

- (C) Same as thermoset phenol formaldehyde
(D) Not a polymer
Answer: Option C

03. Polyurethane cannot be used for making

- (A) Mattresses & foam
(B) Coating material
(C) Adhesives
(D) Bottles
Answer: Option D

04. _____ resins are produced by the condensation polymerisation of formaldehyde with urea or melamine.

- (A) Epoxy
(B) Amino
(C) Alkyd
(D) Phenolic
Answer: Option B

05. Nylon-6, 10 which is used for bristles making is superior to nylon 6, 6 due to its lower water absorption capacity, is a/an

- (A) Polyester
(B) Polyamide
(C) Polyisoprene
(D) Polystyrene
Answer: Option B

06. Which of the following natural bio polymers are formed as a result of polymerisation of amino-acids?

- (A) Starch
(B) Cellulose
(C) Proteins
(D) Nucleic acids
Answer: Option C

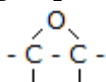
07. Which of the following is an inorganic polymer?

- (A) Teflon
(B) Perspex
(C) Silicones
(D) Bakelite
Answer: Option C

08. Buna-S is a _____ material.

- (A) Fibrous
(B) Plastic
(C) Resinous
(D) Rubbery
Answer: Option D

09. Epoxy resin is a polymer containing two or more groups of the bellow fig. is called epoxide group or ethoxyline group. It is a



- (A) Polyamide & an elastomer
(B) Good adhesive
(C) Surface coating agent
(D) Both (B) and (C)
Answer: Option D

10. _____ practically possess no elasticity.

- (A) Vulcanite or ebonite
(B) Spandex fibre
(C) Polysulphide rubber
(D) Epoxy resin

Answer: Option A

11. Which of the following has the weakest intermolecular forces?

- (A) Polyisoprene
- (B) Nylon-66
- (C) Polystyrene
- (D) Bakelite

Answer: Option A

12. Polystyrene is a _____ plastic at room temperature.

- (A) Ductile
- (B) Brittle
- (C) Malleable
- (D) None of these

Answer: Option B

13. Transistor parts and refrigerator components are normally made of

- (A) Polystyrene
- (B) Polyester
- (C) High density polythene
- (D) Polyurethane

Answer: Option A

14. Condensation polymerisation of _____ produces Bakelite.

- (A) Propylene
- (B) Phenol & formaldehyde
- (C) Phenol & acetaldehyde
- (D) Urea & formaldehyde

Answer: Option B

15. Silicone resins, which are highly water repellent and has good heat resistance cannot be used

- (A) As room temperature adhesive
- (B) As grease & lubricant
- (C) Hydraulic fluid for heat transfer
- (D) Resin for lamination

Answer: Option A

16. Low pressure Zeigler process of polythene manufacture

- (A) Employs a pressure of 30 kgf/cm²
- (B) Achieves an yield of 95-98% based on ethylene
- (C) Produces very low density polythene
- (D) Does not use any catalyst for polymerisation

Answer: Option B

17. Fillers such as zinc oxide and carbon black are added to the crude natural rubber before vulcanisation in order to improve its

- (A) Elasticity
- (B) Strength
- (C) Plasticity
- (D) Weathering characteristics

Answer: Option D

18. Cross linked polymers formed from bi-and trifunctional groups in which cross-linkage in three dimensions via few chemical bonding across linear chains occur imparts to the polymer _____ properties.

- (A) Thermoplastic
- (B) Thermosetting
- (C) Elastometric
- (D) Brittleness

Answer: Option C

19. Cation exchange resins used in water treatment is made from _____ resin.

- (A) Urea formaldehyde
- (B) Epoxy
- (C) Amino

(D) Phenolic
Answer: Option A

20. Thermoplastic resins usually

- (A) Remain hard as long as they are hot
 - (B) Cannot be reclaimed from waste
 - (C) Permanent setting resins
 - (D) Less brittle than thermosetting resins
- Answer: Option D

21. Celluloid is

- (A) Cellulose acetate
 - (B) Regenerated cellulose
 - (C) Cellulose nitrate
 - (D) Cellulose acetate butyrate
- Answer: Option C

22. Cation exchange resins (0.3 to 1 mm size) used in water treatment is prepared from _____ resins.

- (A) Epoxy
 - (B) Phenol formaldehyde
 - (C) Urea formaldehyde
 - (D) Melamine formaldehyde
- Answer: Option C

23. Tyres are made by

- (A) Injection moulding
 - (B) Extrusion
 - (C) Rotational moulding
 - (D) Compression moulding
- Answer: Option C

24. Perspex can be used as a substitute of glass. Its monomer is

- (A) Methyl methacrylate
 - (B) DMT
 - (C) Butadiene
 - (D) Tetrafluoroethylene
- Answer: Option A

25. Automobile steering wheels are normally made of

- (A) Cellulose acetate
 - (B) Cellulose nitrate
 - (C) PVC
 - (D) High density polythene
- Answer: Option A

26. Main constituent of cotton fibre is

- (A) Lignin
 - (B) Cellulose
 - (C) Starch
 - (D) Gelatine
- Answer: Option B

27. In case of dry spinning of polymers, the polymer solution in a volatile solvent is forced through the spinnerates into a warm air chamber, where the solvent evaporates leaving behind the polymer in the filament form. Dry spinning is used for _____ fibres.

- (A) Polythene
 - (B) PVC
 - (C) Rayon
 - (D) Polyvinyl acetate
- Answer: Option B

28. Glyptal used in the manufacture of paints & lacquers is a _____ polymer.

- (A) Polyamide
- (B) Polystyrene

- (C) Polyester
 - (D) Polyacrylonitrile
- Answer: Option C

29. The main use of butadiene is

- (A) As a plasticiser for unsaturated polyester
- (B) In the manufacture of synthetic rubber
- (C) As an anti-skimming agent in paint
- (D) None of these

Answer: Option B

30. Temperature and gage pressure maintained during the manufacture of hot SBR (styrene butadiene rubber) are

- (A) 50°C and 3 - 4 kg/cm²
- (B) 50°C and 1 kgf/cm²
- (C) 250°C and 10 kgf/cm²
- (D) 250°C and 1 kgf/cm²

Answer: Option A

31. Teflon is

- (A) Phenol formaldehyde
- (B) An inorganic polymer
- (C) Polytetrafluoroethylene (PTFE)
- (D) A monomer

Answer: Option C

32. Antioxidants are added to rubber to protect it from the attack of light, heat & atmospheric ozone. Which of the following is an antioxidant used in rubber?

- (A) Carbon
- (B) Alkylated diphenyl amine
- (C) Thiokol
- (D) Magnesium

Answer: Option B

33. Orlan fibre which is used as a wool substitute is

- (A) An amorphous polymer
- (B) A natural polymeric fibre
- (C) Polyacrylonitrile
- (D) Poly-methyl-methacrylate (PMMA)

Answer: Option C

34. Acrylonitrile-butadiene-styrene (ABS) copolymer, which is produced by blending styrene-acrylonitrile copolymer with butadiene based elastomer, is a/an

- (A) Rigid foam
- (B) Engineering plastic
- (C) Thermosetting polymer
- (D) Spongy rubber

Answer: Option B

35. Which of the following additives are added to plastics to make it impervious to X-rays?

- (A) Asbestos
- (B) Barium salt
- (C) Carborundum
- (D) Phthalic acid

Answer: Option B

36. Condensation polymerisation of formaldehyde with _____ does not produce phenolic resin.

- (A) Resorcinol
- (B) Phenol
- (C) Para-cresol
- (D) Melamine

Answer: Option D

37. Neoprene which is used for making shoe heels & belts is superior to natural rubber in its stability to aerial oxidation and resistance to oils & other solvents. The monomer used for making neoprene is

- (A) Chloroethane
 - (B) Chloroprene
 - (C) Isoprene
 - (D) None of these
- Answer: Option B

