01. Which of the following is a natural polymer ?
a) Protein (b) Polythene
c) Buna-S (d) Bakelite

02. The monomers used in the manufacture of nylon-66 are
a) Sebacic acid and hexamethylene diamine
b) Adipic acid and butadiene
c) Sebacic acid and butadiene
d) Adipic acid and hexamethylene diamine

03. PVC has the repeating unit -
a) Ethylene (b) Tetrachloroethylene
c) Vinyl chloride (d) Acrylonitrile

04. Nylon is,
a) Polyester fibre
b) Polymide fibre
c) Polythene derivative
d) Polyethylene methyl acrylate fibre

05. Which one is a protein fibre ?
a) Cotton (b) Rayon
c) Silk (d) Polyester

06. Which of the following fibres are made of polyamides ?
a) Dacron (b) Orlon
c) Nylon (d) Rayon

07. Bakelite is obtained from phenol by reacting with -
a) Formaldehyde (b) Acetaldehyde
c) Chlorobenzene (d) Acetal

08. Terylene is a condensation polymer of ethylene glycol and -
a) Phthalic acid (b) Terephthalic acid
c) Benzoic acid (d) Salicyilc acid

09. A polymer containing nitrogen is,
a) Bakelite (b) Dacron
c) Rubber (d) Nylon - 66

10. Which of the following is a bio-degradable polymer ?
a) PVC (b) Nylon - 6
c) Cellulose (d) Polythene

11. The synthetic fibres are obtained by which of the following reaction -
a) Hydrolysis (b) Polymerisation
c) Dehydration (d) Decomposition

12. Polymerisation of ε-caprolactum is carried out in inert atmosphere of -
a) Hydrogen (b) Nitrogen
c) Oxygen (d) Neon

13. Perlon -L and Nylon-66 use in -
a) Fishing nets (b) Tyrecord and ropes
c) Surgical sutures (d) All of these

14. ε-caprolactum is condensed product of ....
a) ε-caproic acid (b) ε-aminocaproic acid
c) Amino caproic acid (d) ω-amino caproic acid

15. The molar ratio in which Hexamethylene diamine and adipic acid react is,
a) 1 : 2 (b) 2 : 2
c) 2 : 1 (d) None of these

16. Identify synthetic polymer among the following polymers
a) PVC (b) Protein
c) Nucleic acids (d) Cellulose

17. The fibre orlon blended with cotton fibre is known as.
a) Terywool (b) Terycot
c) Perlon-L (d) Cots-wool

18. Carbolic acid is used in the preparation of .....
a) Nylon (b) Bakelite
c) Polystyrene (d) P. V. C.

19. Of which of the following, glycol is an important constituent
a) Dacron (b) Acrilan
c) Teflon (d) Rayon

20. Transesterification of DMT take place in presence of
a) Strong acid (b) Strong base
c) Weak acid (d) Weak base

21. Which is not related with terylene preparation -
a) Zn-acetate (b) Sb_2O_3
c) Vacuum (d) Inert N_2

22. The molecular formula of triolein is,
a) $C_{51}H_{104}O_6$ (b) $C_{57}H_{104}O_6$
c) $C_{57}H_{110}O_6$ (d) $C_{55}H_{104}O_6$

23. Terycot is ..... fibre
a) Semisynthetic (b) Synthetic
c) Polymerised (d) Blended

24. All are mono saccharide with aldose group except
a) Glucose (b) Galactose

c) Sorbose (d) Mannose

25. Glucose acts as -
a) Catalyst (b) Reducing agent
c) Oxidising agent (d) None

26. Which of the following do not convert glucose into glucitol -
a) NaHg + water (b) $NaBH_4$
c) Red P + HCl (d) ZnHg + water

27. Correct order of molecular weight
a) Peptones > proteose < Polypeptide
b) Peptones < proteose < Polypeptide
c) Peptones < proteose > Polypeptide
d) Peptones > proteose > Polypeptide

28. Glucose contain ------ no of primary -OH groups and--- no of secondary - OH groups
a) 1, 2 (b) 1, 5
c) 5, 1 (d) 1, 4

29. All are proteolytic enzymes except -
a) Ptylin (b) Pepsin
c) Trypsin (d) Papain

30. Enzyme hydrolysis of protein is
a) Slow and superficial (b) Fast and superficial
c) Slow and superior (d) Fast and superior

