1. The globular proteins undergo structural changes, in response to extremes of pH or temperature, are called : **[UTTRANCHAL PMT 200]**
(1) Renaturation (2) Denaturation
(3) Combination (4) Both 'a' and 'b'

2. Which of the following fatty acid is not synthesised in the human body : **[UTTRANCHAL PMT 2004]**
(1) Glycerol (2) Cholesterol
(3) Linoliec acid (4) Both 'a' and 'b'

3. Cellulose is a : **[UTTRANCHAL PMT 2005]**
(1) Monosaccharide (2) Disaccharide
(3) Polysccharide (4) Lipid

4. The stored food material of muscles is : **[UTTRANCHAL PMT 2005]**
(1) Starch (2) Glycogen
(3) Lipid (4) Protein

5. Two free ribnucleotide units are interlinked with : **[UTTRANCHAL PMT 2005]**
(1) Peptide bond (2) covalent bond
(3) Hydrogen bond (4) Phosphodiester bond

6. Genetic code is : **[UTTRANCHAL PMT 2005]**
(1) Universal (2) Non-ambiguous
(3) Triplet (4) All the above

7. Genetic material of TMV : **[UTTRANCHAL PMT 2005]**
(1) RNA (2) DNA
(3) DNA and RNA (4) None of these

8. Which one of the following enzyme is responsible for the synthesis of DNA from RNA : **[UTTRANCHAL PMT 2006]**
(1) DNA polymerase (2) RNA polymerase
(3) Reverse rtranscriptase (4) DNA ligase

9. Suppose evolution on earth has occurred in such a way that there are 96 amino acids instead of 20 DNA has 12 different types of bases and DNA synthesis occur in the same way as today. The minimum number of bases per DNA codon would be **[UTTRANCHAL PMT 2006]**
(1) 12 (2) 8 (3) 2 (4) 3

10. Which of the following carbohydrate is absent in honey : **[West Bengal JEE 2007]**
(1) Glucose (2) levulose (3) Lactose (4) Maltose

11. Which of the following is not an essential amino acid : **[West Bengal JEE 2007]**
(1) Alanine (2) Valine
(3) Histidine (4) Methionine

12. Which is non reducing sugar : **[West Bengal JEE 2007]**
(1) Sucrose (2) Fructose (3) Galatose (4) Glucose

13. Which of the following is a polysaccharide : **[West Bengal JEE 2007]**
(1) Glucose (2) Fructose (3) Sucrose (4) Cellulose

14. Which enzyme is used in transcription : **[West Bengal JEE 2007]**
(1) Amino acyl synthetase (2) DNA polymerase III
(3) RNA polymerase (4) DNA ligase

15. Short DNA segment has 80 thymine and 90 gunaine bases. The total number of nucleotides are : **[West Bengal JEE 2007]**
(1) 160 (2) 40 (3) 80 (4) 340

16. The name protoplasm was given by **[C.G. PMT 2004]**
(1) Hooke (2) A.K. Sharma
(3) Schwann (4) Purkinje

17. The physical basis of life is : **[C.G. PMT 2004]**
(1) Nucleus (2) sex chromosome
(3) Protoplasm (4) DNA

18. DNA molecules of each chromosome replicates in **[C.G. PMT 2004]**
(1) G_1 phase (2) G_2 phase
(3) S phase (4) Mitotic phase

19. Which of the following in a purine : **[C.G. PMT 2004]**
(1) Prokaryotes (2) Guanine
(3) Thymine (4) Uracil

20. The nature of DNA replication is : **[C.G. PMT 2004]**
(1) Conservation
(2) Non conservation
(3) Semi-conservation
(4) Cyanobacteria

21. The drug streptomycin inhibits the process of : **[C.G. PMT 2004]**

(1) Prokaryotic translation
(2) Eukaryotic translation
(3) prokaryotic transcription
(4) Eukaryotic transcription

22. Who called the living matter of the cell as protoplasm : **[C.G. PMT 2005]**

(1) Purkinje (2) Virchow
(3) Hooke (4) Khorana

23. Only R.N.A. contains which of the following base : **[C.G. PMT 2005]**

(1) Thymine (2) uracil
(3) Adenine (4) None of these

24. D.N.A. strands are anti-parallel because of **[C.G. PMT 2004]**

(1) H-bonds (2) Phosphate diester -bonds
(3) Di-sulphide-bonds (4) Phosphate - bonds