38. The monomer for the production of neoprene rubber is

- (A) Acetylene
 - (B) Chloroprene
 - (C) Isoprene
 - (D) None of these
- Answer: Option B

39. Zeigler process

- (A) Produces high density polythene
 - (B) Uses no catalyst
 - (C) Produces low density polythene
 - (D) Employs very high pressure
- Answer: Option A

40. Which of the following polymers belong to the class of formaldehyde resin?

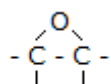
- (A) Melamine resins
 - (B) Teflon
 - (C) Dacron
 - (D) None of these
- Answer: Option A

41. Polypropylene compared to polythene is

- (A) Harder
 - (B) Stronger
 - (C) Lighter
 - (D) All (A), (B) and (C)
- Answer: Option D

42. Epoxy resins (i.e., epoxide polymers)

- (A) Are made by addition polymerisation reaction only
- (B) Contain an epoxy group (fig bellow) at the ends of the polymer



- (C) Are cross-linked polymers only
 - (D) Use emulsion polymerisation methods
- Answer: Option B

43. Nylon-6 as compared to nylon-66 is

- (A) Harder
 - (B) More abrasion resistant
 - (C) Having higher melting point
 - (D) None of these
- Answer: Option D

44. Nylon-6 is manufactured from

- (A) Caprolactam
 - (B) Adipic acid and Hexamethylenediamine
 - (C) Maleic anhydride and Hexamethylenediamine
 - (D) Sebacic acid and Hexamethylenediamine
- Answer: Option A

45. Pick out the wrong statement.

- (A) For the manufacture of styrene, the major raw materials are benzene and ethylene
- (B) One important copolymer of styrene is SBR, which is widely used in the manufacture of automobile tyres

- (C) Manufacture of phenol by chloroben-zene-eaustic process involves. The chlorination of benzene, causticisation and hydrolysis
(D) Phenol manufacture by chlorobenzene-caustic process is competitive even when low cost chlorine is not available

Answer: Option D

46. Identify the group in which all the polymers mentioned can be used to make fibres.

- (A) Butadiene copolymers, Polyamides, Urea-formaldehyde
(B) Cellulose derivatives, Polyisoprene, Polyethylene
(C) Cellulose derivatives, Polyamides, Polyurethane
(D) Polypropylene, Poly vinyl chloride, Silicon

Answer: Option B

47. Nylon-6 as compared to nylon 66 has lower

- (A) Abrasion resistance
(B) Thermal stability
(C) Adhesion to rubber
(D) Hardness

Answer: Option A

48. Natural rubber is obtained from latex, which is a colloidal dispersion of rubber in water.

Which of the following is used as a coagulant in latex?

- (A) Ammonium alum
(B) Potassium alum
(C) Both 'a' & 'b'
(D) Neither 'a' nor 'b'

Answer: Option C

49. Which of the following is not a thermoplastic material?

- (A) Epoxy polymer
(B) PVC
(C) Polystyrene
(D) Polythene

Answer: Option A

50. Which of the following types of polymers has the strongest inter particle forces?

- (A) Elastomers
(B) Fibres
(C) Thermoplastics
(D) Thermosetting polymers

Answer: Option D

51. Addition polymerisation is not involved in the manufacture of

- (A) Low density polythene
(B) Poly vinyl chloride
(C) Polystyrene
(D) Polyhexamethylene adipamide

Answer: Option D

52. Mastication of rubber means

- (A) Its softening
(B) A treatment to retard its deterioration due to oxidation
(C) Improving its curing rate
(D) Depression of its freezing point

Answer: Option A

53. Amino resins are used in paper treatment to improve its

- (A) Wet tear and bursting strength
(B) Folding endurance
(C) Wet rub resistance
(D) All (A), (B) & (C)

Answer: Option D

54. Polythene is a/an

- (A) Addition polymerisation product

- (B) Condensation polymerisation product
 - (C) Thermosetting material
 - (D) None of these
- Answer: Option A

55. Addition of stabiliser during PVC manufacture is done to

- (A) Improve its impact strength
- (B) Improve its elasticity
- (C) Reduce the melt viscosity & glass transition temperature
- (D) Prevent its thermal degradation

Answer: Option D

56. Neoprene is the trade name of

- (A) Polyurethane
- (B) Phenol formaldehyde
- (C) Polychlorophrene
- (D) Styrene butadiene rubber (SBR)

Answer: Option C

57. _____ are produced by reacting polybasic acid (e.g. Phthalic anhydride) with polyhydric alcohol (e.g., glycerol).

- (A) Unsaturated polyester
- (B) Alkyd resins
- (C) Saturated polyester
- (D) Amino resins

Answer: Option B

58. _____ polymer is used for making unbreakable crockery.

- (A) Thermoplastic
- (B) Melamine
- (C) Addition
- (D) None of these

Answer: Option B

59. Maximum consumption of polymers is in

- (A) Electrical insulation
- (B) Toys making
- (C) Coating and films
- (D) Packaging

Answer: Option C

60. The synthetic fibres produced from _____ are known as rayon.

- (A) Lignin
- (B) Cellulose
- (C) Polyamides
- (D) Ethylene glycol

Answer: Option B

61. A copolymer is formed by the combination of two or more monomer molecules

- (A) In a chain without the elimination of water
- (B) With the elimination of small amount of water
- (C) Of the same monomer by elimination of small molecules of water
- (D) None of these

Answer: Option A

62. Pick out the wrong statement regarding the solubility characteristics of high polymers.

- (A) Greater the degree of cross-linking in the polymer, lesser is its solubility
- (B) Polymers having more aliphatic character are more soluble in aliphatic solvents, while those polymers having more aromatic character are more soluble in aromatic solvents
- (C) Swelling tendency or solubility of polymers in a particular solvent decreases with increase in molecular weight of the solvent
- (D) High molecular weight polymers on dissolving gives solution of very low viscosity

Answer: Option D

63. Phosphates (e.g., tricresyl, tributyl, tetrabutyl, triphenyl etc.) are added to polymers to act as

- (A) Hardeners
 - (B) Anti-shrinkage agents
 - (C) Plasticisers
 - (D) Transparency improver
- Answer: Option C

64. Styrene butadiene rubber (SBR) as compared to natural rubber has

- (A) Poor tensile strength
- (B) Poorer resistance
- (C) Greater amount of heat build up heavy loading
- (D) All (A), (B) and (C)

Answer: Option D

65. The rate controlling step in the manufacture of silicone rubber is the

- (A) Polymer termination step
- (B) Condensation of siloxane to silicone
- (C) Initial hydrolysis of silicone monomer
- (D) None of these

Answer: Option C

66. The conversion of caprolactam in the above case is about _____ percent.

- (A) 25
- (B) 50
- (C) 70
- (D) 90

Answer: Option D

67. Viscosity of a polymer solution or melt

- (A) Decreases with increase in molecular weight
- (B) Decreases with increase in temperature
- (C) Increases with increase in temperature
- (D) Does not vary with temperature rise

Answer: Option C

68. Caprolactam, a raw material for the manufacture of nylon-6, is produced from

- (A) Phenol
- (B) Naphthalene
- (C) Benzene
- (D) Pyridine

Answer: Option C

69. Vulcanisation of rubber decreases its

- (A) Tensile strength
- (B) Resistance to organic solvents
- (C) Tackiness
- (D) Working temperature range

Answer: Option C

70. Polyvinyl alcohol is used as a

- (A) Cation/anion exchanger
- (B) Water soluble adhesive
- (C) Textile fibre
- (D) Non-sticky coating on frying pans

Answer: Option B

71. Which of the following is the most important rubber compounding ingredient which is used to improve wearing qualities of both natural rubber & SBR by imparting toughness?

