



CHEMISTRY

BOOKS - MBD CHEMISTRY (ODIA ENGLISH)

POLYMERS

Question Bank

1. Write two uses of Bakelite ?

2.	What is	Teflon	?	Write two	of	its	uses.
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3. What is Buna-S?

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4. How Buna-S is synthesized ?

5. What is neoprene ? Give its one use.
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6. Give an example of natural polymer.
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7. What is the monomer of natural rubber ?
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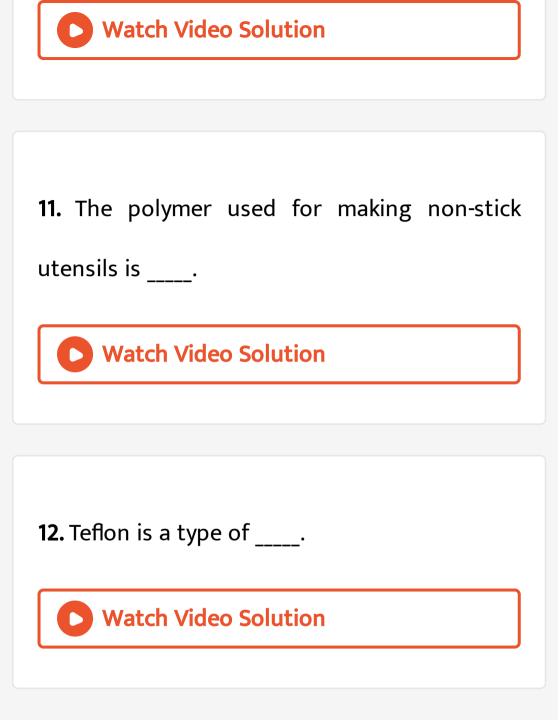
8.	Write	one	use	of	decron.
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9. What is orlon?

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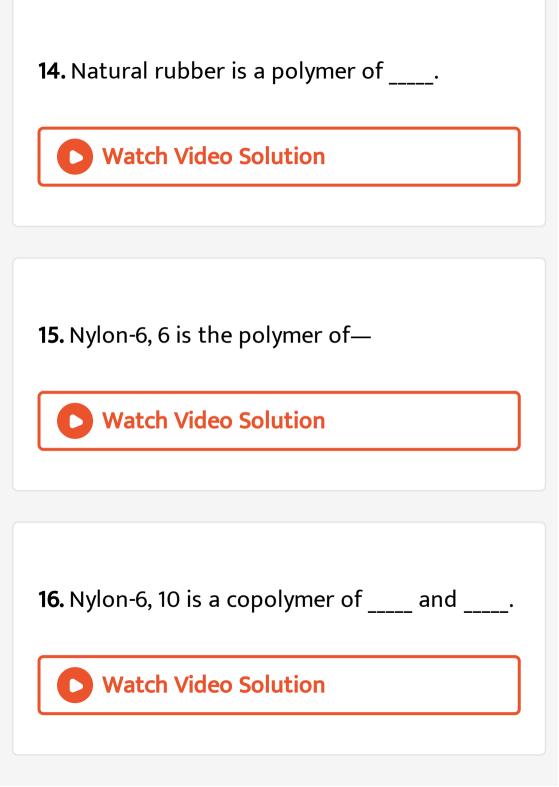
10. Write the formulae of the monomers of teflon.

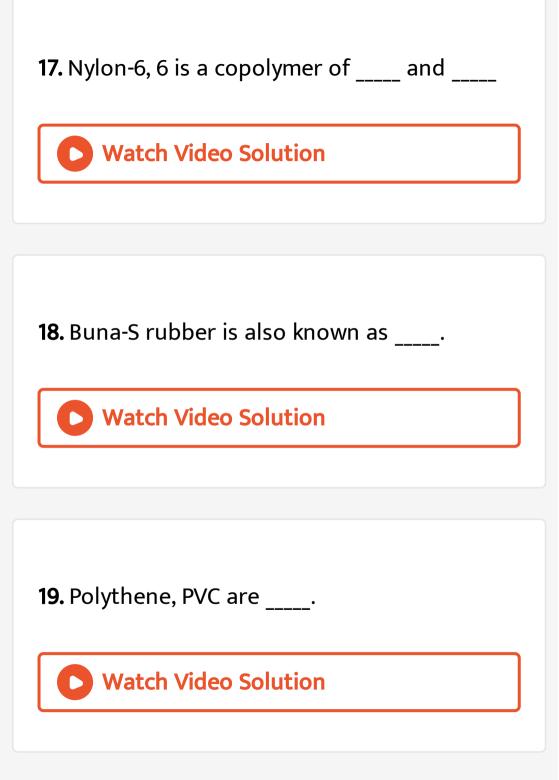


- **13.**____ is natural elastomer.
 - A. Polyisoprene
 - **B.** Polyster
 - C. Chloroprene
 - D. None









20. Formula of Hexamethylenediamine is _____.

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21. Bakelite is
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22. Neoprene is condensation polymer. Is it true or false?

23. Natural rubber is a polymer of acrylonitrile.true ot false
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24. Bakelite is obtained by substitution reaction. Is it true or false?

25. Bakelite is not a condensation polymer. Is it

true or false

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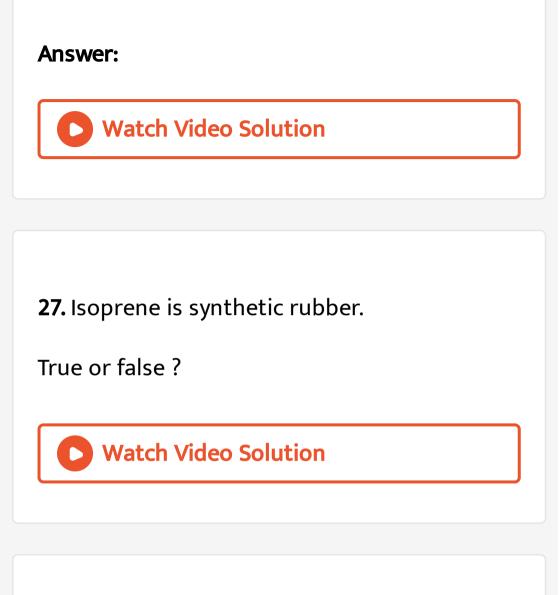
26. Teflon is a polymer of _____.

A. ethylene

B. tetrachloroethylene

C. tetrafluoroethane

D. tetrafluoroethylene



28. A raw material used in making nylon is butadiene. True or False?



29. PVC is a polymer of _____.

A. ethylene

B. tetrafluoroethene

C. chloroethene

D. none

Answer:

30. Terylene is called a polyamide , true or false





31. The monomer of Teflon polymer is

difluoroethene.true or false?

32. Polystyrene is an example of _____ polymer.

A. condensation

B. addition

C. natural

D. homopolymer

Answer:

33. _____ is used to make non-stick cookware.

A. PVC

B. Teflon

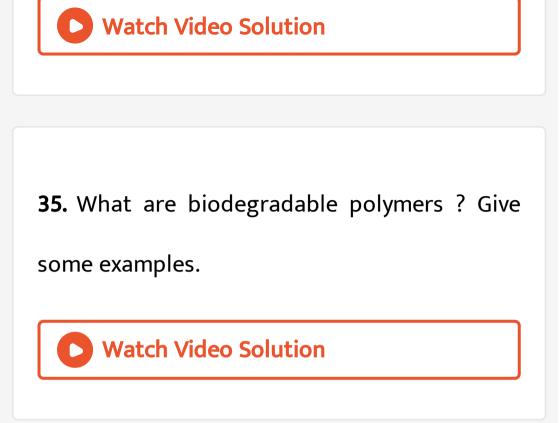
C. Fluon

D. None

Answer:



34. Teflon is a polyamide. Is it true or false?



36. Distinguish between thermosetting and

thermoplastic polymers with examples.



37. Distinguish between the terms homopolymer and copolymer. Give one example of each.

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38. How is bakelite made and what is its major

use ? Why is it called thermo-setting polymer?