25. Translation is the process in which : **[C.G. PMT 2005]**

(1) D.N.A. is formed on D.N.A. template
(2) R.N.A. is formed on D.N.A. template
(3) D.N.A. is formed on R.N.A. template
(4) Protein is formed from R.N.A. message

26. The enzyme responsible for transcription is : **[C.G. PMT 2005]**

(1) D.N.A. polymerase -I
(2) R.N.A. polymerase
(3) Reverse transcriptase
(4) D.N.A. polymerase - III

27. Initiation codon is : **[C.G. PMT 2005]**

(1) AUG (2) UAG
(3) UGA (4) UAA

28. The direction of D.N.A. replication is : **[C.G. PMT 2005]**

(1) from 5' end towards 3' end
(2) From 3' end towards 5' end
(3) Amino terminus to carboxy terminus
(4) Carboxy terminus to amino terminus

29. Among the following examples which is a monosaccharide : **[C.G. PMT 2005]**

(1) Glucose (2) Maltose
(3) Sucrose (4) Raffinose

30. Cellulose is : **[C.G. PMT 2006]**

(1) Mono saccharide (2) Disacchride
(3) Polysaccharide` (4) None

31. Transcription of DNA is aided by : **[C.G. PMT 2006]**

(1) RNA polymerase (2) DNA polymerase
(3) Exo nuclease (4) Recombinase

32. If the base sequence in DNA is 5' AAAA 3' then the bases sequence in m-RNA is : **[C.G. PMT 2006]**

(1) 5' UUUU 3' (2) 3' UUUU 5'
(3) 5' AAAA 3' (4) 3' TTTT 5'

33. Which of the following is a stop codon : **[C.G. PMT 2006]**

(1) AUG, GUG, UUU
(2) UGA, UAG, UAA
(3) UUU, UAC, CUC
(4) CUC, UAC, UAA

34. Correct order of molecular weight is : **[C.G. PMT 2006]**

(1) DNA < r-RNA < t-RNA
(2) DNA < m-RNA <r - RNA
(3) t-RNA < m-RNA < DNA
(4) t-RNA < DNA < m-RNA

35. The site for protein synthesis in plants in the : **[C.G. PMT 2006]**

(1) Chloroplast (2) Ribosomes
(3) Pyrenoids (4) Mitochondria

36. The process involved in the RNA formation on the DNA template : **[C.G. PMT 2006]**

(1) Translation (2) Transduction
(3) Transcription (4) Transformation

37. The genes are responsible for growth and differentiation in an organism through regulation of : **[C.G. PMT 2006]**

(1) Translocation
(2) Transformation
(3) Transduction and translation
(4) Transduction and transcription

38. DNA is present in : **[C.G. PMT 2006]**

(1) Nucleus only
(2) Mitochondrion only
(3) Chloroplast only
(4) All the above

39. In polypeptide chain of 125 amino acids, if the 25th amino acid is mutated to UAA then : **[Jharkhand 2006]**

(1) A polypeptide of 124 amino acid is formed
(2) A polypeptide of 25 amino acid is formed
(3) A polypeptide of 24 amino acid is formed
(4) Any of the above can be possible

40. Which one is polymer : **[Jharkhand 2006]**

(1) sucrose (2) Glycogen
(3) Fructose (4) Lactose

41. Antiparallel strand in DNA is due to : **[Jharkhand 2006]**

(1) Disulphide linkage (2) Hydrogen bond

(3) Phosphodiester bond (4) Ionic bond

42. The term protoplasm was coned by : **[Jharkhand 2005]**

(1) Virchov (2) Purkinje

(3) Dujardin (4) Kollinker

43. Multiplication of DNA is called : **[Jharkhand 2005]**

(1) Translation (2) Replication

(3) Transduction (4) Transcription

44. The first codon discovered by Nirenberg and Mathii was : **[Jharkhand 2004]**

(1) CCC (2) GGG

(3) UUU (4) AAA

45. Which of the following is a disaccharide: **[Jharkhand 2003]**

(1) Glucose (2) Fructose

(3) Sucrose (4) Galactose

46. The scientist who was awarded Nobel prize in 1959 for in vitro synthesis of polyribonucleotide : **[Jharkhand 2003]**