- (A) Phosphorous
- (B) Carbon black
- (C) Pine oil
- (D) Rosin

Answer: Option B

72. In a cross linked polymer, the monomeric units are linked together to constitute a three dimensional network. Which of the following is a cross-linked polymer?

- (A) Bakelite (phenol formaldehyde)
- (B) Polyester
- (C) Polythene
- (D) Nylon-6

Answer: Option A

73. Pick out the wrong statement.

- (A) Cold SBR is superior as compared to hot SBR
- (B) Polymerisation temperature can modify the properties of SBR
- (C) Production of cold SBR employs lower pressure as compared to that of hot SBR
- (D) None of these

Answer: Option D

74. Molecular weights of plastics ranges from

- (A) 1000 to 5000
- (B) 5000 to 1000
- (C) 20000 to 25000
- (D) 10^9 to 10^{11}

Answer: Option C

75. Temperature and gage pressure maintained during the manufacture of cold SBR (styrene butadiene rubber) are

- (A) 5°C and 1 kgf/cm^2
- (B) -20°C and 1 kgf/cm^2
- (C) 0°C and 1 kgf/cm^2
- (D) 0°C and 3 kgf/cm^2

Answer: Option A

76. Poly-methyl-methacrylate (PMMA) is known as

- (A) Bakelite
- (B) Teflon
- (C) Perspex
- (D) Nylon-6

Answer: Option C

77. Orion is

- (A) A copolymer
- (B) A condensation polymer
- (C) Obtained by polymerising vinyl cyanide
- (D) All (A), (B) and (C)

Answer: Option C

78. A copolymer of vinyl and vinylidene chloride is called

- (A) Treylene
- (B) Orlon
- (C) Saran
- (D) Dacron

Answer: Option C

79. Pick out the wrong statement.

- (A) Linear polymers are formed from bifunctional groups only and are normally thermoplastic
- (B) Cross-linked branched chain polymers are either elastometric or thermosetting
- (C) Branching in case of cross-linked polymers caused by small amount of impurities in bifunctional monomer formulation reduces its solubility and increases the softening point
- (D) Dibasic acids reacts with dihydric alcohols to give polyesters using addition polymerisation reaction

Answer: Option D

80. SBR is produced by the copolymerisation of butadiene & styrene by employing emulsion polymerisation. The weight ratio of styrene and butadiene is maintained at

- (A) 1 : 3
- (B) 3 : 1
- (C) 1 : 2
- (D) 2 : 1

Answer: Option A

81. Alkyd resin e.g., glyptal resin formed by Phthalic anhydride and glycerine is not used

- (A) For surface coating of automobiles & air crafts
- (B) For fibre making
- (C) As plasticiser for PVC & nitrocellulose
- (D) For film forming materials

Answer: Option B

82. Thermosetting polymers as compared to thermoplastic polymers

- (A) Are formed by addition polymerisation
- (B) Have three dimensional structure
- (C) Have linear structure
- (D) None of these

Answer: Option B

83. Neoprene is rendered non-inflammable, because of

- (A) Its cross-linked structure
- (B) Its linear chain structure
- (C) The presence of chlorine atoms in its monomer
- (D) The absence of chlorine atoms in its monomer

Answer: Option C

84. _____ is not a polyester fibre.

- (A) Terylene
- (B) Dacron
- (C) Nylon
- (D) Polyacrylonitrile

Answer: Option C

85. Buna-S is also called

- (A) Polyurethane
- (B) SBR
- (C) Teflon
- (D) Bakelite

Answer: Option B

86. In nylon-66, the first and second numbers (i.e., 6) respectively designate the number of carbon atoms present in the

- (A) Hexamethylene diamine and the ring
- (B) Hexamethylene diamine and the adipic acid
- (C) Adipic acid and the ring
- (D) None of these

Answer: Option B

87. Which of the following is not a polymer of two monomers?

- (A) Teflon
- (B) Bakelite
- (C) SBR
- (D) None of these

Answer: Option A

88. The monomer of poly vinyl chloride (PVC) is

- (A) Chloroethane
- (B) Ethylene dichloride
- (C) Ethyl chloride
- (D) Chloroform

Answer: Option A

89. Thermocol (expanded polystyrene) is not used for

- (A) Low temperature thermal insulation as in refrigerator and air conditioners
- (B) Acoustic control and ceiling for building
- (C) High temperature thermal insulation in furnaces
- (D) Packing of delicate electronic gadgets

Answer: Option C

90. Addition polymerisation takes place either by a free radical mechanism or ionic mechanism depending on the reagents used. Free radical polymerisation is catalyzed by _____, which decompose to give free radicals.

- (A) Organic peroxides
- (B) Sulphuric acid
- (C) Hydrofluoric acid
- (D) None of these

Answer: Option A

91. Most commonly used rubber vulcanisation agent is

- (A) Sulphur
- (B) Bromine
- (C) Platinum
- (D) Alumina

Answer: Option A

92. Out of all the elastomers, natural rubber has the longest elongation range & flexibility of the order of _____ percent.

- (A) 1-1000
- (B) 1000-1500
- (C) 1500-2000
- (D) 2000-2500

Answer: Option A

93. Liners of bags are usually made of

- (A) Polythene
- (B) PVC
- (C) Polypropylene
- (D) Polyesters

Answer: Option C

94. Bakelite is a/an

- (A) Addition polymer
- (B) Elastomer
- (C) Thermoplastic
- (D) None of these

Answer: Option D

95. _____ is an addition polymer

- (A) Nylon
- (B) Bakelite
- (C) Polythene
- (D) None of these

Answer: Option C

96. Density of high density polythene is about _____ gm/c.c.

- (A) 1.18
- (B) 1.05
- (C) 0.95
- (D) 0.99

Answer: Option C

97. Which of the following is an elastomer?

- (A) Thiokol
- (B) Phenol formaldehyde
- (C) Urea formaldehyde
- (D) Polystyrene

Answer: Option A

98. Non sulphonated hard bakelites are not used for making

- (A) Ion-exchange resins
- (B) Fountain pen barrels
- (C) Formica table tops
- (D) Combs

Answer: Option A

99. Plastic tubes & pipes are generally made by _____ moulding.

- (A) Injection
- (B) Transfer
- (C) Extrusion
- (D) Compression

Answer: Option C

100. The organic acid monomer in nylon-66 is

- (A) Sebacic acid
- (B) Terephthalic acid
- (C) Adipic acid
- (D) Benzoic acid

Answer: Option C

101. Diphenylamine is added to rubber to

- (A) Vulcanise it
- (B) Protect it from deterioration on exposure to air
- (C) Make it non-inflammable
- (D) Make it thermosetting

Answer: Option B

102. Which of the following polymers is used for making a non stick coating on frying pans?

- (A) Bakelite
- (B) Teflon
- (C) Perspex
- (D) PVC

Answer: Option B

103. Temperature maintained in the emulsion polymerisation reactor for PVC manufacture is about _____ ° C.

- (A) -20
- (B) 50
- (C) 250
- (D) 500

Answer: Option B

104. Which of the following polymers has the tendency of decomposing before melting?

- (A) Polystyrene
- (B) Nylon
- (C) PVC
- (D) None of these

Answer: Option C

105. Plastic articles are normally produced by _____ moulding.

- (A) Green sand
- (B) Injection
- (C) Shell
- (D) Dry sand

Answer: Option B

106. Synthetic polymer produced by using terephthalic acid and ethylene glycol is

- (A) Terylene
- (B) Nylon-66
- (C) PVC
- (D) Polystyrene

Answer: Option A

107. Low pressure Zeigler process for the manufacture of polythene uses a catalyst which is

- (A) Ni
- (B) V_2O_5
- (C) Fe
- (D) Aluminium triethyl combined with titanium tetrachloride

Answer: Option D

108. Buna-S is also known as

- (A) Teflon
- (B) PTFE
- (C) SBR
- (D) Polycrylates

Answer: Option C

109. Pick out the wrong statement.

- (A) Denier is defined as weight in gm of 9000 metres length of a fibre, while tex is defined as weight in gm of 1000 metres length of fibre
- (B) Crimp is a measure of the difference between the length of the straightened and unstraightened fibre
- (C) Dacron fibres, acrylic fibres, viscose rayon fibres & cellulose acetate fibres are all prepared by wet spinning
- (D) Nylon fibres have greater water absorption capacity than polyester fibres

Answer: Option C

110. Flexible plastic pipes are made of

- (A) High density polyethylene (HDPE)
- (B) Low density polyethylene (LDPE)
- (C) Polypropylene
- (D) Unsaturated polyester

Answer: Option B

111. Cellulose acetate has very high film permeability among all the polymers of the order of 5000 gm/100 m². Which of the following polymers has the maximum film elongation (of the order of 100%)?