39. Distinguish between addition polymer and

condensation polymer.

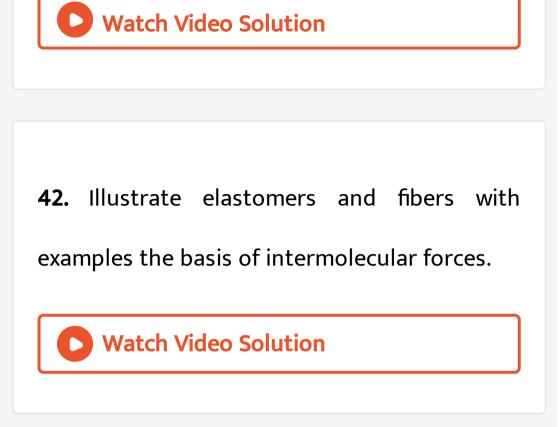


40. Write chemical equation to prepare Buna-

S?



41. What are polymers? Give two examples.



43. Explain thermoplastics and thermosetting

polymers in the light of intermolecular forces.

Give examples of each.

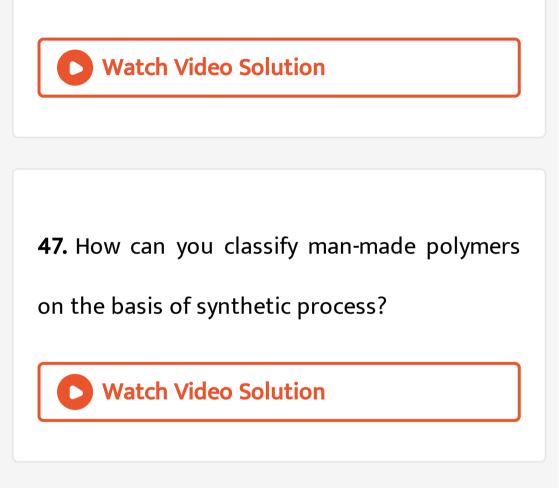
44. Illustrate linear polymers and branched chain polymers with examples.

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45. Discuss homopolymers and copolymers

with examples.

46. Illustrate natural polymers.



48. Briefly describe the synthesis of the polymer PVC and its specific uses.



49. Briefly describe the synthesis and the specific uses of the polymer Neoprene.

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50. Briefly describe the synthesis and specific

uses of polymer Teflon.

51. Write the names and structures of the

monomers of the following polymers.

Buna-S



52. Illustrate the synthesis of the following

polymer with uses. Nylon-6,6



53. Illustrate the synthesis of polymer nylon-

6,10 with its uses.

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54. Illustrate the synthesis of the following

polymer with uses. Nylon-6,6

55. Which polymer is generally used in carrybags:

A. Polyester

B. Bakelite

C. Polyethylene

D. Alkylresin

Answer: C

56. Caprolactum can be obtained from:

A. Benzaldehyde

- B. Cyclohexane
- C. Benzophenone
- D. Adipic acid

Answer: B



57. Vulcanized rubber resists:

- A. Wear and tear due to friction
- B. Cryogenic temperature
- C. High temperature
- D. Action of acids

Answer: A

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58. The monomer units of silicone, a water repellant, acid resistant and heat resistant polymer is:

A. Si

B. SiO_2

 $\mathsf{C.}\,R_2Si(OH)_2$

D. None of these

Answer: C

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59. Which of the following does not cause pollution:

A. Burning of rubber

B. Burring of petrol

C. Use of solar energy

D. Coal

Answer: C

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60. A polymer of prop-2-ene nitrile is called:

A. Saran

B. Orlon

C. Dacron

D. Terylene

Answer: B

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61. Synthetic rubber is:

A. Polyester

B. Polyamide

C. Polysaccharide

D. Poly (halodiene)

Answer: D

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62. The turbidity of a polymer solution measures:

A. Light absorbed by the solution

B. Light transmitted by the solution

C. Light scattered by the solution

D. None of the above

Answer: C

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63. Peptide bond is a key feature in:

A. Polysaccharide

B. Proteins

C. Nucleotide

D. Vitamins

Answer: B

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64. Synthetic human hair wigs are made from a Co-polymer of vinyl chloride and acrylonitrile and is called:

A. PVC

B. Polyacrylonitrile

C. Cellulose

D. Dynel

Answer: D



65. Natural rubber is a polymer of:

A. Trans isoprene

B. Cis isoprene

C. Cis and trans isoprene

D. None of these

Answer: B

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66. Synthetic rubber is a polymer which resrmble natural rubber is:

A. Neoprene

B. Chloroprene

C. Glyptal

D. Nylone

Answer: A

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67. The widely used PVC is a polymerised product of:

A. $CH_2 = CH_2$

 $\mathsf{B.}\,CH_2=CCl_2$

 $\mathsf{C.}\,CH_2ClCH_2Cl$

 $\mathsf{D.}\, CH_2 = CHCl$

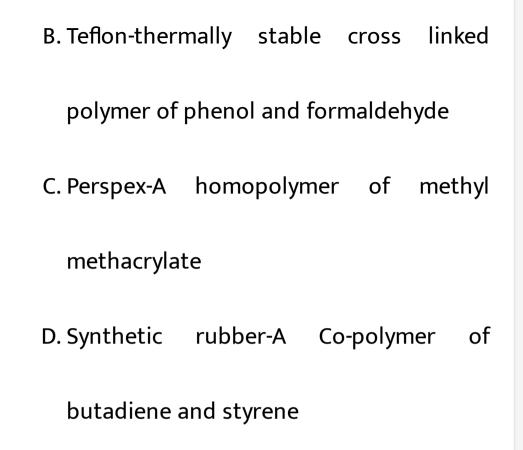
Answer: D

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68. Which of the following pairs is not correctly matched:

A. Terylene-condensation polymer of

terephthalic acid and ethylene glycol



Answer: B

69. An example of natural biopolymer is :

A. Teflon

B. Nylon-6,6

C. Rubber

D. DNA

Answer: D

70. Which of the following is a step growth polymer:

A. Bakelite

B. Polyethylene

C. Teflon

D. PVC

Answer: A

71. Symbolic name for teflon is:

A. PTFE

B. PCTFE

C. PVC

D. None of these

Answer: A



72. The bakelite is made from phenol and fromaldehyde. The intial reaction between the two compounds is an example of:

A. Aromatic electrophilic substitution

B. Aromatic nucleophilic substitution

C. Free radical reaction

D. Aldol reaction

Answer: A

73. PMMA is the polymer of:

A. Methyl methacrylate

B. Methylacrylate

C. Methacrylate

D. Ethylacrylate

Answer: A

74. Co-polymer is not:

A. Nylon-6

B. Nylon-6,6

C. Bakelite

D. Polyethene

Answer: B

75. A raw material used in making nylon-6,6 is:

A. Adipic acid

B. Butadiene

C. Ethylene

D. Methyl methacrylate

Answer: A

76. Orlon is a polymer of:

A. Styrene

B. Acrylonitrile

C. Vinyl chloride

D. Tetrafluoro ethylene

Answer: B

77. The compound used in the manufacture of

terylene is:

A. Phthalic acid

B. Caprolactam

C. p-benzene dicarboxylic acid

D. none

Answer: C

78. Which of the following belong to the class

of natural polymers:

A. Proteins

B. Cellulose

C. Rubber

D. All of the above

Answer: D

79. Toluene di-isocyanate is used to prepare:

A. Ployesters

B. Polyamides

C. Ploycarbonates

D. Ployurethanes

Answer: D

80. Polymerisation in which two or more chemically different monomers take part is called:

A. Addition polymerisation

B. Copolymerisation

C. Chain polymerisation

D. Homo polymerisation

Answer: B

81. Acetate rayon is prepared from:

A. Acetic acid

B. Glycerol

C. Starch

D. Cellulose

Answer: D

82. Which one of the followings is employed in

making explosives:

A. Methanol

B. Oxalic acid

C. Glycerol

D. Urea

Answer: C

83. Polymers have:

A. Absolute mol.wt.

B. Average mol.wt.

C. Low mol.wt.

D. Absolute m.pt.

Answer: B



84. Teflon is a polymer of

A. $(-CF_2 - CF_2 -)_n$

- B. $(-CCl_2 CCl_2 -)_n$
- $\mathsf{C.}\left(-CBr_2-CBr_2-\right)_n$
- D. CF_2Cl_2

Answer: A

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85. The product of reaction,

 $CH_3CH_2OH + Cu \xrightarrow{300^{\circ}C} ?$

(Reduced)

A. PVC

B. Nylon

C. Terylene

D. Polamide

Answer: A

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86. Natural rubber is a polymer derived from:

A. Propylene

B. Ethylene

C. Butadiene

D. Isoprene

Answer: D

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87. Which process involves the formation of

polystyrene from styrene:

A. Polymerisation

B. Racemization

C. Condensation

D. Reversible reaction

Answer: A

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88. Rubber is heated with sulphur and the process is known:

A. Galvanization

B. Vulcanization

- C. Bessemerization
- D. Sulphonation

Answer: B

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89. Nylon-6,6 is an example of:

A. Polystyrene

B. Polyisopropene

C. Polypropylene

D. Polyamide

Answer: D



90. Teflon, styrene and neoprene are all

A. Copolymers

B. Condensation polymers

C. Homopolymers

D. Monomers

Answer: C

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91. The catalyst used in the manufacture of polythene by Zeigler method is:

A. Titanium tetrachloride and triphenyl

aluminum

B. Titanium tetrachloride and triethyl

aluminum

C. Titanium dioxide

D. Titanium isoperoxide

Answer: B

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92. A copolymer is obtained by polymerisation

of:

A. One type of monomer units

- B. Two types of monomer units
- C. Either of these
- D. None of these

Answer: A



93. Which can be used as monomer in a polymerisation reaction:

A. C_2H_6

$\mathsf{B.}\, C_2 H_5 Cl$

$\mathsf{C}.\, C_2 H_4$

D. CH_3Cl

Answer: C

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94. A copolymer is obtained by polymerisation

of:

A. One type of monomer units

B. More than one type of monomer units

C. Either of these

D. None of these

Answer: B

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95. Thermoplastics are:

A. Linear polymers

B. Soften or melt on heating

C. Molten polymer can be moulded in

desired shape

D. All

Answer: D

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96. Thermosets are:

A. Cross-linked polymers

B. Do not melt or soften on reheating C. Cross -linking is usually developed at the time of moulding where they harden irreversibly

D. All

Answer: D

97. Buna-N is a polymer of:

- A. 1,3-butadiene and acrylonrile
- B. Acrylonitrile
- C. Styrene
- D. None of these

Answer: A



98. Which are true for terpolymer:

- A. Contains three different monomers
- B. ABS plastic
- C. A polymer of acrylonitrile, butadiene

and styrene

D. All

Answer: D

99. Which are true for elastomers:

A. These are synthetic polymers

possessing elasticity

B. These possess very weak intermolecular

forces

of attactions between polymer chains

C. Vulcanised rubber is an example of

elastomer

D. All





100. Prespex or plexiglass is a polymer of:

- A. Methyl methacrylate
- B. Methyl acrylate
- C. Acrylonitrile
- D. None of these

Answer: A



101. GlypItal or alkyds is polymer of:

A. Ethylene glycol and phthalic acid

B. Ethylene and phathalic acid

C. Phthalic acid and acetylene

D. None of these

Answer: A

102. Nylon-6,6 is an example of:

A. Hexamethylene and adipic acid

B. Hexamethlene and sebasic acid

C. Caprolactum

D. None of these

Answer: A

103. Which one is protein fibre:

A. Cotton

B. Rayon

C. Silk

D. Polyester

Answer: C



104. Which one is chain growth polymer:

A. Polypropylene

B. Glyptal

C. Nylon-6,6

D. Nylon-6

Answer: A



105. Polymer obtained by condensation polymerisation is :

A. Polythene

B. Teflon

C. PVC

D. Phenol Formaldehyde resin

Answer: D

106. If N_1 , N_2 , N_3 Are the number of molecules with molecular masses M_1 , M_2 , M_3 Respectively, than mass average molecular mass is expressed:

A.
$$\frac{\sum N_i M_i^2}{\sum N_i M_i}$$
B.
$$\frac{\sum N_i M_i}{\sum N_i}$$
C.
$$\frac{\sum M_i^2}{\sum N_i}$$
D.
$$\frac{\sum N_i M_i^2}{\sum M_i}$$

Answer: A



107. Which of the following polymer can be remelted time to time without producing any change?

A. Thermosetting polymers

B. Thermoplastic polymers

C. Bakelite

D. Malamine

Answer: B

108. In vulcanisation of rubber:

A. Suiphur reacts to from new compound

B. Sulphur cross-links are introduced

C. Sulphur forms a very thin protective

layer over rubber

D. All of the statements are correct

Answer: B

109. The weakest interparticle forces are present in:

A. Thermosetting polymers

B. Thermoplastic polymers

C. Fibres

D. Elastomers

Answer: D

110. The starting materials of PCTFE are:

A. Monochlorotrifluoro ethylene

B. Tetrafluorethylene

C. Vinyl chloride

D. Styrene

Answer: A

111. Cellulose is a condensation polymer of:

A. Maltose

B. β -glucose

C. α -glucose

D. β -fructose

Answer: B

112. Chemical name of malamine is :

- A. 2,4-diamino-1,3,5-triazine
- B. 2-amino-1,3,5-triazine
- C. 2,4,6-triamino-1,3,5-triazine
- D. 1,3,5-triamino-2,4,6-triazine

Answer: C

113. The prosses of valcanisation of rubber was

introducedby:

A. Zeigler

B. MRF

C. Charles good year

D. Wohler

Answer: C

114. The abbreviation PDI refers to:

A. Name of the polymer

B. poly dispersity index of polymer

C. Application

D. Poly diagonal index

Answer: B



115. Which one is a polymer compound :

A. SO_2

$\mathsf{B.}\,CO_2$

 $\mathsf{C.}\,CH_4$

 $\mathsf{D}.\,PVC$

Answer: D



116. Which of the following is not an example

of addition polymer:

A. Polyethene

B. Polystyrene

C. Neoprene

D. Terylene

Answer: D

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117. Which of the following contains isoprene

units:

A. Natural rubber

B. Nylon-6,6

C. Polyethylene

D. Dacron

Answer: A

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118. Example of addition polymer is:

A. Buna -s

B. Bakelite

C. Nylon-6

D. Melmac

Answer: A

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119. Which of the following is an addition polymer:

B. Glyptals

C. Terylene

D. Nylons

Answer: A

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120. Which of the following is not a thermoset:

A. Glyptals

B. Bakelite

C. Melamine - formaldehyde polymer

D. Styrene-butadiene rubber

Answer: D

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121. Which of the following is not a synthetic

polymer:

A. polyisoprene

B. polybutadiene

C. Polyethylene terephthalate

D. Polyethylene

Answer: A

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122. Which of the following is not a natural

polymer :

A. Glycogen

B. Cellulose

C. Pepsin

D. Polybutadiene

Answer: D



123. Which of the following is not a fibre :

A. Terylene

B. Nylon

C. Polyacrylonitrile

D. Polychloroprene

Answer: D

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124. Nylon-6,6 is a strong crystalline fibre due to the presence of intermolecular forces which are:

A. H-bonds

B. Covalent bonds

C. Van der waal's attractive forces

D. Ionic bonds

Answer: A

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125. Teflon is made by polymerisation of:

A. Tetrafluoroethene

B. Isobutene

C. Vinyl acetate

D. Methyl methacrylate

Answer: A

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126. Which of the following cannot be grouped as polyolefins:

A. Polyethene

B. polypropene

C. polystyrene

D. Polyoxyethene

Answer: D

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127. Polymerisation of chloroethylene gives the

polymer:

A. Polyethene

B. PVC

C. Teflon

D. Nylons

Answer: B

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128. polymers are:

A. Micromolecule

B. Macromolecules

C. Sub -micromolecules

D. None of these





129. Which of the following is a condensation polymer:

A. Polystyrene

B. Neoprene

C. PAN

D. Poly (ethylene terphthalate)

Answer: D



130. Bakelite is :

A. Addition polymer

B. Elastomer

C. Thermoplastic

D. Thermosetting

Answer: D



131. Nylon-6,6 is a polyamide of:

A. Vinyl chloride and formaldehyde

B. Adipic acid and methyl amine

C. Adipic acid and hexamethylene diamine

D. Formaldehyde and melamine

Answer: C

132. Buna-S is a :

A. Natural polymer

B. Synthetic polymer

C. Sulphur polymer

D. None of these

Answer: B

133. The monomer units of PTFE are:

A. $Cl_2CH - CH_3$

B. $F_2C = CF_2$

C. $F_3C - CF_3$

D. $FClC = CF_2$

Answer: B

134. Which one is a homopolymer:

A. Bakelite

B. Nylon-6,6

C. Terylene

D. Neoprene

Answer: D

135. Natural rubber is a:

A. Polyester

B. Polyamide

C. Polyisoprene

D. Polysaccharide

Answer: C

136. Which of the following is commonly called

a ..polyamide..:

A. Rayon

B. Nylon

C. Terylene

D. Orlon

Answer: B

137. Terylene is a:

A. Polyamide

B. Polyester

C. Polyether

D. Long chain hydrocarbon

Answer: B



138. Protein is a polymer of:

A. Glucose

- B. Terephthalic acid
- C. Amino acids
- D. None of these

Answer: C



139. Which one among the following is a thermosetting plastic :

A. PVC

B. PVA

C. Bakelite

D. None of these

Answer: C

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140. The fibre obtained by the condensation of

hexamethylene diamine and adipic acid is :

A. Dacron

B. Nylon-6,6

C. Rayon

D. Teflon

Answer: B

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141. Buna rubber is a polymer of :

A. 1,3-butadiene

B. Vinyl acetate

C. Styrene

D. None

Answer: A

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142. Buna -S is a copolymer of:

A. Styrene and 1,3-butadine

B. Styrene and ethylene

C. 1,3-butadiene and ethylene

D. None

Answer: A



143. Melamine plastic crockery is a polymer of:

A. HCHO and melamine

B. HCHO and ethylene

C. Melamine and ethylene

D. None

Answer: A

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144. Bakelite is :

A. HCHO and malamine

B. HCHO and phenol

C. Phenol and ethylene

D. None





145. Which of the following is not a copolymer

?

A. Polyisoprene

B. polychloroprene

C. Thiokol rubber

D. Nitrille rubber





146. Which of the following natural product is

not a polymer:

A. cotton

- B. Cellulose rayon
- C. silk

D. wool





147. Which is considered to be the first synthetic polymer:

A. Nylon

B. Terylene

C. LDPE

D. Bakelite

Answer: D



148. Number average molecular mass M_n of synthetic and weigth average mol. Mass $\bar{M_w}$ of synthetic polymer are related as :

A.
$$M_n < M_w$$

 $\mathsf{B.}\,M_n > M_w$

 $\mathsf{C}.\,M_n=M_w$

 $\mathsf{D}.\,M_n>M_w$

Answer: A

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149. To make PVC a flexible plastic , the additive used is called:

A. Filler

B. Antioxidant

C. Stabilizer

D. Plasticiser

Answer: D

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150. Condensation of caprolactam gives:

A. Nylon-6,6

B. Nylon-6

C. Nitrile rubber

D. Nylon -6,10





151. Which of the following is an inert polymer used in coating, particularly in non - sticking frying pans:

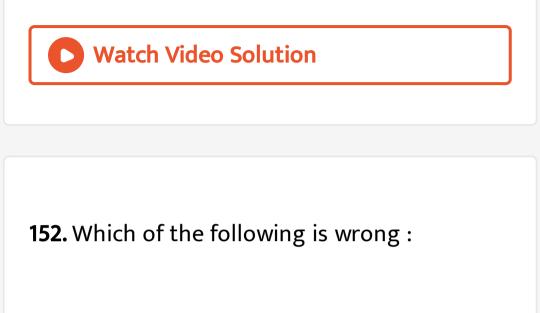
A. Teflon

B. Perspex

C. Bakelite

D. Orlon





- A. PMMA is called Plexiglas
- B. PTFE is called Teflon
- C. SBR is called natural rubber
- D. LDPE is called low density polyethylene

Answer: C



153. Which of the following is not a cellulose product,

A. Gun cotton

B. Celluloid

C. Rayon

D. Dacron

Answer: D





154. Nylons, polyesters and cotton all possess strength due to :

A. Intermolecular H-bonding

B. Vander waals' attraction

C. Dipole - dipole interaction

D. None of the above

Answer: A

155. Which of the following is not a natural polymer :

A. Starch

B. Cellulose

C. Glyptal

D. Glycogen

Answer: C

156. Natural fibre is :

A. Strach

B. cellulose

C. Rubber

D. Nylon-6

Answer: B



157. PDI for natural polymers is generally close

to:

A. Zero

B. 100

C. 1

D. 10

Answer: C

158. Strongest interparticle forces exist in:

A. Elastomers

B. Thermoplastics

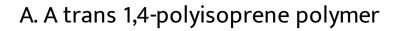
C. Fibers

D. Thermosetting polymer

Answer: D

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159. Natural rubber is a:



- B. A very hard meterial
- C. A synthetic polymer
- D. All of the statements are correct

Answer: D

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160. Natural silk and artificial silk differ in one

respect that one of them contains:

A. N

B.S

C. P

D. None

Answer: A



161. A co -polymer of vinyl chloride and vinylidene chloride is called:

A. Dynel

B. Saran

C. Vinylon

D. None of these

Answer: A

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162. A co -polymer of vinyl chloride and vinyl acetate is called:

A. Vinyon

B. PVCA

C. Dynel

D. Orlon

Answer: A

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163. A co -polymer of isobutylene and isoprene

is called:

A. Butyl rubber

B. Buna -S

C. Buna -N

D. Thiokol

Answer: A

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164. Which can absorb over 99% of its own mass of water and does not stick to wound:

A. Rayon

B. Guncotton

C. Thiokol

D. Saran

Answer: A

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165. Isoprene is used for making :

A. Rubber

B. Petrol

C. Liquid fuel

D. None

Answer: A

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166. The phenomenon involving the union of two or more molecules to form a new molecular aggregate is called :

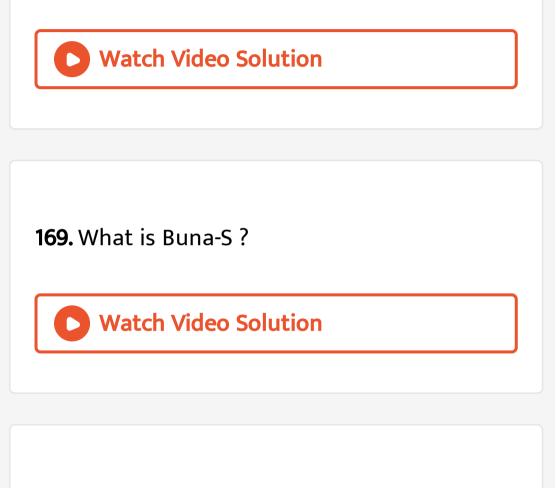
- A. Polarisation
- **B.** Polymerisation
- C. Photosensitisation
- D. Pasteurization

Answer: B

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167. Write two uses of Bakelite ?