31. Which of the following is not a simple protein -
a) Prolamine (b) Collagen
c) Keratin (d) None

32. Which of the following is considered as vegetable fat -
a) Castor oil (b) Pine oil
c) Coconut oil (d) Olive oil

33. Versatile fibre is
a) Terylene (b) Nylon
c) PVC (d) Teflon

34. On heating glucose with Fehling solution we get precipitate whose colour is,
a) Red (b) White
c) Blue (d) Black

35. Temperature condition for terylene, Nylon 6 and Nylon-66 for polymerisation are respectively.
a) 533 K, 573 K, 523 K (b) 523 K, 573 K, 473 K
c) 573 K, 533 K, 553 K (d) 473 K, 533 K, 553 K

36. Proteins are -
a) Homopolymer (b) Heteropolymers
c) Co-polymer (d) Elastomers

37. The chemical composition of lactose, maltose & canesugar respectively are -
a) $C_6H_{12}O_6$, $C_{12}H_{22}O_{11}$ & $C_{18}H_{32}O_{16}$
b) $C_{12}H_{22}O_{11}$, $C_6H_{12}O_6$ & $C_{18}H_{32}O_{16}$
c) $C_{18}H_{32}O_{16}$, $C_6H_{12}O_6$ & $C_{12}H_{22}O_{11}$
d) None of these

38. The hydrolysis of sucrose is carried out in the laboratory by using -
a) 90% C_2H_5 - OH & conc. HCl at 413 K
b) 90% C_2H_5 - OH & dil. HCl at 333 K
c) 90% C_2H_5 - OH & conc. HCl at 333 K
d) Either b or c

39. Some statements about carbohydrates is given below -
A) Monosaccharides and Oligosaccharides are sugars while polysaccharides are nonsugar
B) Sugars are sweet in taste, water soluble & crystalline
C) Non sugars are tasteless, water insoluble & amorphous
D) Monosaccharides are basic units of carbohydrates
Among above incorrect statement is/are
a) A, B & C (b) B, C & D
c) A, C & D (d) None

40. Which one of the following is a synthetic fibre -
a) Bakelite (b) Nylon -66
c) Dacron (d) All of these

41. Dacron is ... polymer
a) Polyester (b) Condensation
c) Polyamide (d) Both 'a' and 'b'

42. Classification of fibres carried out on the basis of -
a) Their occurance in nature
b) Their physical and chemical properties
c) Nature of reactant and chemical properties
d) None of these

43. During preparation of perlon-L, the monomer is heated at about-
a) 533 K (b) 433 K
c) 633 K (d) 593 K

44. The formula of adipic acid is,
a) HOOC - $(CH_2)_2$ - COOH
b) HOOC - $(CH_2)_3$ - COOH
c) HOOC - $(CH_2)_4$ - COOH
d) HOOC - CH_2 - COOH

45. Adipic acid is ..... acid.
a) Monobasic (b) Dibasic
c) Tribasic (d) Tetrabasic

46. Nylon-66 contains ..... linkages.
a) - COO - (b) - NH -

c) - CO - NH (d) - CO -

47. The polymerisation of hexamethylene diammonium adipate is carried out in .. atm
a) Vaccum (b) Inert N_2
c) Inert O_2 (d) Inert H_2

48. In USA terylene is also called -
a) Dacron (b) Perlon-L
c) P.V.C. (d) Protein

49. Which of the following substance is consumed and regenerated during the preparation of terylene -
a) Adipic acid (b) Methyl alcohol
c) Ethylene glycol (d) Propylene glycol

50. Physical properties of nylon-6 and nylon-66 are -
a) These are tough and elastic
b) These are chemically inert
c) These are wrinkle proof
d) All of these

51. In the raw material adipic acid and hexamethylene diamine, both contains six carbon atoms, hence obtained from these are termed as -
a) Nylon -6 (b) Nylon -66
c) Terylene (d) Both 'a' and 'b'

52. In Nylon-66 indicates its monomer contains...
a) Six hydrogen atoms (b) Six carbon atoms
c) Both 'a' and 'b' (d) None of these

53. Molecular weight of ε-caprolactum is,
a) 114 (b) 113
c) 115 (d) 112

54. Which of the following fibre is made of polymide ?
a) Dacron (b) Nylon
c) Orlon (d) Rayon

55. Which is not other name of Dacron .....
a) Terylene (b) Terene
c) Orlon (d) Perlon-L

56. Which is not condensation polymer.
a) Nylon-6 (b) Dacron
c) Nylon - 66 (d) Cellulose

57. The ratio in gram of hexamathylene diamine and adipic acid, in which they react is .....
a) 56 : 73 (b) 58 : 146
c) 116 : 73 (d) 58 : 73