(1) Mendel (2) Calvin

(3) Khorana (4) Ochoa

47. The chemical formula of starch is : **[Jharkhand 2003]**

(1) $(C_6H_{10}O_5)_n$ (2) $(C_6H_{12}O_6)_n$

(3) $C_{12}H_{22}O_{11}$ (4) CH_3COOH

48. Non essential amino acids are synthesized in the human body during : **[Jharkhand 2002]**

(1) Protein catabolism (2) Protein anabolism

(3) Both 'a' and 'b' (4) None of these

49. According to modern colloidal theory the protoplasm in a polyphasic colloidal system. This was first suggested by : **[Jharkhand 2002]**

(1) Purkinge (2) max Schultze

(3) R.A. Fisher (4) E. Strasburger

50. The function of chromosome of carrying the genetic information from one cell generation to an other is performed by : **[Bihar 2005]**

(1) RNA (2) DNA

(3) Histones (4) Calcium

51. Which of the following is non-reducing sugar : **[Bihar 2005]**

(1) Glucose (2) Sucrose

(3) Maltose (4) Galactose

52. Richest energy compound is : **[Bihar 2005]**

(1) Creatinine phosphate (2) ATP

(3) Carbohydrate (4) Fat

53. Unit of nucleic acid is : **[Bihar 2005]**

(1) Nucleotide (2) Nucleoside

(3) Nucleic acid (4) All of these

54. DNA replication requires : **[Bihar 2005]**

(1) DNA polymerase only

(2) DNA polymerase and ligase

(3) Ligase only

(4) RNA Polymerase

55. Which of the following is not correct about translation : **[Bihar 2005]**

(1) It stars with AUG

(2) Stopped at termination codon

(3) Based on operon model

(4) Occurs in nucleus

56. Method by which information reached from DNA to RNA is : **[Bihar 2005]**

(1) Transcription (2) Translation

(3) Transformation (4) Transduction

57. Which base is present in RNA but not in DNA : **[Bihar 2004]**

(1) uracil (2) Thymine

(3) Guanine (4) Cytosine

58. Number of carbons in ring of deoxy ribose sugar is **[Bihar 2004]**

(1) Four (2) Five

(3) Six (4) Three

59. Bond present between two carbohydrate molecules is : **[Bihar 2004]**

(1) Glycosidic (2) Hydrogen bond

(3) Phosphodiester (4) Amide

60. In mammals, carbohydrates are stored as : **[Bihar 2003]**

(1) Glycogen in liver and spleen

(2) Lactic acid in muscles

(3) Glucose in liver

(4) Glycogen in liver and muscles

61. Raffinose is : **[Bihar 2003]**

(1) Monosaccharides (2) Disaccharides

(3) Trisaccharides (4) Polysaccharides

62. DNA acts as a template for synthesis of : **[Bihar 2003]**

(1) RNA (2) DNA

(3) Both 'a' and 'b' (4) Protein

63. t-RNA attaches, amino acid at its : **[Bihar 2003]**
(1) 3' end (2) 5' end
(3) Anticodon (4) Loop

64. Prokaryotic DNA is : **[Bihar 2002]**
(1) double stranded round
(2) single stranded round
(3) double stranded straight
(4) double stranded RNA as nucleic acid

65. Semiconservation replication of DNA was given by **[Bihar 2002]**
(1) Watson and Crick
(2) Bateson and Punnett
(3) Messelson and Stahi
(4) Avery, McCarty and Mactleod

66. Which one is hexose sugar : **[Bihar 2001]**
(1) Mannose
(2) Galactose
(3) Both 'a' and 'b'
(4) Cellulose

67. Nucleoside is : **[Bihar 2001]**
(1) Polymer of nucleic acid
(2) Phosphoric acid + base
(3) Phosphoric acid + sugar + base
(4) Sugar+ base

