34. Polymers – Multiple Choice Questions

1. Classification of Polymers

1. Correct statement for thermoplastic polymer is
(a) It does not become soft on heating under pressure
(b) It can not be remoulded
(c) It is either linear or branched chain polymer
(d) It is cross-linked polymer

2. Which of the following is not a synthetic polymer
(a) Polyethylene (b) PVC
(c) Nylon (d) Cellophane

3. Which polymers occur naturally
(a) Starch and Nylon (b) Starch and Cellulose
(c) Proteins and Nylon (d) Proteins and PVC

4. Identify the heteropolymer from the list given below
(a) Polythene (b) Nylon-6
(c) Teflon (d) Nylon-6, 6

5. Three dimensional molecules with cross links are formed in the case of a
(a) Thermoplastic (b) Thermosetting plastic
(c) Both (d) None

6. Perlon is
(a) Rubber (b) Nylon-6
(c) Terylene (d) Orlon

7. Which one of the following is not a condensation polymer
(a) Nylon 66 (b) Nylon 6
(c) Dacron (d) Buna-S

8. Which of the following is not a semisynthetic polymer
(a) cis-polyisoprene (b) Cellulose nitrate
(c) Cellulose acetate (d) Vulcanised rubber

2. Methods and Mechanism of Polymerisation

1. An example of chain growth polymer is
(a) Nylon-66 (b) Bakelite
(c) Terylene (d) Teflon

2. The product of addition polymerisation reaction is
(a) PVC (b) Nylon
(c) Terylene (d) Polyamide

3. The catalyst used for the polymerisation of olefins is
(a) Ziegler Natta catalyst (b) Wilkinson's catalyst
(c) *Pd*-catalyst (d) Zeise's salt catalyst

4. High density polyethylene (HDPE) can be prepared from ethylene by
(a) Ziegler-Natta process
(b) Heating with peroxides
(c) Condensing in sealed tubes
(d) Condensing with styrenes

5. When condensation product of hexamethylenediamine and adipic acid is heated to $553\,K\,(280^{\circ}C)$ in an atmosphere of nitrogen for about 4-5 hours, the product obtained is
(a) Solid polymer of nylon 66
(b) Liquid polymer of nylon 66
(c) Gaseous polymer of nylon 66
(d) Liquid polymer of nylon 6

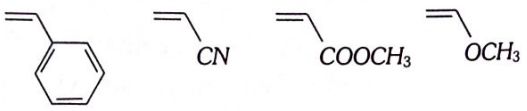
6. The catalyst used in the manufacture of polyethene by Ziegler method is
(a) Titanium tetrachloride and triphenyl aluminium
(b) Titanium tetrachloride and triethyl aluminium
(c) Titanium dioxide
(d) Titanium isopropoxide

7. Which of the following polymer is formed by cationic addition polymerization reaction
(a) Butyl rubber (b) Poly styrene
(c) Teflon (d) PVC

8. Buna-S rubber is which of the following of 1-3-butadiene and styrene
(a) Polymers
(b) Copolymer
(c) Addition
(d) Condensation polymer

9. In the preparation of Nylon-6 from cyclohexanone oxime use is made of a rearrangement reaction. This rearrangement reaction is called
(a) Wolf rearrangement (b) Amadori rearrangement
(c) Curtius rearrangement (d) Beckmann rearrangement

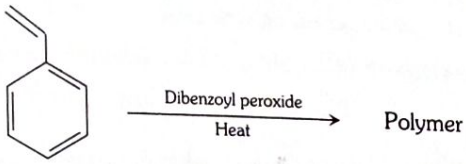
10. Among (i) – (iv)

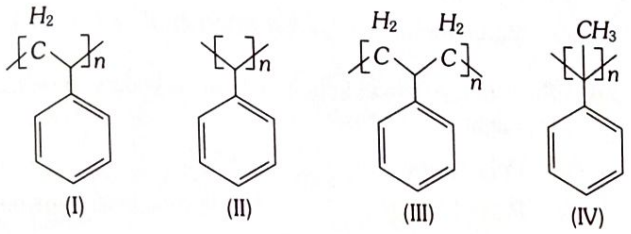


(i) (ii) (iii) (iv)

The compound that does not undergo polymerization under radical initiation, is
(a) (i) (b) (ii)
(c) (iii) (d) (iv)

11. The structure of the polymer obtained by the following reaction is





(a) (I) (b) (II)