58. The molar ratio in which Hexamethylene diamine and adipic acid react is,
a) 1 : 2 (b) 2 : 2
c) 2 : 1 (d) None

59. ε-caprolactum is a starting material for -
a) Rayon (b) Nylon-6
c) Terylene (d) Nylon-66

60. Chemically treated cellulose is known as -
a) Regenerated fibre (b) Semi-synthetic fibre
c) Either of these (d) None of these

61. Nylon fibres possess which of the following properties -
a) They are strong and tough fibres
b) They have good elasticity and tensile strength
c) They are crease resistant
d) All of these

62. A molecule or group of molecules when repeated to get a polymer is termed as -
a) Monomer (b) Repeating Unit
c) Dimer (d) None of these

63. Which one of the following fibre contains protein units in their molecule -
a) Cotton (b) Wool
c) Nylon (d) Terylene

64. The IUPAC name of ω-amino caproic acid is,
a) 5-amino-hexanoic acid (b) 4-amino hexanoic acid
c) 6-amino hexanoic acid (d) 1-amino hexanoic acid

65. Natural silk is,
a) Polyester (b) Polyamide
c) Polyacid (d) Polysaccharide

66. For filtration of chemicals, the cloth used is made up of
a) Polyamide (b) Polyester
c) Polyethylene (d) Nylon

67. The polyester obtained by trans- esterification is,
a) Nylon-6 (b) Nylon-66
c) Dacron (d) Perlon

68. Cellulose (cotton) is built up of many -
a) Fructose unit (b) Glucose unit
c) Both 'a' and 'b' (d) None of these

69. In Germany nylon-6 is called as -
a) Homopolymer (b) Terene
c) Dacron (d) Perlon -L

70. The general advantages of synthetic fibres are -
a) High tensile strength
b) Wrinkle resistance
c) It absorbs less amount of water, hence dry quickly
d) All of these

71. A polymer containing only one type of monomeric units is called .....and, if it contains more than one type of monomeric units is called....

a) Heteropolymer, homopolymer
b) Homopolymer, heteropolymer
c) Monomers, polymers
d) Both 'a' and 'b'

72. A good quality fibre is supposed to have -
a) Good length
b) Low denier (weight per unit length)
c) Low crimp (curl or waviness)
d) All of these

73. The quality of fibre is decided by the parameters like -
a) Length (b) Tensile strength
c) Crimp (d) All of these

74. Repetition of amide linkage takes place in ...
a) Nylon-6 (b) Nylon-66
c) Terylene (d) Both 'a' and 'b'

75. Chemical name of pure cotton is,
a) Jute (b) Cellulose
c) Both 'a' and 'b' (d) None of these

76. Tyre-cords are made of ....
a) Nylon-66 (b) Rayon
c) Terylene (d) None of these

77. Nylon fibre first made in ....
a) Japan (b) England
c) Russia (d) America

78. Artificial fibres are drip dried because they -
a) Lose water easily
b) Do not absorb water
c) Do not react with water
d) Can not become wet with water

79. ε-caprolactum has as a ring structure, which is,
a) Homocyclic six - membered
b) Heterocyclic six - membered
c) Homocyclic seven - membered
d) Heterocyclic seven - membered

80. Terylene is known as polyester because -
a) It is made up from DMT
b) It is made up from ethylene glycol and DMT
c) It is ester of dibasic acid
d) It contains repeatative ester linkage in chain

81. Hexamethylene diamine have acidity ....
a) One (b) Two
c) Three (d) Four

82. Wool is also known as -
a) Karotin (b) Keratin
c) Fibrion (d) Linen

83. In preparation of Terylene the biproduct obtained is
a) Methanol
b) Ethanol
c) Ethanol and Methanol
d) Ethylene glycol and methanol

84. Nylon-6, Nylon-66 and Terylene polymer formed from monomer with the help of ....
a) Ionic bond
b) Covalent bond
c) Ionic and covalent bond
d) All of these

85. Nylon is generic name for ....
a) Polyamides (b) Polyester
c) Poly ethene (d) Poly Vinyl chloride

86. Which polyamide polymer on hydrolysis gives α-amino acid -
a) Silk (b) Jute
c) Nylon-6 (d) Nylon -66

87. What type of polymer is shown by following segment
$-COO-CH_2CH_2-[C_2H_4]-COO-CH_2CH_2O-$
a) Polymide (b) Polyester
c) Polyolefin (d) Polyethylene