68. DNA is a genetic material was proved : **[Bihar 2001]**
(1) Griffith
(2) Linin Pauling
(3) Messelon and stahl
(4) Watson

69. Arrangement of three successive bases in the genetic code signifies : **[Bihar 2006]**
(1) Protein
(2) Nucleic acid
(3) Plasmids
(4) Amino acids

70. Nulceus is the site for the synthesis of : **[UP CPMT 2001]**
(1) DNA (2) m-RNA
(3) t-RNA (4) All

71. The enzyme involved in transcription is : **[UP CPMT 2001]**
(1) RNA polymerase
(2) DNA polymerase-I
(3) DNA polymerase -II
(4) DNA polymerse-Ii

72. A codon is made up of : **[UP CPMT 2003]**
(1) single nucleotide
(2) Two nucleotides
(3) three nucleotides
(4) Four nucleotides

73. Protein in silk thread is : **[UP CPMT 2003]**
(1) Fibroin
(2) Keratin
(3) Albumin
(4) Globulin

74. Which of the following enzyme is used in DNA multiplication : **[UP CPMT 2003]**
(1) RNA polymerase
(2) NA endonuclease
(3) Exonuclease
(4) DNA Polymerase

75. The back bone of RNA is consists of which of the following sugar : **[UP CPMT 2003]**
(1) Deoxyribonse
(2) Ribose
(3) Sucrose
(4) Maltose

76. Multiplication of DNA is called : **[UP CPMT 2003]**
(1) Transcription
(2) Replication
(3) Translation
(4) Transduction

77. Amino acid derivative hormone is : **[UP CPMT 2004]**
(1) Insulin
(2) Oxytocin
(3) Erythropoietin
(4) thyroxine

78. The double helix model of Watson and Crick is known as : **[UP CPMT 2004 C-DNA]**
(1) B-DNA
(2) B-DNA
(3) Z-DNA
(4) D-DNA

79. Mode of DNA replication in E. coli is : **[UP CPMT 2005]**
(1) Conservative and unidirectional
(2) Semi conservative and unidirectional
(3)conservative and bidirectional
(4)Semi conservative and bidirectional

80. Which of the following is initiator codon:- **[UP CPMT 2005]**
(1) UUU (2) AUC
(3) UAC (4) AUG

81. Which of the following enzyme is used to join DNA fragments : **[UP CPMT 2005]**
(1) Terminase
(2) Endonuclese
(3) Ligse
(4) DNA polymerase

82. Which is soluble RNA : **[UP CPMT 2005]**
(1) hnRNA
(2) rRNA
(3) mRNA
(4) tRNA

83. Okazaki fragments are synthesised on : **[UP CPMT 2005]**
(1) Leading strands of DNA only
(2) Lagging strands of DNA only
(3) Both leading and lagging strands of DNA
(4) Complementary DNA

84. cDNA probes are copies from the messenge RNA molecules with the help of : **[UP CPMT 2005]**
(1) Restriction enzymes
(2) Reverse transcriptase
(3) DNA polymerase
(4) Adenosine deaminase

85. Messenger RNA is produced in : **[UP CPMT 2005]**
(1) Nucleus (2) Golgi apparatus
(3) Endoplasmic reticulum (4) Ribosomes

86. Portion of gene which is transcribed but not translated is : **[UP CPMT 2005]**
(1) exon (2) intron (3) cistron (4) codon

87. Which of the following is not found in DNA : **[UP CPMT 2005]**
(1) adenine (2) Cytosine (3) Uracil (4) Thymine

88. The type of linkage present in carbohydrates is : **[UP CPMT 200]**
(1) Peptide (2) glycosidic
(3) Amide (4) Phosphate bonds

89. Formation of mRNA from DNA is : **[UP CPMT 2007]**
(1) Translation (2) Transcription
(3) Transformation (4) Transduction

90. Retrovirus have genetic material : **[MP PMT 2007]**
(1) DNA only (2) RNA only
(3) DNA or RNA only (4) None

91. Prions consists mainly of : **[MP PMT 200]**
(1) Protein (2) DNA
(3) RNA (4) Both DNA and RNA

92. DNA replication includes : **[MP PMT 2007]**
(1) DNA ligase
(2) DNA polymerase and ligase
(3) RNA polymerase and ligase
(4) All of these