(c) (III) (d) (IV)

3. Composition and Properties of Polymers

1. PVC is prepared by the polymerisation of

(a) Ethylene (b) 1-chloropropene

(c) Propene (d) 1-chloroethene

2. Which of the following is resistant to boiling aqua-regia

(a) Polythene (b) Perspex

(c) Teflon (d) Bakelite

3. As the molecular weight increases the tensile strength of polymers

(a) Increases (b) Decreases

(c) Remains unchanged (d) Uncertain

4. Orlon is a polymer of

(a) Styrene (b) Tetrafluoro ethylene

(c) Vinyl chloride (d) Acrylonitrile

5. Synthetic fibres like nylon-66 are very strong because

(a) They have high molecular weights and high melting points

(b) They have a high degree of cross-linking by strong $C-C$ bond

(c) They have linear molecules consisting of very long chains

(d) They have linear molecules interlinked with forces like hydrogen bonding

6. Which of the following is teflon

(a) $\left[\begin{array}{cc} H & H \\ | & | \\ -C & -C- \\ | & | \\ H & H \end{array}\right]_n$ (b) $\left[\begin{array}{cc} H & CH_3 \\ | & | \\ -C & -C- \\ | & | \\ H & H \end{array}\right]_n$

(c) $\left[\begin{array}{cc} F & F \\ | & | \\ -C & -C- \\ | & | \\ F & F \end{array}\right]_n$ (d) $\left[\begin{array}{cc} H & F \\ | & | \\ -C & -C- \\ | & | \\ F & Cl \end{array}\right]_n$

7. The plastic household crockery is prepared by using

(a) Melamine and tetrafluoroethane

(b) Malonic acid and hexamethyleneamine

(c) Melamine and vinyl acetate

(d) Melamine and formaldehyde

8. Which of the following polymer contains amide linkage

(a) Nylon-66 (b) Terylene

(c) Teflon (d) Bakelite

9. Which polymer among the following polymers does NOT soften on heating

(a) Bakelite (b) Polythene

(c) Polystyrene (d) PVC

10. Which one of the following can be used as monomer in a polymerisation reaction

(a) CH_3CH_2Cl (b) CH_3CH_2OH

(c) C_6H_6 (d) C_3H_6

11. In bakelite, the rings are joined to each other through

(a) $-CH_2-$ (b) $-O-$

(c) $-\underset{\displaystyle H}{\overset{\displaystyle OH}{\overset{|}{\underset{|}{C}}}}-H$ (d) $-\overset{\displaystyle O}{\overset{\|}{C}}-$

12. Silicones are a group of organosilicon polymers containing

(a) $Si-O-Si$ linkage (b) $O-Si-O$ linkage

(c) $Si-C-Si$ linkage (d) $Si-Si-O$ linkage

13. Orlon has a unit

(a) Vinyl cyanide

(b) Acrolein

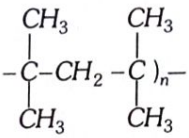
(c) Glycol

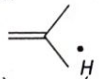
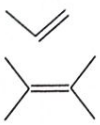
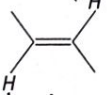
(d) Isoprene

14. The commercial name of polyacrylonitrile is.....

(a) Dacron (b) Orlon (acrilan)

(c) PVC (d) Bakelite

15.  is a polymer having monomer units.....

(a) 
(b) 
(c) 
(d)

16. The alkyl resins are condensation polymers obtained from dibasic acids and

(a) Phenol (b) Glycol
(c) Glycerol (d) Formaldehyde

17. Celluloid is

(a) A thermoplastic material obtained from caprolactam and urea
(b) A thermoplastic material obtained from cellulose nitrate and camphor
(c) A thermosetting material obtained from urea and formaldehyde
(d) A thermosetting material obtained from glycerol and phthalic anhydride

18. Complete hydrolysis of cellulose gives

(a) D-fructose (b) D-ribose
(c) D-glucose (d) L-glucose

19. Terylene is

(a) An addition polymer with a benzene ring in every repeating unit
(b) A condensation polymer with a benzene ring in every repeating unit
(c) An addition polymer with two carbon atoms in every repeating unit
(d) A condensation polymer with two nitrogen atoms in every repeating unit