- (A) Water impermeable cellophane
- (B) Polythene
- (C) Cellulose acetate
- (D) Teflon

Answer: Option B

112. 90% of the caprolactam is converted to nylon-6 on its condensation polymerisation in the reactor maintained at a temperature of _____ °C.

- (A) -5
- (B) 10-30
- (C) 250-280
- (D) 500-600

Answer: Option C

113. The physical state in which polymers exist is

- (A) Melts & rubber like state
- (B) Amorphous glassy state
- (C) Partially crystalline state
- (D) All (A), (B) and (C)

Answer: Option D

114. Ebonite is a/an

- (A) Highly vulcanised rubber
- (B) Natural rubber
- (C) Unvulcanised raw rubber
- (D) Adhesive

Answer: Option A

115. Alkyd resin is a/an

- (A) Polyamide
- (B) Polyester
- (C) Polyolefin
- (D) Addition polymer

Answer: Option B

116. Due to its excellent permeability to air/gas and oxidation resistance, the tubes of automobile tyres is made of

- (A) Cold SBR

- (B) Butyl rubber
 - (C) Bunai N
 - (D) Buna S
- Answer: Option B

117. Polycaprolactam (Nylon - 6) is produced by the condensation polymerisation of caprolactam at 240-280°C in which the conversion of caprolactam is about _____ percent.

- (A) 50
- (B) 75
- (C) 90
- (D) 99

Answer: Option C

118. Polymerisation product of C_2F_4 (carbon tetrafluoride) is called P.T.F.E. (poly chloro tetra fluoro ethylene). It is also called

- (A) Polyurethane
- (B) Silicone rubber
- (C) Teflon
- (D) Epoxy resin

Answer: Option C

119. Ion exchange resins are made of

- (A) Lucite
- (B) Sulphonated Bakelite
- (C) Polystyrene
- (D) Teflon

Answer: Option B

120. Dacron is a/an

- (A) Polyester
- (B) Unsaturated polyester
- (C) Polyamide
- (D) Inorganic polymer

Answer: Option A

121. Bristles of tooth brushes are made of

- (A) Nylon-6
- (B) Nylon-66
- (C) Polystyrene
- (D) PVC

Answer: Option B

122. Which of the following is not present in bagasse fibre?

- (A) Cellulose
- (B) Lignin
- (C) Pentogens
- (D) None of these

Answer: Option D

123. Most of the plastics are safe to be used upto a maximum temperature of _____ °C.

- (A) 100
- (B) 150
- (C) 350
- (D) 450

Answer: Option B

124. Which of the following is generally not used as cord for synthetic rubber tyre casing?

- (A) Dacron
- (B) Nylon
- (C) Cellulose
- (D) None of these

Answer: Option C

125. Contact lenses for eyes are made of Perspex, which is nothing but

- (A) poly-methyl-methacrylate

- (B) Polystyrene
 - (C) Unsaturated polyester
 - (D) Polypropylene
- Answer: Option A

126. Addition of plasticisers to polymers results in partial neutralisation of intermolecular forces of attraction between the macro-molecules thereby increasing its

- (A) Tensile strength
 - (B) Chemical resistance
 - (C) Flexibility
 - (D) All (A), (B) & (C)
- Answer: Option C

127. Which of the following is not a polyolefin?

- (A) Polystyrene
 - (B) Polypropylene
 - (C) Neoprene
 - (D) None of these
- Answer: Option C

128. Neoprene is chemically known as

- (A) Polybutadiene
 - (B) Styrene butadiene rubber (SBR)
 - (C) Polyurethane
 - (D) Poly chloroprene
- Answer: Option D

129. Vulcanisation of raw rubber makes it

- (A) Soft
 - (B) Less elastic
 - (C) Plastic
 - (D) Tacky
- Answer: Option B

130. Polycondensation of saturated dicarboxylic acid with polyhydric alcohol produces

- (A) Epoxy resin
 - (B) Polyamide
 - (C) Alkyd resin
 - (D) Phenolic resin
- Answer: Option C

131. Poly-methyl-methacrylate, which is an acrylic resin, is also called

- (A) Thiokol
 - (B) Plexiglass or Lucite
 - (C) Dacron
 - (D) Teflon
- Answer: Option B

132. Reaction of dimethyl terephthalate (DMT) and ethylene glycol produces

- (A) Nylon-6
 - (B) Dacron
 - (C) Polyester
 - (D) PVC
- Answer: Option B

133. Alkyd resin cannot be used for making

- (A) Plasticiser
 - (B) Paint & varnish
 - (C) Fibres
 - (D) Film forming materials
- Answer: Option C

134. Polyvinyl chloride (PVC) is

- (A) A thermosetting material
- (B) A condensation polymerisation product

(C) Made by employing emulsion polymerisation

(D) None of these

Answer: Option C

135. Buna-N is also called

(A) Butyl rubber

(B) Nitrile rubber

(C) Neoprene

(D) Thiokol

Answer: Option B

136. Which of the following is a copolymer?

(A) PVC

(B) Bakelite

(C) Polythene

(D) Teflon

Answer: Option B

137. Molecular weight of polymers are in the range of

(A) 10 to 10^3

(B) 10^2 - 10^7

(C) 10^7 - 10^9

(D) 10^9 - 10^{11}

Answer: Option B

138. _____ scrap can be recycled & reutilised.

(A) Bakelite

(B) Epoxy resin

(C) Polythene

(D) None of these

Answer: Option C

139. Branched chain polymers as compared to linear polymers have

(A) Higher melting point

(B) Higher tensile strength

(C) Lower density

(D) None of these

Answer: Option C

140. Nitrile rubber is produced by the polymerisation of

(A) Acrylonitrile & butadiene

(B) Acrylonitrile & styrene

(C) Isobutylene & isoprene

(D) None of these

Answer: Option A

141. Viscose rayon is

(A) Cellulose nitrate

(B) Regenerated cellulose nitrate

(C) Regenerated cellulose acetate

(D) None of these

Answer: Option D

142. Epoxy resin is

(A) Not used for surface coating

(B) A good abrasive

(C) An elastomer

(D) A polyester

Answer: Option B

143. Pick out the correct statement.

(A) Plastics are good conductors of heat and electricity

(B) All the polymers are highly crystalline in nature

(C) Polymers can be vaporised by heating to a very high temperature

(D) The liquid polymer becomes greasy, then waxy and finally solid on increasing the degree of polymerisation

Answer: Option D

144. Lavatory cisterns are normally made of

- (A) Expanded polystyrene
- (B) Saturated polyester
- (C) Perspex
- (D) PVC

Answer: Option A

145. Starting material for the production of butadiene in India is

- (A) Naphthalene
- (B) Benzol
- (C) Ethyl alcohol
- (D) Phthalic anhydride

Answer: Option C

146. Which of the following polymers does not belong to the class of Polyacrylate polymer?

- (A) PMMA
- (B) Polyacrylonitrile
- (C) Poly Ethyl acrylate
- (D) None of these

Answer: Option D

147. Low density polythene as compared to high density polythene is

- (A) Harder
- (B) Tougher
- (C) Chemically inert
- (D) More flexible

Answer: Option D

148. Vinyl flooring is done using _____ sheets.

- (A) Polypropylene
- (B) PVC
- (C) Polythene
- (D) Polyvinyl acetate

Answer: Option B

149. Hot drink (e.g., tea) cups are usually made of

- (A) Polystyrene
- (B) Polythene
- (C) Polypropylene
- (D) PVC

Answer: Option A

150. Main constituent of natural rubber is

- (A) Polystyrene
- (B) Polyisoprene
- (C) Polybutadiene
- (D) Poly chloroprene

Answer: Option B

151. _____ is a copolymer.