88. Formaldehyde is used in the manufacture of
a) Teflon (b) Bakelite
c) Gammexane (d) Dynamite

89. Of which of the following, glycol is an important constituent
a) Dacron (b) Acrilan
c) Teflon (d) Rayon

90. Synthetic fibres are prepared by -
a) Reduction (b) Oxidation
c) Combustion (d) Polymerization

91. Polymers containing more than one kind of monomer unit are called -
a) Polypolymer (b) Copolymer
c) Multipolymer (d) Sec. polymer

92. Select the animal fibre ?
a) Cotton (b) Rayon
c) Nylon (d) Silk

93. Regenerated fibre among the following is,
a) Nylon - 6 (b) Nylon - 66
c) Viscose rayon (d) Terylene

94. Natural silk is,
a) Polyacid (b) Polyester
c) Polysaccharide (d) Polyamide

95. Which one of the following is incorrect ?
a) Nylon - 6 is obtained by polymerisation of amino caproic acid
b) Rayon is semi synthetic fibre
c) Terylene has low moisture absorption property
d) Terylene has high tensile strength

96. Fibre used in making magnetic recording tape is,
a) Nylon - 6 (b) Nylon - 66
c) Terylene (d) Viscose rayon

97. When condensation of hexamethylenediamine and adipic acid is heated to 553 K (280°C) in an atmosphere of nitrogen for about 4 - 5 hours, the product obtained is,
a) Solid polymer of nylon 66
b) Liquid polymer of nylon 66
c) Gaseous polymer of nylon 66
d) Liquid polymer of nylon 66

98. Starting compound for nylon - 6 is,
a) ε - caprolactum (b) α - amino acids
c) ω - amino acids (d) None of these

99. The molecular formula of ε - caprolactum is,
a) $C_6H_{11}ON$ (b) $C_7H_{12}ON$
c) $C_7H_{13}ON$ (d) $C_6H_{13}OH$

100. Polycaprolactum is,
a) Polyester fibre (b) Nylon - 66
c) Nylon - 6 (d) Terycot

101. Nylon - 66 is a / an -
a) Addition polymer
b) Condensation polymer
c) Addition condensation of polymer
d) Condensation polyamide

102. Which of the following contains nitrogen ?
a) Nylon (b) Teflon
c) Terylene (d) PVC

103. Caprolactum is a monomer of Nylon - 6. It can be obtained from -
a) Cyclohexane (b) Benzene
c) ω - aminocaproic acid (d) Adipic acid

104. Adipic acid is produced by -
a) Oxidation of cyclohexane only
b) Oxidation of benzene
c) Air oxidation of cyclohexane and further oxidation of the products formed by dil. HNO_3
d) Both 'a' and 'b'

105. For polymerisation of nylon salts to obtain Nylon - 66, the salt is heated in an autoclave
a) For 4 - 5 hrs at 8 atm pressure and 553 - 573 K
b) For 5 hrs at 7 atm pressure and 503 K
c) For 1 hrs at 5 atm pressure and 533 K
d) For 4 hrs at 4 atm pressure and 403 K

106. Which of the following is used to prepare tooth brush bristles ?
a) Viscose rayon (b) Acetate rayon
c) Nylon - 66 (d) Terylene

107. The fibre which is resistant to action of chemicals is,
a) Cotton (b) Silk
c) Jute (d) Terylene

108. Which of the following is NOT a cellulose product ?
a) Gun cotton (b) Celluloid
c) Rayon (d) Dacron

109. Starting chemicals used for manufacturing terylene are -
a) Adipic acid and hexamethylene diamine
b) Adipic acid and hexamethylene tetramine
c) Dimethyl terephthalate and ethylene glycol
d) Dimethyl terephthalate and propylene glycol

110. Transestrification product of ethylene glycol and DMT is,
a) Dihydroxy diethyl terephthalate
b) Hydroxydiethyl terephthalate
c) Trihydroxy diethyl terephthalate
d) Dihydroxy ethyl terephthalate