93. During DNA replication in prokaryotes DNA is attached to : **[MP PMT 2007]**
(1) Chromosome (2) Menosome
(3) Nucleolus (4) Ribosome

94. Formation of RNA on DNA template is called : **[MP PMT 2007]**
(1) Transduction (2) transformation
(3) Transcription (4) Translation

95. Out of 64 codons only 61 codes for the 20 different amino acids. This character of genetic code is called **[MP PMT 2007]**
(1) Degeneracy (2) Non ambiguous nature
(3) Redundancy (4) Overlapping

96. DNA is acidic due to : **[MP PMT 2007]**
(1) Sugar (2) Phosphoric acid
(3) Purine (4) Pyimidine

97. RNA is not found in : **[MP PMT 2007]**
(1) Chromosome (2) Plasmmale mma
(3) Nucleous (4) Ribosome

98. Which one is a laevo - rotatory sugar : **[MP PMT 2007]**
(1) Sucrose (2) Glucose
(3) Fructose (4) None of these

99. Which one is the sweetest sugar : **[MP PMT 2007]**
(1) Glucos (2) Fructose
(3) Sucrose (4) Maltose

100. Functional unit of gene is : **[MP PMT 2001]**
(1) Muton (2) Recon (3) Cistron (4) Codon

101. Initiation codon is : **[MP PMT 2001]**
(1) AUG (2) UAG (3) UGA (4) UAA

102. In eukaryotic cell the type or ribosome is : **[MP PMT 2001]**
(1) only 70s (2) only 80s
(3) 70s and 80s both (4) only 50s

103. Translation is the process in which : **[MP PMT 2001]**
(1) D.N.A. is formed on D.N.A. template
(2) R.N.A. is formed on D.N.A. template
(3) D.N.A. is formed on R.N.A. template
(4) Protein is formed form R.N.A.

104. D.N.A. strands are anti-parallel because of : **[MP PMT 2001]**
(1) H-bonds
(2) Phosphate diester-bonds
(3) di-sulphide bonds
(4) Phosphate-bonds

105. T.M.V. contains : **[MP PMT 2001]**
(1) D.N.A. (2) R.N.A. + Protein
(3) D.N.A. + R.N.A. (4) D.N.A. + Protein

106. R.N.A. contains which of the following base in place of Thymine of D.N.A. : **[MP PMT 2001]**
(1) Thymine (2) Uracil
(3) Adenine (4) None of these

107. The enzyme responsible for transcription is : **[MP PMT 2001]**
(1) D.N.A. polymerase I
(2) R.N.A. polymerase
(3) Reverse transcriptase
(4) D.N.A. polymerase II