- (A) Nylon-66
- (B) Polypropylene
- (C) PVC
- (D) Poly tetra fluoro ethylene

Answer: Option A

152. Peptizers like aromatic mercaptans (e.g. thiophenes) are added in rubber to

- (A) Protect rubber goods from attack by oxygen & ozone present in the atmosphere
- (B) Reduce its viscosity to permit easier processing
- (C) Reduce the time of vulcanisation and quantity of vulcanising agent
- (D) Increase its viscosity

Answer: Option B

153. The inter particle forces between linear chains in nylon-66 are _____ bonds.

- (A) Hydrogen
- (B) Covalent
- (C) Ionic
- (D) None of these

Answer: Option A

154. Paper like thin plastic articles can be produced by

- (A) Blow moulding
- (B) Vacuum thermo forming
- (C) Injection moulding
- (D) None of these

Answer: Option B

155. Polypropylene is preferred to polythene, because the former is

- (A) Non-inflammable
- (B) Harder
- (C) Stronger
- (D) Both (B) & (C)

Answer: Option D

156. Plasticisers are added to synthetic plastics to

- (A) Impart flexibility
- (B) Improve workability during fabrication
- (C) Develop new improved properties not present in the original resin
- (D) All (A), (B) and (C)

Answer: Option D

157. Polystyrene is a light, transparent, thermoplastic material used for making

- (A) Toys and combs
- (B) Packaging bags
- (C) Non-sticking utensils
- (D) Electrical insulation

Answer: Option A

158. All thermoplastic, thermosetting & elastic materials can be processed in a extrusion machine, however it cannot be used for the production of plastic

- (A) Filaments
- (B) Pipes
- (C) Buckets
- (D) Tubings

Answer: Option C

159. Rayon is superior to cotton in making gauge for wound treatment, because rayon

- (A) Is a synthetic polymer
- (B) Does not stick to the wound unlike cotton
- (C) Can absorb over 90% of its own weight of water
- (D) Both (B) and (C)

Answer: Option B

160. Tubeless tyres are made of _____ rubber, which is a co-polymer of isoprene & isobutylene.

- (A) Nitrile
- (B) Silicone
- (C) Neoprene
- (D) Butyl

Answer: Option D

161. The repeating units of PTFE are

- (A) $\text{Cl}_2\text{CH}-\text{CH}_3$
- (B) $\text{F}_2\text{C}=\text{CF}_2$
- (C) $\text{F}_3\text{C}-\text{CF}_3$
- (D) $\text{FCIC}=\text{CF}_2$

Answer: Option B

162. Polymerisation process in which two or more monomers of chemically different nature take part is called

- (A) Copolymerisation
- (B) Addition polymerisation
- (C) Chain polymerisation
- (D) None of these

Answer: Option A

163. Condensation polymerisation is not involved in the manufacture of

- (A) Teflon
- (B) Polythene
- (C) Terylene
- (D) Nylon

Answer: Option B

164. Starting material for the production of SBR is

- (A) Ethyl alcohol
- (B) Ethylene
- (C) Both (A) & (B)
- (D) Neither (A) nor (B)

Answer: Option C

165. Linear polymers are normally

- (A) Thermosetting
- (B) Thermoplastic
- (C) Elastometric
- (D) Having extremely high softening point

Answer: Option B

166. The monomer of natural rubber is

- (A) DMT
- (B) Isoprene
- (C) 2 methyl-1 propane
- (D) Both (B) and (C)

Answer: Option D

167. _____ polymer is produced by the copolymerisation of vinyl chloride-vinyl acetate.

- (A) Fibrous
- (B) Leathery
- (C) Rubbery
- (D) Hard

Answer: Option B

168. Cellulose is the main constituent of most _____ fibres.

- (A) Acrylic
- (B) Spandex
- (C) Synthetic
- (D) Natural

Answer: Option D

169. _____ moulding is used for shaping of thermosetting plastics exclusively.

- (A) Compression
- (B) Injection
- (C) Transfer
- (D) Extrusion

Answer: Option C

170. Benzoyl chloride is not used as a catalyst in the manufacture of

- (A) Polystyrene
- (B) Polyvinyl acetate
- (C) Polypropylene
- (D) Polyvinyl chloride-co-vinyl acetate

Answer: Option C

171. Pick out the wrong statement.

- (A) Polymeric fibres are never produced by addition polymerisation
- (B) Property of tackiness is exhibited by uncured rubber
- (C) Sharp melting point is not observed in thermoplastic polymers
- (D) Polythene generally has an excellent resistance to ultra violet rays

Answer: Option A

172. Visco-elastic behaviour exhibited by plastics is a _____ like behaviour.

- (A) Solid
- (B) Liquid
- (C) Combination of solid & liquid
- (D) Neither solid nor liquid

Answer: Option C

173. Poly Vinyl chloride (PVC) is a _____ material.

- (A) Thermoplastic
- (B) Thermosetting
- (C) Fibrous
- (D) Chemically active

Answer: Option A

174. Molecular weight of a polymer is equal to the molecular weight of the repeat unit multiplied by the degree of polymerisation. What is the molecular weight of poly vinyl chloride (PVC), if its degree of polymerisation is 800?

- (A) 50000
- (B) 51600
- (C) 49200
- (D) 50800

Answer: Option A

175. Polycaprolactam is nothing but

- (A) Orlon
- (B) Nylon-66
- (C) Nylon-6
- (D) Saran

Answer: Option C

176. _____ tubes are good substitute for human blood vessels on heart by-pass operation.

- (A) PVC
- (B) Polythene
- (C) Teflon/Dacron
- (D) Polystyrene

Answer: Option C

177. Plasticisers are high boiling liquids added to plastic polymers to impart toughness and flexibility at ordinary temperature. Which of the following is not a plasticiser?

- (A) Ethylene glycol
- (B) Stearic acid esters
- (C) Tricresyl phosphate
- (D) Esters of phthalic acid

Answer: Option A

178. Vulcanisation of rubber

- (A) Decreases its tensile strength
- (B) Increases its ozone & oxygen reactivity
- (C) Increases its oil & solvent resistance
- (D) Converts its plasticity into elasticity

Answer: Option D

179. Which of the following polymers shows the highest anti-tacking properties?

- (A) Melamine formaldehyde resin
- (B) Phenolic resin
- (C) Epoxy resin
- (D) Alkyd resin

Answer: Option A

180. Trade name of _____ is neoprene.

- (A) Polychlorophrene
- (B) Polyisoprene
- (C) Polytetrafluoroethylene
- (D) Poly vinyl acetate

Answer: Option A

181. Which of the following is a polymer of Hexamethylene diamine and adipic acid?

- (A) Nylon-6
- (B) Nylon-66
- (C) Nylon-6, 10
- (D) Epoxy resin

Answer: Option B

182. Condensation of bisphenol A with phosgene produces _____ which possess very good heat resistance.

- (A) Polyurethane
- (B) Polysulfone
- (C) Polycarbonate
- (D) Polyester

Answer: Option C

183. _____ is a thermosetting plastic.