111. Dimethyl terephthalate is an ester of -
a) Phthalic acid (b) Terephthalic acid
c) Caproic acid (d) Oxalic acid

112. The total number of carbon atoms present in the starting materials used for terylene are -
a) 6 (b) 8
c) 10 (d) 12

113. Which of the following is a condensation polymer ?
a) Dacron (b) PVC
c) Polystyrene (d) Teflon

114. Which of the following has an ester linkage ?
a) Bakelite (b) Nylon
c) Terylene (d) PVC

115. Terylene is, **(MHT-CET 2008)**
a) Polyamide (b) Polyester
c) Nylon (d) Polypeptide

116. Which one of the following is a cellulose fibre ?
a) Hair (b) Cotton
c) Wool (d) Silk

117. Among the following, which one is obtained by chemical

treatment on cotton fibre is,

a) Wool (b) Acetate rayon

c) Terywool (d) Nylon-6

118. Nylon - 6 and Nylon - 66 have same

a) Molecular weight (b) Empirical formula

c) Molecular formula (d) Structural formula

119. The molecular formula $C_2H_4O_2$ represents two isomers A and B. A gives effervescence of a colourless gas with washing soda while B on treatment with methyl magnesium iodide gives an aldehyde. A and B are respectively.

a) Acetic acid and methyl formate

b) Formic acid and methyl acetate

c) Methyl formate and acetic acid

d) Methyl acetate and formic acid

120. DMT is obtained form terephthalic acid by

a) Hydrolysis (b) Oxidation

c) Esterification (d) Stretching

121. The natural silk is a

a) Polyamide (b) Polysaccharide

c) Polyester (d) Polystyrene

122. Which of the following statement is incorrect ?

a) Nylon - 6 is polyamide polymer

b) Terylene has high tensile strength

c) Rayon is semi synthetic fibre

d) Terylene is addition polymer

123. Nylon - 66 belongs to the class of

a) Addition polymer

b) Addition homopolymer

c) Condensation polymer

d) Condensation heteropolymer

124. Out of viscose Rayon (I), cuprammonium silk (II), terylene (III) and acetate rayon (IV) the regenerated fibre (s) is / are

a) Only I and II (b) Only II, III and IV

c) Only I, II and IV (d) Only II and III

125. The formula $C_{12}H_{26}O_4N_2$ represents

a) Nylon - 66 (b) Nylon - salt

c) Poly caprolactum (d) Polyamide fibres

126. Regenerated fibres have superior physical properties because

a) They are fresh fibres

b) They are chemically treated fibres

c) They are obtained naturally

d) None of these

Answer Keys

01. (a) **02.** (d) **03.** (c) **04.** (b) **05.** (c) **06.** (c) **07.** (a) **08.** (b) **09.** (d) **10.** (c) **11.** (b) **12.** (b) **13.** (d) **14.** (d) **15.** (b) **16.** (a) **17.** (b) **18.** (b) **19.** (a) **20.** (d) **21.** (d) **22.** (b) **23.** (d) **24.** (c) **25.** (b) **26.** (d) **27.** (c) **28.** (d) **29.** (a) **30.** (c) **31.** (d) **32.** (c) **33.** (b) **34.** (a) **35.** (c) **36.** (b) **37.** (d) **38.** (c) **39.** (d) **40.** (d) **41.** (d) **42.** (a) **43.** (a) **44.** (c) **45.** (b) **46.** (c) **47.** (b) **48.** (a) **49.** (c) **50.** (d) **51.** (b) **52.** (b) **53.** (b) **54.** (b) **55.** (d) **56.** (d) **57.** (d) **58.** (b) **59.** (b) **60.** (c) **61.** (d) **62.** (a) **63.** (b) **64.** (c) **65.** (b) **66.** (b) **67.** (c) **68.** (b) **69.** (d) **70.** (d) **71.** (b) **72.** (d) **73.** (d) **74.** (d) **75.** (b) **76.** (a) **77.** (d) **78.** (a) **79.** (d) **80.** (d) **81.** (b) **82.** (b) **83.** (d) **84.** (b) **85.** (a) **86.** (b) **87.** (d) **88.** (b) **89.** (a) **90.** (d) **91.** (b) **92.** (d) **93.** (c) **94.** (d) **95.** (a) **96.** (c) **97.** (b) **98.** (a) **99.** (a) **100.** (c)

101. (b) **102.** (a) **103.** (c) **104.** (c) **105.** (a) **106.** (c) **107.** (d) **108.** (d) **109.** (c) **110.** (a) **111.** (b) **112.** (d) **113.** (a) **114.** (c) **115.** (b) **116.** (b) **117.** (b) **118.** (b) **119.** (a) **120.** (c) **121.** (a) **122.** (d) **123.** (d) **124.** (c) **125.** (b) **126.** (b)