168. What is Teflon ? Write two of its uses.



170. How Buna-S is synthesized ?

171. What is neoprene ? Give its one use.

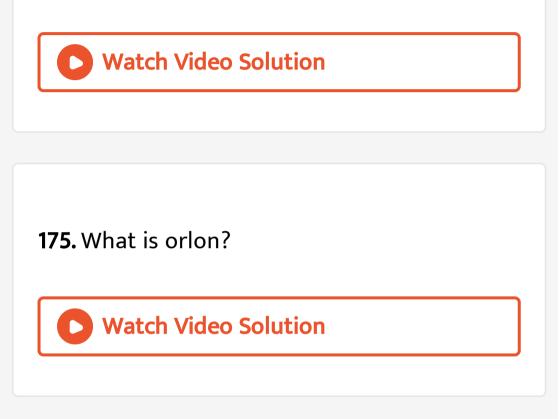


172. Give four examples of natural polymers.

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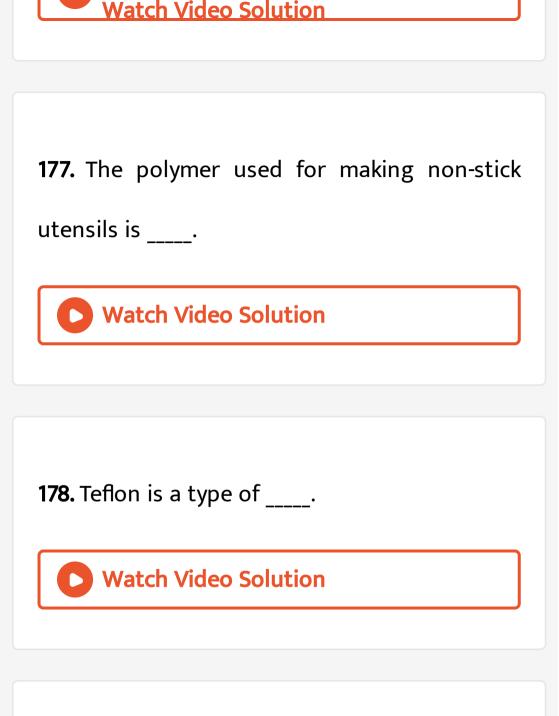
173. What is the monomer of natural rubber ?

174. Write one use of decron.

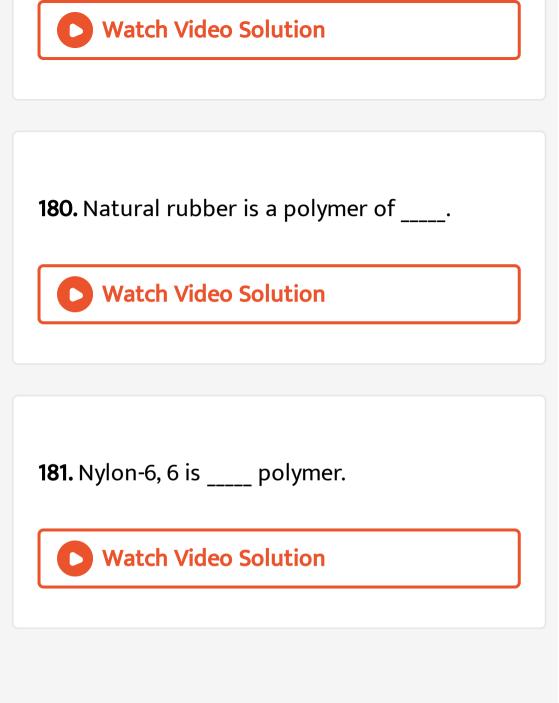


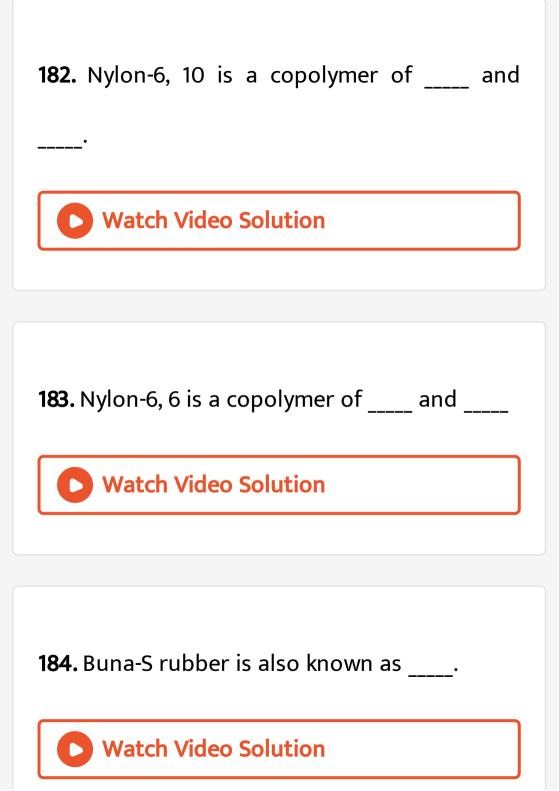
176. Write the formulae of the monomers of

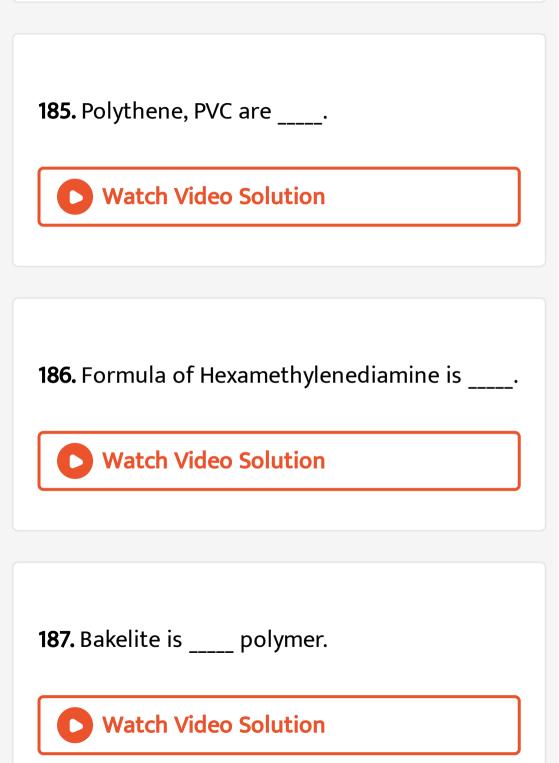
polythene and teflon.



179. _____ is natural elastomer.







188. Neoprene is condensation polymer. Is it

true or false?



189. Natural rubber is a polymer of acrylonitrile.true ot false

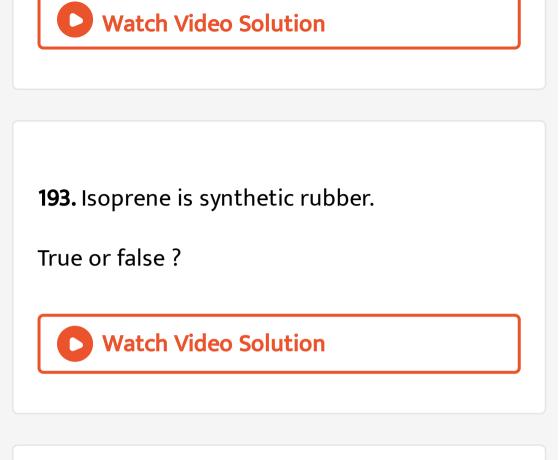
190. Bakelite is obtained by substitution
reaction. Is it true or false?
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191. Bakelite is not a condensation polymer. Is

it true or false



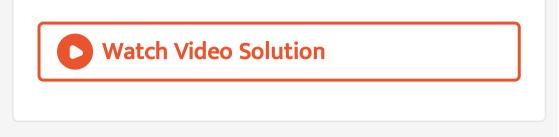
192. Teflon is a type of



194. A raw material used in making nylon is

butadiene. True or False?

195. Which is naturally occurring polymer?



196. Terylene is called a polyamide , true or

false ?

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197. The monomer of Teflon polymer is difluoroethene.true or false?