- (A) PVC
- (B) Polythene
- (C) Bakelite
- (D) Polystyrene

Answer: Option C

184. Which of the following low molecular weight ($<10^4$), soft & waxy polymer is used in 'chewing gum'?

- (A) Cellulose acetate
- (B) Polyvinyl acetate
- (C) Thiokol
- (D) PVC

Answer: Option B

185. Vulcanisation of rubber does not increase its

- (A) Elasticity
- (B) Plasticity
- (C) Ductility
- (D) None of these

Answer: Option B

186. Dacron is a/an

- (A) Addition polymer
- (B) Condensation polymer
- (C) Polyester
- (D) Both (B) and (C)

Answer: Option D

187. Phenol formaldehyde is produced by condensation polymerisation. It is also known as

- (A) Teflon
- (B) Bakelite
- (C) Polyester
- (D) Nylon-66

Answer: Option B

188. Dacron (or Treylene) fibres as compared to nylon fibres have

- (A) Better heat & acid resistant properties
- (B) Poorer resistance to alkalis
- (C) Poorer dyeability
- (D) All (A), (B) and (C)

Answer: Option D

189. Vulcanisation of rubber does not increase its

- (A) Softness
- (B) Oxidation resistance
- (C) Weight & strength
- (D) Elasticity & water solubility

Answer: Option A

190. The major component of acrylic fibres is

- (A) Polyamides
- (B) Polyolefins
- (C) Polyacrylonitrile
- (D) Polyesters

Answer: Option C

191. _____ is a natural fibre.

- (A) Cellulose
- (B) Dacron
- (C) Nylon-6
- (D) None of these

Answer: Option A

192. Zeigler - Natta catalyst ($\text{AlR}_3 - \text{AlCl}_3$) is used in the polymerisation of

- (A) Vinyl acetate
- (B) Vinyl chloride
- (C) Propylene
- (D) Styrene

Answer: Option C

193. Synthetic rubber

- (A) Deforms, if stretched to double of its original dimension
- (B) Is brittle at low temperature
- (C) Is softer at higher temperature
- (D) Is highly permeable to air & water and is readily attacked by chemicals & atmospheric gases

Answer: Option D

194. _____ is produced by polymerisation of chloroprene.

- (A) Thiokol (a polysulphide rubber)
- (B) Butyl rubber
- (C) Neoprene
- (D) Polyurethane rubber

Answer: Option C

195. Which of the following is a natural polyamide fibre?

- (A) Wool
- (B) Silk
- (C) Cotton
- (D) None of these

Answer: Option A

196. Thiokol is nothing but

- (A) Polysulphide rubber
- (B) Polyamide fibre
- (C) Engineering plastic
- (D) Expanded polystyrene

Answer: Option A

197. Which of the following is not a natural polymer?

- (A) Nucleic acids e.g. RNA and DNA
- (B) Polysaccharides
- (C) Polyisoprene
- (D) Polyurethane

Answer: Option D

198. Crystallisation of polymers is an undesirable property. Crystallisation of celluloid is prevented by adding

- (A) Glycerol
- (B) Nitro cellulose
- (C) Camphor
- (D) None of these

Answer: Option C

199. Flexible foam (for mattresses) are usually made of

- (A) PVC
- (B) Silicone rubber
- (C) Polyurethanes
- (D) Polyamides

Answer: Option C

200. Neoprene is a

- (A) Monomer
- (B) Synthetic rubber
- (C) Polyester
- (D) None of these

Answer: Option B

201. Melt spinning of polymers involves the forcing of polymer melt through spinnerates (fine holes) into an atmosphere kept at a temperature lower than the melting point of the polymer, which causes the fine diameter polymer melt to harden into filaments. Melt spinning is not used in case of the _____ fibres.

- (A) Acrylic
- (B) Polyester
- (C) Nylon 6:6
- (D) Polypropylene

Answer: Option A

202. Polymerisation of poly functional monomers produces polymers having

- (A) Good mechanical strength
- (B) Low viscosity
- (C) Low melting point
- (D) None of these

Answer: Option A

203. Polycaprolactam is also known as

- (A) Nylon-66
- (B) Nylon-6
- (C) Teflon
- (D) SBR

Answer: Option B

204. β - glucose is the monomer of

- (A) Cellulose
- (B) Starch
- (C) Protein
- (D) None of these

Answer: Option A

205. The major constituent of laminate of safety glass, which holds the broken glass, pieces in their places during accident (and thus minimises the danger from flying glass fragments) is

- (A) Polyvinyl alcohol
- (B) Polyvinyl acetate
- (C) Polyvinyl butyral
- (D) PVC

Answer: Option C

206. _____ of SBR is adversely affected, if more quantity of styrene is added to butadiene during its co-polymerisation to produce SBR.

- (A) Percent elongation
- (B) Resilience

- (C) Freezing point
 - (D) Strength
- Answer: Option B

207. Phthalic anhydride is used

- (A) In making PVC
 - (B) As plasticisers
 - (C) In insecticides manufacture
 - (D) For making nylon-6
- Answer: Option B

208. _____ is a homopolymer.

- (A) Neoprene
 - (B) Bakelite
 - (C) Nylon-66
 - (D) Terylene
- Answer: Option A

209. The generic chemical name for the class of polymers which are commercially known as nylons is

- (A) Polyolefins
 - (B) Polyamide
 - (C) Polyacrylate
 - (D) Polyurethane
- Answer: Option B

210. Acrylonitrile is mainly used in the _____ industry.

- (A) Polymer
 - (B) Printing
 - (C) Dyeing
 - (D) Photographic
- Answer: Option A

211. Elastomers are

- (A) Thermosetting material
 - (B) Exemplified by protein derivatives
 - (C) Having high flexural strength
 - (D) Having very high tensile strength and heat resistance
- Answer: Option C

212. Pick out the wrong statement.

- (A) Polystyrene is a thermoplastic polymer
 - (B) Protein is a natural polymer
 - (C) Neoprene is a natural rubber
 - (D) Polythene is a copolymer, while SBR is a homopolymer
- Answer: Option C

213. Typical solvent polymerisation reaction conditions for the production of high density polythene by Zeigler process is

- (A) 7 kgf/cm² and 70 °C
 - (B) 1000 kgf/cm² and 100°C
 - (C) 7 kgf/cm² and 700°C
 - (D) 1 kgf/cm² (gage) and 70°C
- Answer: Option A

214. Silicone is a/an

- (A) Monomer
 - (B) Inorganic polymer
 - (C) Thermoplastic material
 - (D) A natural polymer
- Answer: Option B

215. Catalyst used in the production of high density polythene by low pressure Ziegler process is

- (A) Aluminium triethyl activated with TiCl₄
- (B) Platinum

- (C) Molybdenum
 - (D) Nickel
- Answer: Option A

216. _____ fibres are made of polyamides.

- (A) Dacron
- (B) Nylon
- (C) Rayon
- (D) Orion

Answer: Option B

217. In a linear polymer, the monomeric units are linked together to form long straight chains. The cross linked or branched chain polymers compared to linear polymers have higher

- (A) Densities
- (B) Melting point
- (C) Tensile strength
- (D) Hardness, rigidity & brittleness

Answer: Option D

218. A chain growth polymerisation reaction consists of three different types of reaction namely initiation reaction, propagation reaction & termination reaction. Chain growth polymerisation reaction is not involved in the manufacture of

- (A) Siloxane elastomers
- (B) Polyamides
- (C) Vinyl polymers
- (D) Urea-formaldehyde resins

Answer: Option D

219. Thermal pyrolysis of ethylene dichloride produces

- (A) Trichloroethylene
- (B) Vinyl chloride
- (C) Ethanol amine
- (D) Ethylene oxide

Answer: Option B

220. Which of the following is stretched into fibres?

- (A) Saturated polyester
- (B) Unsaturated polyester
- (C) Isoprene
- (D) Bakelite

Answer: Option A

221. Melamine formaldehyde resin which has a very high anti tacking properties, is not used for the

- (A) Electrical insulation purpose
- (B) Tanning of leather
- (C) Strengthening of plaster of Paris
- (D) Decorative laminates

Answer: Option C

222. Terylene is

- (A) Same as Dacron
- (B) A polyester
- (C) Both (A) & (B)
- (D) Neither (A) nor (B)

Answer: Option C

223. In case of wet spinning of polymers, the polymer solution is forced through spinnerates into, a coagulating bath to give a filament form. Wet spinning is not used in case of the _____ fibres.

