Erythrocyte

(4) Leukocyte

133. Plastid storing fats are

(1) Elaioplasts

(2) Sphaerosomes

(3) Adipocytes

(4) Pyrenoids

134. Cell polarity is determined by
(1) Intermediate filaments
(2) Microtubules
(3) Protofilaments
(4) Centrioles

135. A single large central vacuole occurs in
(1) Mature animal cells
(2) Mature plant cells
(3) Developing cells
(4) Developing plant cells

136. Nuclear matrix is formed of
(1) Histones
(2) Neutral proteins
(3) Acid proteins
(4) Nucleosomes

137. The universal hydrogen acceptor is
(1) NAD^+
(2) ATP
(3) CoA
(4) FMN

138. Which one can respire in the absence of oxygen
(1) Seeds
(2) Leaves
(3) Stem
(4) Root

139. The fastest enzyme is
(1) Urease
(2) Carbonic anhydrase
(3) Trypsin
(4) Pepsin

140. Energy required for start of a chemical reaction is
(1) Activation energy
(2) Entropy
(3) Potential energy
(4) Kinetic energy

141. Chitin is strengthened by
(1) Calcium phosphate
(2) Magnesium phosphate
(3) Calcium carbonate
(4) Magnesium carbonate

142. Inulin is a polymer of
(1) Glucose (2) Galactose (3) Fructose (4) Arabinose

143. Protein amino acids are
(1) Laevorotatory
(2) Dextrorotatory
(3) Laevorotatory except glycine which is non rotator
(4) Laevorotatory except glycine which is dextrorotatory

144. A source of maximum energy is
(1) Carbohydrate
(2) Fat
(3) Protein
(4) Vitamins

145. Large cells have
(1) High metabolic rate
(2) High respiration rate
(3) Low surface: volume ratio
(4) High surface: volume ratio

146. Longest cell in human body are
(1) Nerve cells (2) Bone cells
(3) Leg muscle cells (4) Heart muscle cells

147. The ability of cell to form the whole organism is
(1) Regeneration
(2) Cloning
(3) Totipotency
(4) Development

148. Master copy of genetic information is
(1) mRNA
(2) DNA
(3) Nucleolus
(4) rRNA

149. Largest known virus is
(1) TMV
(2) T1 phage
(3) Citrus tristeza
(4) phiX174

150. Homeostasis is
(1) Tendency to change with change in environment
(2) Tendency to resist change
(3) Disturbance in regulatory controls
(4) Plant and animal extracts used in homeo-pathy

अभ्यर्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण-पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल ***नीली/काली बाल-प्वाइंट पेन*** से ही लिखें)

1. प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख ले कि प्रश्नपत्र में सभी पृष्ठ मौजूद है और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त पाये जाने पर इसकी सूचना तत्काल कक्ष निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।
2. परीक्षा भवन में ***लिफाफा रहित प्रवेश-पत्र के अतिरिक्त***, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
3. उत्तर-पत्र अलग से दिया गया है। ***इसे न तो मोड़ें और न ही विकृत करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा। केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।***
4. अपना ***अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से*** निर्धारित स्थान पर लिखें।
5. ***उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।***
6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक संख्या और ओ० एम० आर० पत्र संख्या की प्रविष्टियों में उपरिलेखन को अनुमति नहीं है।
7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। ***प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिये आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से गाढ़ा करना है।***
9. प्रत्येक प्रश्न के उत्तर के लिये केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
10. ***ध्यान दें कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता है।*** यदि आप किसी प्रश्न का ***उत्तर नहीं देना चाहते हैं***, तो सम्बन्धित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
11. रफ कार्य के लिये इस पुस्तिका के मुखपृष्ठ के अंदर वाला पृष्ठ तथा अंतिम खाली पृष्ठ का प्रयोग करें।
12. परीक्षा के उपरान्त ***केवल ओ० एम० आर० उत्तर-पत्र*** ही परीक्षा भवन में जमा करें।
13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।
14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की भागी होगा/होगी।