108. The direction of D.N.A. replications is : **[MP PMT 2001]**

(1) From 5' end towards 3' end

(2) From 3' end towards 5' end

(3) Amino terminus to carboxy terminus

(4) Carboxy terminus to amino terminus

109. The cell wall of plants in made up of cellulose which is : **[MP PMT 2002]**

(1) A lipid (2) A Protein

(3) A Polysaccharide (4) An Amino acid

110. Anticodons are found in : **[MP PMT 2002]**

(1) m RNA (2) t RNA

(3) r RNA (4) In all

111. In which stage D.N.A. duplication occurs : **[MP PMT 2002]**

(1) G_1 (2) G_2

(3) S (4) In all

112. The process of RNA formation from DNA is called **[MP PMT 2002]**

(1) Transition (2) Translation

(3) Transversion (4) Transcription

113. Nitrogen is the essential component of : **[MP PMT 2002]**

(1) Carbohydrates (2) Fats

(3) Proteins (4) Oil

114. The smallest RNA is : **[MP PMT 2003]**

(1) r-RNA (2) m-RNA

(3) t-RNA (4) nuclear RNA

115. Which of the following codes for stop signal : **[MP PMT 2003]**

(1) UAA (2) UAG (3) UGA (4) All of these

116. The site for protein synthesis is : **[MP PMT 2003]**

(1) Ribosome (2) DNA

(3) Nucleus (4) Mitochondria

117. The most abundant RNA of cell of : **[MP PMT 2003]**

(1) r-RNA (2) t-RNA

(3) m-RNA (4) None of these

118. DNA synthesis takes place by : **[MP PMT 2003]**

(1) Replication (2) Transcription

(3) Translation (4) Transduction

119. One gene is responsible for making : **[MP PMT 2005]**

(1) One protein (2) One polypeptide

(3) Many polypeptides (4) All of these

120. Eukaryotic chromosome different from prokaryotic **[MP PMT 2006]**

(1) RNA (2) DRNA

(3) DNA and lipid (4) DNA and histone

121. Min components of ribosome are : **[MP PMT 2006]**

(1) protein and RNA (2) sucrose

(3) starch (4) glycogen

122. One strand of DNA (non template) has base sequence CAG, TCG, GAT. What will be the sequence of bases in m-RNA : **[MP PMT 2006]**

(1) AGC, CTA, CTA (2) GTC, AGC, CTC

(3) CAG, UCG, GAU (4) GAC, TAG, CTA

123. One gene one enzyme hypothesis was proposed by : **[MP PMT 2006]**

(1) Beadle and Tatum (2) Jacob and Monod

(3) Lederberg (4) Watson and Crick

124. Most abundant RNA of cells is : **[MP PMT 2006]**

(1) m-RNA (2) t-RNA

(3) r-RNA (4) None of these

125. Inverse transcription was discovered by **[MP PMT 2006]**

(1) Watson and Crick (2) Khorana

(3) Temin and Baltimore (4) Meischer

126. Which of the following is found only RNA and not in DNA : **[MP PMT 2004]**

(1) Adenine (2) Thymine

(3) Guanine (4) Uracil

127. Genetic information are transferred from nucleus to cytoplasm of cell through : **[MP PMT 2005]**

(1) DNA (2) RNA

(3) Lyosomes (4) ACTH

128. Carriers of genetic information are :

[MP PMT 2005]

(1) t-RNA (2) DNA

(3) m-RNA (4) Nucleoproteins

129. The information from RNA to DNA are transferred by the process, which is called :

[MP PMT 2005]

(1) Replication (2) Transcription

(3) Translation (4) Reverse transcription

130. The chemical name of vitamin D is :

[MP PMT 2005]

(1) Riboflavin (2) Ascorbic acid

(3) Niacin (4) Calciferol

131. Growth hormone affects growth by controlling the productions of ..... at cellular level :

[MP PMT 2006]

(1) r-RNA (2) m-RNA

(3) t-RNA (4) None of these

132. Model of DNA molecule was first proposed by:

[MP PMT 2002]

(1) Tatum and Beadle (2) Mc Chung

(3) Purkinje (4) Watson and Crick

PROTOPLASM

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	**2**	**3**	**3**	**2**	**4**	**4**	**1**	**3**	**3**	**3**	**1**	**1**	**4**	**3**	**4**	**4**	**3**	**3**	**2**	**3**
Que.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	**1**	**1**	**2**	**2**	**4**	**2**	**1**	**1**	**1**	**3**	**1**	**3**	**2**	**1**	**2**	**3**	**4**	**4**	**3**	**2**
Que.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	**3**	**2**	**2**	**3**	**3**	**4**	**1**	**3**	**3**	**2**	**2**	**4**	**1**	**2**	**4**	**1**	**1**	**2**	**1**	**4**
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Ans.	**3**	**3**	**1**	**1**	**1**	**3**	**4**	**1**	**4**	**4**	**1**	**3**	**1**	**4**	**2**	**2**	**4**	**2**	**4**	**4**
Que.	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ans.	**3**	**4**	**2**	**2**	**1**	**2**	**3**	**2**	**2**	**2**	**1**	**4**	**2**	**3**	**1**	**2**	**2**	**3**	**2**	**3**
Que.	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Ans.	**1**	**3**	**4**	**2**	**2**	**2**	**2**	**1**	**3**	**2**	**3**	**4**	**3**	**3**	**4**	1	1	1	2	4
Que.	121	122	123	124	125	126	127	128	129	130	131	132								
Ans.	**1**	**3**	**1**	**3**	**3**	**4**	**2**	**2**	**4**	**4**	**2**	**4**								