- (A) Viscose rayon
- (B) Acrylic
- (C) Polyvinyl acetate
- (D) Saturated polyester

Answer: Option D

224. Which of the following is the lowest cost plastic commercially available?

- (A) Polythene
- (B) Teflon
- (C) Bakelite
- (D) PVC

Answer: Option A

225. Which of the following is not the commercial name of poly-methyl-methacrylate (PMMA)?

- (A) Perspex
- (B) Lucite
- (C) Plexiglass
- (D) Teflon

Answer: Option D

226. Bakelite (phenol-formaldehyde) resin cannot be used as

- (A) Decorative paint
- (B) Decorative laminates
- (C) Electrical insulation
- (D) Glass reinforced plastics

Answer: Option A

227. Thermosetting resins/polymers as compared to thermoplastic ones are

- (A) Soluble in all organic solvents
- (B) More brittle
- (C) Formed by addition polymerisation only
- (D) Easily reshaped & reused

Answer: Option B

228. Polycaprolactam is

- (A) Nylon-6
- (B) Nylon-66
- (C) Dacron
- (D) Rayon

Answer: Option A

229. Polyvinyl acetate is never used for making

- (A) Moulded articles
- (B) Fibres
- (C) Adhesives
- (D) All (A), (B) & (C)

Answer: Option A

230. Branched chain polymers compared to linear polymers have higher

- (A) Density
- (B) Tensile strength
- (C) Melting point
- (D) Degree of irregularity in atomic packing

Answer: Option D

231. In condensation polymerisation as compared to addition polymerisation

- (A) The monomers are unsaturated compounds
- (B) No co-product is lost
- (C) The monomers contain two functional groups
- (D) Generally only one monomer is involved

Answer: Option C

232. Polyvinyl chloride (PVC)

- (A) Is produced by Polycondensation reaction
- (B) Uses either emulsion or suspension polymerisation methods
- (C) Can be made thermosetting by adding a plasticiser
- (D) Softening temperature is 200°C

Answer: Option B

233. Scouring is a finishing operation during the manufacture of fibre, which aims at _____ of fibres.

- (A) Improving the stretchability
- (B) Dyeing/colouring
- (C) Detergent solution washing
- (D) Glycol soaking

Answer: Option C

234. Polyesters are manufactured by the Polycondensation reaction of

- (A) Dibasic acid with dihydric alcohol
- (B) A single monomer
- (C) Carboxylic acid with ethylene
- (D) Inorganic acid with ethylene glycol

Answer: Option A

235. Condensation polymerisation of caprolactam is carried out in the reactor maintained at a temperature of _____ °C for producing nylon-6.

- (A) -20 to 25
- (B) 50 to 75
- (C) 100 to 150
- (D) 250-280

Answer: Option D

236. Polyurethane cannot be used to make

- (A) Automobile cushion
- (B) Thermal insulation in refrigerator
- (C) Coating and adhesive
- (D) Fibre reinforced plastic (FRP)

Answer: Option D

237. Density of low density polythene is about _____ gm/c.c.

- (A) 0.38
- (B) 0.56
- (C) 0.81
- (D) 0.91

Answer: Option D

238. Thermosetting plastic materials

- (A) Can be repeatedly melted
- (B) Is useful for melt casting
- (C) Cannot be melted after forming
- (D) Is useful for spinning

Answer: Option C

239. Poly-tetra-fluoro ethylene (PTFE) is known as

- (A) Dacron
- (B) Teflon
- (C) Bakelite
- (D) Celluloid

Answer: Option B

240. Dacron is a

- (A) Condensation polymerisation product of Hexamethylene diamine and adipic acid
- (B) Condensation polymerisation product of dimethyl terephthalate (DMT) and ethylene glycol
- (C) Thermosetting material
- (D) None of these

Answer: Option D

241. Nylon-66 is manufactured from

- (A) Adipic acid and Hexamethylene diamine
- (B) Caprolactam
- (C) Maleic anhydride and Hexamethylene diamine
- (D) Dimethyl terephthalate (DMT) and ethylene glycol

Answer: Option A

242. Collapsible tubes for tooth paste are produced by _____ extrusion.

- (A) Direct
- (B) Indirect
- (C) Impact
- (D) None of these

Answer: Option C

243. Properties of a polymer is affected by the

- (A) Chain length
- (B) Intermolecular forces
- (C) Both (A) and (B)
- (D) None of these

Answer: Option C

244. Which of the following polymers are produced by employing all bulk polymerisation, solution polymerisation & suspension polymerisation technique of addition (chain) polymerisation?

- (A) PVC
- (B) Bakelite
- (C) PTFE
- (D) Epoxy resin

Answer: Option A

245. In a co-polymer, the repeating units contain two different monomers. Which of the following is a copolymer?

- (A) PTFE
- (B) Buna-S
- (C) PMMA
- (D) Polycaprolactam

Answer: Option B

246. Polymers are classified into four categories namely thermosetting, thermoplastic, elastomer and fibre depending upon their

- (A) Molecular sizes
- (B) Magnitude of intermolecular forces
- (C) Resistance to heat
- (D) Polymerisation mechanism

Answer: Option B

247. In step growth polymerisation, condensation occurs in a stepwise manner with or without the elimination of smaller molecules. An example of step growth polymerisation product is

- (A) Terylene
- (B) Polybutadiene
- (C) PVC
- (D) Polypropylene

Answer: Option A

248. Terylene is a/an

- (A) Addition polymer
- (B) Poly amide
- (C) Homopolymer
- (D) None of these

Answer: Option D

249. Polycondensation reaction of polymerisation

- (A) Does not produce linear polymers
- (B) Produces only thermoplastic material
- (C) Produces epoxy polymers
- (D) Does not need any catalyst

Answer: Option C

250. Polymethyl methacrylate (PMMA) which is also known as Perspex and is produced by bulk polymerisation of methyl methacrylate is not a _____ polymer.

- (A) Thermoplastic
- (B) Thermosetting

- (C) Linear
 - (D) Glass like transparent
- Answer: Option B

251. Cellulose content in bamboo fibre is about _____ percent.

- (A) 10
- (B) 20
- (C) 50
- (D) 85

Answer: Option C

252. _____ is a copolymer.