20. Acetate rayon is prepared from

(a) Acetic acid (b) Glycerol
(c) Starch (d) Cellulose

21. Which of the following pair of monomers are used in preparation of *PHBV*

(a) β - Hydroxy butyric acid, β - hydroxy valeric acid
(b) β - Hydroxy valeric acid, Amino caproic acid
(c) β - Hydroxy butyric acid, Adipic acid
(d) Lactic acid, Adipic acid

22. Nylon polymers are

(a) Acidic (b) Basic
(c) Amphoteric (d) Neutral

23. Which of the following intermolecular forces are present in 'nylon – 66'

(a) Vander Waals (b) Hydrogen bonding
(c) Dipole-dipole interaction (d) None of these

24. Given the polymers (i) Nylon 66; (ii) Buna-S; (iii) Polythene, arrange these in increasing order of their inter-molecular forces (lower to higher)

(a) (i) > (ii) > (iii) (b) (ii) > (iii) > (i)
(c) (ii) < (iii) < (i) (d) (iii) < (i) < (ii)

25. Which of the following polymer has ester linkage

(a) Nylon-66 (b) PVC
(c) Terylene (d) SBR

26. Which of the following polymers turns yellowish on exposure to sunlight

(a) Polystyrene (b) Nylon
(c) Polyethylene (d) Styrene butadiene resin

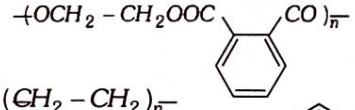
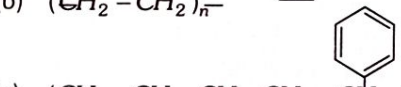
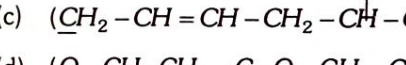
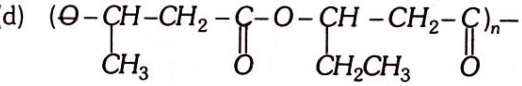
27. Trans-form of polyisoprene is

(a) Guttapercha (b) Hydrochloride rubber
(c) Buna-N (d) Synthetic rubber

28. The common acid used in the manufacture of rayon and plastics is

(a) Methanoic acid
(b) Ethanoic acid
(c) Propanoic acid
(d) Butanoic acid

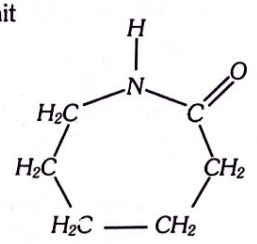
29. In which of the following polymers, ethylene glycol is one of the monomer units

(a) 
(b) 
(c) 
(d) 

30. Which of the following statements is not true about low density polyethene

(a) Tough
(b) Hard
(c) Poor conductor of electricity
(d) Highly branched structure

31. Which of the following polymer can be formed by using the following monomer unit



(a) Nylon-6, 6 (b) Nylon-2-nylon-6
(c) Melamine polymer (d) Nylon-6

4. Uses of Polymers

1. The sterile gauze (or cotton) used in medicine is obtained by oxidising cellulose with
   (a) Nitrogen (b) $KMnO_4$
   (c) Nitrogen dioxide (d) Potassium chlorate

2. Which polymer is used for making magnetic recording tapes
   (a) Dacron (b) Acrilan
   (c) Glyptal (d) Bakelite

3. Polymer used in bullet proof glass is
   (a) Lexan (b) PMMA
   (c) Nomex (d) Kevlar

4. The polymer used for making contact lenses for eyes is
   (a) Polymethylmethacrylate (b) Polyethylene
   (c) Polyethylacrylate (d) Nylon-6

5. Which of the following is currently used as a tyre cord
   (a) Terylene (b) Polyethylene
   (c) Polypropylene (d) Nylon – 6

6. Which of the following polymer is used in pigment
   (a) Buna - S (b) Neoprene
   (c) Teflon (d) Orlon

5. Biodegradable Polymers

1. Which of the following polymer is biodegradable
   (a) $+CH_2-\underset{Cl}{\underset{|}{C}}=CH-CH_2+_n$
   (b) $+CH_2-CH=CH-CH_2-CH_2-\underset{CN}{\underset{|}{CH}}+_n$
   (c) $+O-\underset{CH_3}{\underset{|}{CH}}-CH_2-\underset{O}{\underset{||}{C}}-O-\underset{CH_2CH_3}{\underset{|}{CH}}-CH_2-\underset{O}{\underset{||}{C}}+_n$
   (d) $+\overset{H}{\overset{|}{N}}-(CH_2)_6-\overset{H}{\overset{|}{N}}-\overset{O}{\overset{||}{C}}-(CH_2)_4-\overset{O}{\overset{||}{C}}+_n$