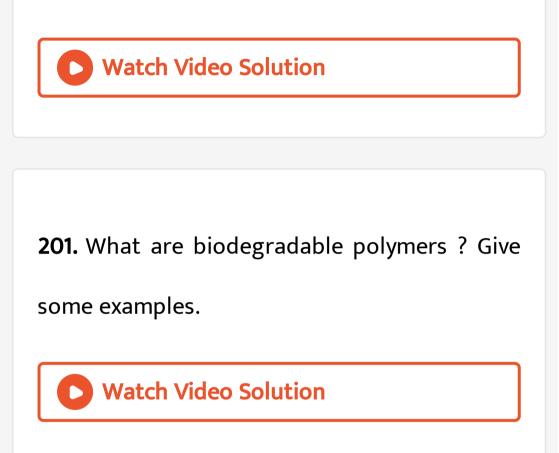
198. Polystyrene is not an example of addition

polymer.



199. _____ is used to make non-stick cookware.

200. Teflon is a polyamide. Is it true or false?



202. Distinguish between thermosetting and

thermoplastic polymers with examples.

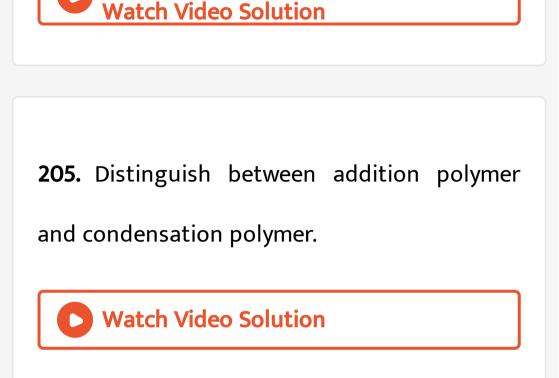


203. Distinguish between the terms homopolymer and copolymer. Give one example of each.

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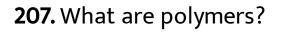
204. How is bakelite made and what is its major use ? Why is it called thermo-setting polymer?





206. What are elastomers ? Write chemical

equation to prepare Buna-S.

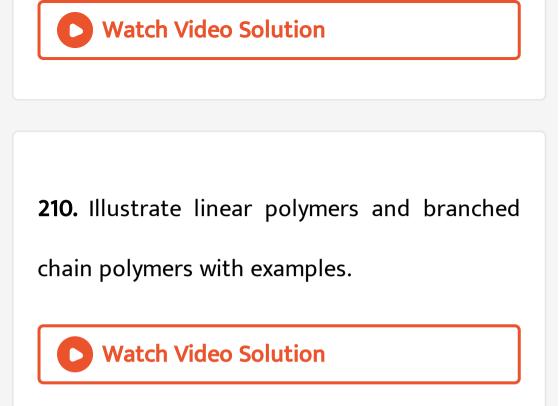




208. Illustrate elastomers and fibers with examples the basis of intermolecular forces.

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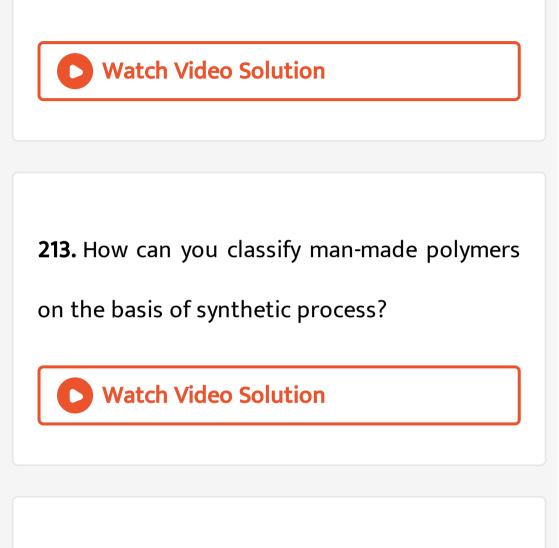
209. Explain thermoplastics and thermosetting polymers in the light of intermolecular forces. Give examples of each.



211. Discuss homopolymers and copolymers

with examples.

212. Illustrate natural polymers.



214. Briefly describe the synthesis of the polymer PVC and its specific uses.





215. Briefly describe the synthesis of the following polymers with specific uses. (ii) Neoprene

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216. Briefly describe the synthesis of the following polymers with specific uses. (iii) Teflon

217. Briefly describe the synthesis of the following polymers with specific uses. (iv) Buna-S

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218. Illustrate the synthesis of the following

polymer with uses. Nylon-6,6

219. Illustrate the synthesis of polymer nylon-

6,10 with its uses.

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220. Illustrate the synthesis of the following

polymers with uses. Bakelite

221. Which polymer is generally used in carrybags:

A. Polyester

B. Bakelite

C. Polyethylene

D. Alkylresin

Answer: C

222. Caprolactum can be obtained from:

A. Benzaldehyde

- B. Cyclohexane
- C. Benzophenone
- D. Adipic acid

Answer: B



223. Vulcanized rubber resists:

- A. Wear and tear due to friction
- B. Cryogenic temperature
- C. High temperature
- D. Action of acids

Answer: A

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224. The monomer units of silicone, a water repellant, acid resistant and heat resistant polymer is:

A. Si

B. SiO_2

 $\mathsf{C}.R_2SiO$

D. None of these

Answer: C

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225. Which of the following does not cause

pollution:

A. Burning of rubber

B. Burring of petrol

C. Use of solar energy

D. Coal

Answer: C

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226. A polymer of prop-2-ene nitrile is called:

A. Saran

B. Orlon

C. Dacron

D. Tetron

Answer: B

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227. Synthetic rubber is:

A. Polyester

B. Polyamide

C. Polysaccharide

D. Poly L(halodiene)

Answer: D

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228. The turbidity of a polymer solution measures:

A. A light absorbed by solution

B. Light transmitted by the solution

C. Light scattered by the solution

D. None of the above

Answer: C

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229. Peptide bond is a key feature in:

A. Polysaccharide

B. Proteins

C. Nucleotide

D. Vitamins

Answer: B

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230. Synthetic human hair wigs are made from a Co-polymer of vinyl chloride and acrylonitrile and is called:

A. PVC

B. Polyacrylonitrile

C. Cellulose

D. Dynel

Answer: D



231. Natural rubber is a polymer of:

A. Trans isoprene

B. Cis isoprene

C. Cis and trans isoprene

D. None of these

Answer: B

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232. Synthetic rubber is a polymer which resrmble natural rubber is:

A. Neoprene

B. Chloroprene

C. Glyptal

D. Nylone

Answer: A

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233. The widely used PVC is a polymerised product of:

A. $CH_2 = CH_2$

B. $CH_2 = \mathbb{C}l_2$

 $\mathsf{C.}\,CH_2ClCH_2Cl$

 $\mathsf{D.}\, CH_2 = CHCl$

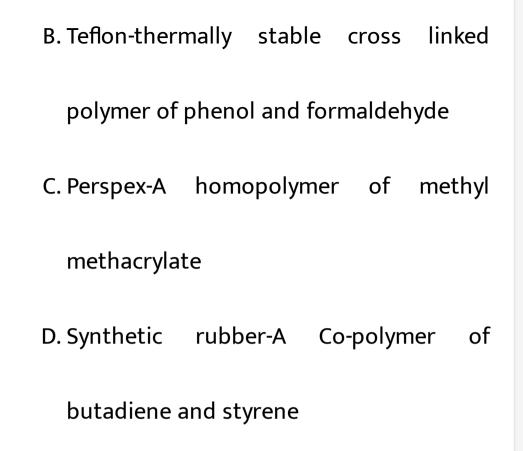
Answer: D

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234. Which of the following pairs is not correctly matched:

A. Terylene-condensation polymer of

terephthalic acid and ethylene glycol



Answer: B

235. An example of natural biopolymer is :

A. Teflon

B. Nylon-6,6

C. Rubber

D. DNA

Answer: D

236. Which of the following is a step growth

polymer:

A. Bakelite

B. Polyethylene

C. Teflon

D. PVC

Answer: A

237. Symbolic name for teflon is:

A. PTFE

B. PCTFE

C. PVC

D. None of these

Answer: A



238. The bakelite is made from phenol and fromaldehyde. The intial reaction between the two compounds is an example of:

A. Aromatic electrophilic substitution

B. Aromatic nucleophilic substitution

C. Free radical reaction

D. Aldol reaction

Answer: A

239. PMMA is the polymer of:

A. Methyl methacrylate

B. Methylacrylate

C. Methacrylate

D. Ethylacrylate

Answer: A

240. Co-polymer is:

A. Nylon-6

B. Nylon-6,6

C. Bakelite

D. Polyethene

Answer: B

241. A raw material used in making nylon-6,6 is:

A. Adipic acid

B. Butadiene

C. Ethylene

D. Methyl methacrylate

Answer: A

242. Orlon is a polymer of:

A. Styrene

B. Acrylonitrile

C. Vinyl chloride

D. Tetrafluoro ethylene

Answer: B

243. The compound used in the manufacture

of terylene is:

A. Phthalic acid

B. Caprolactam

C. p-benzene dicarboxylic acid

D. m-phthalic acid

Answer: C

244. Which of the following belong to the

class of natural polymers:

A. Proteins

B. Cellulose

C. Rubber

D. All of the above

Answer: D

245. Toluene di-isocyanate is used to prepare:

A. Ployesters

B. Polyamides

C. Ploycarbonates

D. Ployurethanes

Answer: D

246. Polymerisation in which two or more chemically different monomers take part is called:

A. Addition polymerisation

B. Copolymerisation

C. Chain polymerisation

D. Homo polymerisation

Answer: B

247. Acetate rayon is prepared from:

A. Acetic acid

B. Glycerol

C. Starch

D. Cellulose

Answer: D

248. Which one of the followings is employed

in making explosives:

A. Methanol

B. Oxalic acid

C. Glycerol

D. Urea

Answer: C

249. Polymers have:

A. Absolute mol.wt.

B. Average mol.wt.

C. Low mol.wt.

D. Absolute m.pt.

Answer: B

250. Teflon is :

A. $(-CF_2 - CF_2 -)_n$

 $\mathsf{B.}\left(-\mathbb{C}l_2-\mathbb{C}l_2-\right)_n$

C. (-CBr_2-CBr_2-)_n`

D. CF_2Cl_2

Answer: A

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251. The product of addition polymerisation reaction is:

A. PVC

B. Nylon

C. Terylene

D. Polamide

Answer: A

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252. Natural rubber is a polymer derived from:

A. Propylene

B. Ethylene

C. Butadiene

D. Isoprene

Answer: D

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253. Which process involves the formation of

polystyrene from styrene:

A. Polymerisation

- **B.** Racemization
- C. Candensation
- D. Reversible reaction

Answer: A

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254. Rubber is heated with sulphur and the

process is known:

A. Galvanization

B. Vulcanization

- C. Bessemerization
- D. Sulphonation

Answer: B

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255. Nylon-6,6 is an example of:

A. Polystyrene

B. Polyisopropene

C. Polypropylene

D. Polyamide

Answer: D



256. Teflon, styrene and neoprene are all

A. Copolymers

B. Condensation polymers

C. Homopolymers

D. Monomers

Answer: C

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257. The catalyst used in the manufacture of polythene by Zeigler method is:

A. Titanium tetrachloride and triphenyl

aluminum

B. Titanium tetrachloride and triethyl

aluminum

C. Titanium dioxide

D. Titanium isoperoxide

Answer: B

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258. A homopolymer is obtained by polymerisatation of:

A. One type of monomer units

- B. Two types of monomer units
- C. Either of these
- D. None of these

Answer: A



259. Which can be used as monomer in a polymerisation reaction:

A. C_2H_6

$\mathsf{B.}\, C_2 H_5 Cl$

$\mathsf{C.}\,C_2H_4$

D. CH_3Cl

Answer: C

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260. A copolymer is obtained by polymerisation of:

A. One type of monomer units

B. More than one type of monomer units

C. Either of these

D. None of these

Answer: B

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261. Thermoplastics are:

A. Linear polymers

B. Soften or melt on heating

C. Molten polymer can be moulded in

desired shape

D. All

Answer: D

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262. Thermosets are:

A. Cross-linked polymers

B. Do not melt or soften on heating

C. Cross -linking is usually developed at the

time of moulding where they harden

reversibly

D. All

Answer: D

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263. Buna-N is a polymer of:

- A. 1,3-butadiene and acrylonrile
- B. Acrylonitrile
- C. Styrene
- D. None of these

Answer: A

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264. Which are true for terpolymer:

A. Contains three monomers

B. ABS plastic

C. A polymer of acrylonitrile, but adiene and

styrene

D. Sulphonation

Answer: D

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265. Which are true for elastomers:

A. These are synthetic polymers possessing

elasticity

B. These possess very weak intermolecular

forces of attactions between polymer

chains

C. Vulcanised rubber is an example of

elastomer

D. All

Answer: D

266. Prespex or plexiglass is a polymer of:

A. Methyl methyl acrylate

B. Methyl acrylate

C. Acrylonitrile

D. None of these

Answer: A

267. GlypItal or alkyds is polymer of:

A. Ethylene glycol and phthalic acid

B. Ethylene and phathalic acid

C. Phthalic acid and acetylene

D. None of these

Answer: A



268. Nylon-6,6 is an example of:

A. Hexamethylene and adipic acid

- B. Hexamethlene and sebasic acid
- C. Caprolactum
- D. None of these

Answer: A

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269. Which one is protein fibre:

A. Cotton

B. Rayon

C. Silk

D. Polyester

Answer: C

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270. Which one is chain growth polymer:

A. Polypropylene

B. Glyptal

C. Nylon-6,6

D. Nylon-6

Answer: A

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271. Polymer obtained by condensation polymerisation is :

A. Polythene

B. Teflan

C. PVC

D. Phenol Formaldehyde resin

Answer: D

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272. If N_1 , N_2 , N_3 Are the number of molecules with molecular masses M_1 , M_2 , M_3 Respectively, than mass average molecular mass is expressed:

A. $\frac{\sum N_i M_i^2}{\sum N_i M_i}$ $\mathsf{B}.\frac{\sum N_i M_i}{\sum N_i}$ C. $\frac{\sum M_i^2}{\sum N_i}$ D. $rac{\sum N_i M_i^2}{\sum M_i}$

Answer: A



273. Which of the following polymer can be remelted time to time without producing any change?

- A. Thermosetting polymers
- B. Thermoplastic polymers
- C. Bakelite
- D. Malamine

Answer: B

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274. In vulcanisation of rubber:

A. Sluphur reacts to from new compound

B. Sulphur cross-links are introduced

C. Slphure forms a very thin protective

layer over rubber

D. All of the statements are correct

Answer: B

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275. The weakest interparticle forces are present in:

- A. Thermosetting polymers
- B. Thermoplastic polymers
- C. Fibres
- D. Elastomers

Answer: D



276. The starting materials of PCTFE are:

A. Monochlorotrifluoro ethylene

B. Tetrafluorethylene

C. Vinyl chloride

D. Styrene

Answer: A

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277. Cellulose is a condensation polymer of:

A. Maltose

B. β -glucose

C. α -glucose

D. β -fructose

Answer: B



278. Chemical name of malamine is :

A. 2,4-diamino-1,3,5-triazine

B. 2-amino-1,3,5-triazine

C. 2,4,6-triamino-1,3,5-triazine

D. 1,3,5-triamino-2,4,6-triazine

Answer: C

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279. The prosses of valcanisation of rubber was introducedby:

A. Zeigler

B. MRF

C. Charles good year

D. Wohler

Answer: C

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280. The abbreviation PDI refers to:

A. Name of the polymer

B. poly dispersity index of polymer

C. Application

D. Poly diagonal index





281. Which one is a polymer compound :

- A. SO_2
- $\mathsf{B.}\,CO_2$
- $\mathsf{C.}\,CH_4$
- D. PVC

Answer: D



282. Which of the following is not an example

of addition polymer:

A. Polyethene

B. Polystyrene

C. Neoprene

D. Treylene

Answer: D





283. Which of the following contains isoprene

units:

A. Natural rubber

B. Nylon-6,6

C. Polyethylene

D. Dacron

Answer: A

284. Example of addition polymer is:

A. Buna -s

B. Bakelite

C. Nylon-6

D. Malamac

Answer: A

285. Which of the following is an addition

polymer :

A. SBR

B. Glyptals

C. Terylene

D. Nylons

Answer: A



286. Which of the following is not a thermoset:

A. Glyptals

B. Bakelite

C. Melamine - formaldehyde polymer

D. Styrene-butadiene rubber

Answer: D

287. Which of the following is not a synthetic polymer:

A. polyisoprene

B. polybutadiene

C. Polyethylene terephthalate

D. Polyethylene

Answer: A

288. Which of the following is not a natural

polymer :

A. Glycogen

B. Cellulose

C. Pepsin

D. Polybutadiene

Answer: D

289. Which of the following is not a fibre :

A. Terylene

B. Nylons

C. Polyacrylonitrile

D. Polychloroprene

Answer: D

290. Nylon-6,6 is a strong crystalline fibre due to the presence of intermolecular forces which are:

A. H-bonds

B. Covalent bonds

C. Van der waal's attractive forces

D. Ionic bonds

Answer: A

291. Teflon is made by polymerisation of:

- A. Tetrafluoroethene
- B. Isobutene
- C. Vinyl acetate
- D. Methyl methacrylate

Answer: A

292. Which of the following cannot be grouped as polyolefins:

A. Polyethene

B. polypropane

C. polystyrene

D. Polyoxyethene

Answer: D

293. Polymerisation of chloroethylene gives

the polymer:

A. Polyethene

B. PVC

C. Teflon

D. Nylons

Answer: B

294. polymers are:

A. Micromolecule

B. Macromolecules

C. Sub -micromolecules

D. None of these

Answer: B

295. Which of the following is a condensation

polymer:

A. Polystyrene

B. Neoprene

C. PAN

D. Poly (ethylene terphthalate)

Answer: D

296. Bakelite is :

A. Addition polymer

B. Elastomer

C. Thermoplastic

D. Thermosetting

Answer: D



297. Nylon-6,6 is a polyamide of:

- A. Vinyl chloride and farmaldehyde
- B. Adipic acid and methyl amine
- C. Adipic acid and hexamethylene diamine
- D. Formaldehyde and malamine

Answer: C

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298. Buna-S is a :

A. Natural polymer

- B. Synthetic polymer
- C. Sulphur polymer
- D. None of these

Answer: B

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299. The monomer units of PTFE are:

A. $Cl_2CH - CH_3$

 $\mathsf{B}.\,F_2C=CF_2$

$$\mathsf{C.} \, F_3C - CF_3$$

D.
$$FClc = CF_2$$

Answer: B



300. Which one is a homopolymer:

A. Bakelite

B. Nylon-6,6

C. Terylene

D. Neoprene

Answer: D

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301. Natural rubber is a:

A. Polyester

B. Polyamide

C. Polyisoprene

D. Polysaccharide





302. Which of the following is commonly called

- a ..polyamide..:
 - A. Rayon
 - B. Nylon
 - C. Terylene
 - D. Orlon

Answer: B



303. Terylene is a

A. Polyamide

- B. Polyester
- C. Polyether
- D. Long chain hydrocarbon

Answer: B



304. Protein is a polymer of:

A. Glucose

B. Terephthalic acid

C. Amino acids

D. None of these

Answer: C

305. Which one among the following is a thermosetting plastic :

A. PVC

B. PVA

C. Bakelite

D. None of these

Answer: C

306. The fibre obtained by the condensation of

hexamethylene diamine and adipic acid is :

A. Dacron

B. Nylon-6,6

C. Rayon

D. Teflon

Answer: B

307. Buna rubber is a polymer of :

A. 1,3-butadiene

B. Vinyl acetate

C. Styrene

D. None

Answer: A



308. Buna -S is a copolymer of:

- A. Styrene and 1,3-butadine
- B. Styrene and ethylene
- C. 1,3-butadiene and ethylene
- D. None

Answer: A



309. Melamine plastic crockery is a polymer of:

A. HCHO and malamine

B. HCHO and ethylene

C. Malamine and ethylene

D. None

Answer: A

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310. Bakelite is a copolymer of:

A. HCHO and malamine

B. HCHO and phenol

C. Phenol and ethylene

D. None

Answer: B



311. Which of the following rubber is not a polydiene:

A. Polyisoprene

B. polychloroprene

C. Thiokol rubber

D. Nitrille rubber

Answer: C



312. Which of the following natural product is

not a polymer:

A. DNA

B. Cellulose

C. ATP

D. Urease

Answer: C



313. Which is considered to be the first synthetic polymer:

A. Nylon

B. Terylene

C. LDPE

D. Bakelite

Answer: D



314. Number average molecular mass M_n of synthetic and weigth average mol. Mass M_w of synthetic polymer are related as :

A.
$$\stackrel{-}{M_n} < \stackrel{-}{M_w}$$

B.
$$M_n > M_w$$

$$\mathsf{C}.\,M_n=M_w$$

 $\mathsf{D}.\,M_n>M_w$

Answer: A

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315. To make PVC a flexible plastic , the additive

used is called:

A. Filler

B. Antioxidant

C. Stabilizer

D. Plasticiser

Answer: D

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316. Condensation of caprolactam gives:

A. Nylon-6,6

B. Nylon-6

C. Nitrile rubber

D. Nylon -6,10

Answer: B



317. Which of the following is an inert polymer

used in coating, particularly in non - sticking

frying pans:

A. Teflon

B. Perspex

C. Bakelite

D. Orlon

Answer: A

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318. Which of the following is wrong :

A. PMMA is called Plexiglas

B. PTFE is called Teflon

C. SBR is called natural rubber

D. LDPE is called low density polyethylene

Answer: C



319. Which of the following is not a cellulose

product,

A. Gun cotton

B. Celluloid

C. Rayon

D. Dacron

Answer: D



320. Nylons, polyesters and cotton all possess

strength due to :

A. Intermolecular H-bonding

B. Vander waals' attraction

C. Dipole - dipole interaction

D. None of the above

Answer: A

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321. Which of the following is not a natural

polymer :

A. Starch

B. Cellulose

C. Glyptal

D. Glycogen

Answer: C



322. Natural fibre is :

A. Strach

B. cellulose

C. Rubber

D. Nylon-6

Answer: B

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323. PDI for natural polymers is generally close

to:

A. Zero

B. 100

C. 1

D. 10

Answer: C

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324. Strongest interparticle forces exist in:

A. Elastomers

B. Thermoplastics

C. Fibers

D. Thermosetting polymer

Answer: D



325. Gutta pracha rubber is:

- A. A trans 1,4-polyisoprene polymer
- B. A very hard meterial
- C. A synthetic polymer
- D. All of the statements are correct

Answer: D



326. Natural silk and artificial silk differ in one

respect that one of them contains:

A. N

B.S

C. P

D. None

Answer: A





327. A co -polymer of vinyl chloride and vinylidene chloride is called:

A. Dynel

B. Saran

C. Vinylon

D. Oelen

Answer: A

328. A co -polymer of vinyl chloride and vinyl acetate is called:

A. Vinyon

B. Saran

C. Dynel

D. Orlen

Answer: A

329. A co -polymer of isobutylene and isoprene

is called:

A. Butyl rubber

B. Buna -S

C. Buna -N

D. Thiokol

Answer: A

330. Which can absorb over 99% of its own mass of water and does not stick to wound:

A. Rayon

B. Guncotton

C. Thiokol

D. Saran

Answer: A

331. Isoprene is used for making :

A. Rubber

B. Petrol

C. Liquid fuel

D. None

Answer: A



332. The phenomenon involving the union of two or more molecules to form a new molecular aggregate is called :

A. Polarisation

B. Polymerisation

C. Photosensitisation

D. Pasteurization

Answer: B