- (A) Styrene butadiene rubber (SBR)
- (B) Neoprene
- (C) PVC
- (D) None of these

Answer: Option A

253. Pick out the wrong statement.

- (A) Addition polymers are generally formed by chain growth polymerisation
- (B) Condensation polymers are generally formed by step growth polymerisation
- (C) Teflon is formed by step growth polymerisation
- (D) Bakelite is formed by step growth polymerisation

Answer: Option C

254. Rain coats are made of

- (A) Neoprene
- (B) PVC
- (C) Polyurethane
- (D) SBR

Answer: Option B

255. Which of the following is generally not drawn into fibre?

- (A) Polyamide
- (B) Unsaturated polyesters
- (C) Saturated polyesters
- (D) Polyacrylonitrile

Answer: Option B

256. Which of the following is not a natural fibre?

- (A) Silk
- (B) Viscose rayon
- (C) Wool
- (D) Cotton

Answer: Option B

257. Gutta percha rubber is

- (A) Soft & tacky at room temperature
- (B) An isomer of natural rubber
- (C) A thermosetting resin
- (D) Recovered by coagulation of rubber latex

Answer: Option B

258. Rayon is a _____ fibre.

- (A) Cellulosic
- (B) Polyamide
- (C) Polyester
- (D) Natural

Answer: Option A

259. Chain growth polymerisation is a process, in which the monomers are added in a chain fashion, and it requires an initiator to produce the free radical. An example of chain growth polymerisation products is

- (A) Nylon-66
- (B) Teflon

- (C) Polyester
 - (D) Bakelite
- Answer: Option B

260. The starting material used for the manufacture of caprolactam is

- (A) Ethyl benzene
- (B) Cyclohexane
- (C) Ethylene glycol
- (D) DMT

Answer: Option B

261. Which of the following is a copolymer?

- (A) Polystyrene
- (B) SBR
- (C) PTFE
- (D) Polypropylene

Answer: Option B

262. The only natural thermoplastic resin, which is a product of animal life is

- (A) Rosin
- (B) Shellac
- (C) Amber
- (D) Copal

Answer: Option B

263. Size range of polymer molecules varies from _____ metre.

- (A) 10^{-2} to 10^{-5}
- (B) 10^{-4} to 10^{-7}
- (C) 10^{-1} to 10^{-2}
- (D) 10^{-8} to 10^{-10}

Answer: Option A

264. Nylon-66 is a polyamide of

- (A) Hexamethylene diamine and adipic acid
- (B) Adipic acid and methyl amine
- (C) Vinyl chloride and formaldehyde
- (D) None of these

Answer: Option A

265. Polyhexamethylene adipamide is also known as

- (A) Bakelite
- (B) Nylon-66
- (C) Epoxy resin
- (D) Silicone rubber

Answer: Option B

266. Commercial production of polypropylene employs _____ polymerisation.

- (A) Emulsion
- (B) Suspension
- (C) Solution
- (D) Bulk

Answer: Option C

267. Thermoplastic materials

- (A) Do not soften on application of heat
- (B) Are heavily branched molecules
- (C) Are solvent insoluble
- (D) None of these

Answer: Option D

268. Rexine (also called artificial leather), which is used for making table cover, automobile seat cover, shoes etc. is made by coating thick cloth with molten

- (A) Teflon
- (B) Bakelite
- (C) SBR

(D) PVC
Answer: Option D

269. Cross linked polymers are

- (A) Thermoplastic
- (B) Thermosetting
- (C) Either (A) or (B)
- (D) Fibres only

Answer: Option B

270. Plexiglass (also called Lucite) because of its high optical transparency is used for making lenses. It is chemically

- (A) Polymethyl methacrylate (PMMA)
- (B) Polytetrafluoroethylene (PTFE)
- (C) Polycarbonates
- (D) Phenolic resins

Answer: Option A

271. Nylon-66 compared to nylon-6 has

- (A) Lower melting point
- (B) More abrasion resistant properties
- (C) Higher hardness
- (D) All (A), (B) and (C)

Answer: Option C

272. Nylon-6 is a

- (A) Polyamide
- (B) Thermosetting resin
- (C) Polyester
- (D) None of these

Answer: Option A

273. Unbreakable crockeries are made from _____ polymers.

- (A) Polystyrene
- (B) Melamine
- (C) Polystyrene
- (D) Polyurethane

Answer: Option B

274. Adipic acid is an intermediate in the manufacture of

- (A) Perspex
- (B) Nylon-66
- (C) Polystyrene
- (D) Bakelite

Answer: Option B

275. In step growth polymerisation, generally only one type of reaction & some basic mechanism is involved. Step growth polymerisation reaction is not involved in the manufacture of

- (A) Cross linked polystyrene
- (B) Phenol formaldehyde resins
- (C) Polyesters
- (D) Polyamides

Answer: Option A

276. Styrene butadiene rubber is commercially manufactured by

- (A) Bulk polymerisation
- (B) Suspension polymerisation
- (C) Solution polymerisation
- (D) Emulsion polymerisation

Answer: Option D

277. Which of the following rubbers has the widest service temperature range (-75 to 275°C)?

- (A) Butyl rubber
- (B) Silicon rubber

- (C) Nitrile rubber
 - (D) Silicone rubber
- Answer: Option D

278. Pick out the wrong statement.

- (A) Polymers made of only one monomer is called homopolymer
- (B) Polymers made of more than one monomer is called copolymer or mixed polymer
- (C) Vulcanised rubber is more elastic than natural rubber
- (D) The intermolecular forces in thermoplastic polymers are intermediate to that of elastomers & fibres

Answer: Option A

279. _____ is normally used for the manufacture of refrigerator components and transistor parts.

- (A) Polypropylene
- (B) Polystyrene
- (C) Polyester
- (D) Polyurethane

Answer: Option B

280. _____ is not a condensation polymer.

- (A) Teflon
- (B) Nylon-66
- (C) Dacron
- (D) Polystyrene

Answer: Option A

281. Acrilan fibres used for making cloth, carpet & blankets, which is a hard, horny & high melting polymeric material is nothing but

- (A) Polyacrylonitrile
- (B) Polyamide
- (C) Saturated polyester
- (D) Alkyd resin

Answer: Option A

282. Softening point of high density polythene is about _____ °C.

- (A) 85
- (B) 135
- (C) 165
- (D) 205

Answer: Option B

283. Styrene butadiene rubber (SBR) is never used for making

- (A) Coated fabrics
- (B) Front wheel tyres of aeroplanes (i.e., heavy duty tyres)
- (C) Gaskets
- (D) Soles of shoes

Answer: Option B

284. Which of the following is not an elastomer?

- (A) Polyisoprene
- (B) Neoprene
- (C) Nitrile-butadiene
- (D) None of these

Answer: Option D

285. The process involved in converting rubber into a thin sheet or coating it on fabric is called

- (A) Extrusion
- (B) Mastication
- (C) Calendaring
- (D) Vulcanisation

Answer: Option C

286. Thermosetting materials

- (A) Are cross-linked molecules

- (B) Soften on application of heat
 - (C) Are solvent soluble
 - (D) None of these
- Answer: Option A

287. In nylon-6, the number 6 represents the total number of

- (A) Carbon atoms in the ring
- (B) Carbon atoms in the linear polymer chain
- (C) Nitrogen atoms in the ring
- (D) Hydrogen atoms in the ring

Answer: Option B

288. Polymers are

- (A) Micro-molecules
- (B) Macromolecules
- (C) Sub-micromolecules
- (D) None of these

Answer: Option B

289. Thermocol is a spongy, porous, rigid or flexible foamed plastic, obtained by blowing gas/air through molten

- (A) Saturated polyester
- (B) Polyurethane
- (C) Polystyrene
- (D) Either (B) or (C)

Answer: Option D

290. _____ polythene is most prone to stress-cracking

- (A) High density
- (B) Low density
- (C) Cross-linked
- (D) Linear low density

Answer: Option A

291. Which of the following is not a condensation polymer?

- (A) Bakelite
- (B) Melamine polymer
- (C) Poly-methyl-methacrylate (PMMA)
- (D) None of these

Answer: Option C

292. Styrene which is a monomer for the production of polystyrene, is commercially produced by the

- (A) Catalytic dehydrogenation of ethyl benzene
- (B) Dehydration of ethyl alcohol followed by hydrogenation
- (C) Reacting ethylene oxide with acetaldehyde
- (D) Fermentation of starch

Answer: Option A

293. Phenol formaldehyde

- (A) Employs addition polymerisation
- (B) Employs condensation polymerisation
- (C) Is a monomer
- (D) Is an abrasive material

Answer: Option B

294. Most of the fibre forming polymers are crystalline in nature, one of the exceptions being _____ which is amorphous in nature.

- (A) Nylon
- (B) Polyacrylonitrile
- (C) Polypropylene
- (D) Polyester

Answer: Option B