2. Buna-S is a polymer of
   (a) Butadiene only (b) Butadiene and styrene
   (c) Styrene only (d) Butadiene and nitryl

3. Which of the following is used in vulcanization of rubber
   (a) SF_6 (b) CF_4
   (c) Cl_2F_2 (d) C_2F_2

4. What is the percentage of sulphur used in vulcanization of rubber
   (a) 05% (b) 03%
   (c) 30% (d) 55.0%

6. IIT-JEE/ AIEEE

1. Which one is classified as a condensation polymer
   (a) Dacron (b) Neoprene
   (c) Teflon (d) Acrylonitrile

2. Polymer formation from monomers starts by **[2002]**
   (a) Condensation reaction between monomers
   (b) Coordinate reaction between monomers
   (c) Conversion of monomer to monomer ions by protons
   (d) Hydrolysis of monomers

3. The species which can best serve as an initiator for the cationic polymerization is **[2012]**
   (a) $LiAlH_4$ (b) HNO_3
   (c) $AlCl_3$ (d) $BuLi$

4. Under hydrolytic conditions, the compounds used for preparation of linear polymer and for chain termination, respectively, are **[2015]**
   (a) CH_3SiCl_3 and $Si(CH_3)_4$
   (b) $(CH_3)_2SiCl_2$ and $(CH_3)_3SiCl$
   (c) $(CH_2)SiCl_2$ and CH_3SiCl_3
   (d) $SiCl_4$ and $(CH_3)_3SiCl$

5. Among the following substituted silanes the one which will give rise to cross linked silicone polymer on hydrolysis is **[2008]**
   (a) $RSiCl_3$ (b) R_2SiCl_2
   (c) R_3SiCl (d) R_4Si

6. The formation of which of the following polymers involves hydrolysis reaction **[2017]**
   (a) Bakelite (b) Nylon 6,6
   (c) Terylene (d) Nylon 6

7. Which of the following is fully fluorinated polymer **[2005]**
   (a) Neoprene (b) Teflon
   (c) Thiokol (d) PVC

8. The polymer containing strong intermolecular forces e.g. hydrogen bonding, is **[2010]**
   (a) Natural rubber (b) Teflon
   (c) Nylon-66 (d) Polystyrene

9. Among cellulose, polyvinyl chloride, nylon and natural rubber, the polymer in which the intermolecular force of attraction is weakest in **[2009]**
   (a) Nylon (b) Polyvinyl chloride
   (c) Cellulose (d) Natural rubber

10. Which of the following is a polyamide **[2005]**

(a) Teflon (b) Nylon –66

(c) Terylene (d) Bakelite

11. Which polymer is used in the manufacture of paints and lacquers **[2015]**

(a) Bakelite (b) Glyptal

(c) Polypropene (d) Poly vinyl chloride

12. Which of the following statements about low density polythene is FALSE **[2016]**

(a) It is poor conductor of electricity

(b) Its synthesis required dioxygen or a peroxide initiator as a catalyst

(c) It is used in the manufacture of buckets, dust-bins etc

(d) Its synthesis requires high pressure

13. Buna-N synthetic rubber is a copolymer of **[2009]**

(a) $H_2C=CH-\underset{\displaystyle Cl}{\underset{|}{C}}=CH_2$ and $H_2C=CH-CH=CH_2$

(b) $H_2C=CH-CH=CH_2$ and $H_5C_6-CH=CH_2$

(c) $H_2C=CH-CN$ and $H_2C=CH-CH=CH_2$

(d) $H_2C=CH-CN$ and $H_2C=CH-\underset{\displaystyle CH_3}{\underset{|}{C}}=CH_2$

14. On complete hydrogenation, natural rubber produces **[2016]**

(a) Ethylene-propylene copolymer

(b) Vulcanised rubber

(c) Polypropylene

(d) Polybutylene

7. NEET/ AIPMT/ CBSE-PMT

1. Which of the following is not an example of addition polymer **[2001]**

(a) Terylene (b) Polypropylene

(c) Polyethylene (d) Polystyrene

2. $[NH(CH_2)NHCO(CH_2)_4CO]_n$ is a **[2006]**

(a) Thermosetting polymer (b) Homopolymer

(c) Copolymer (d) Addition polymer

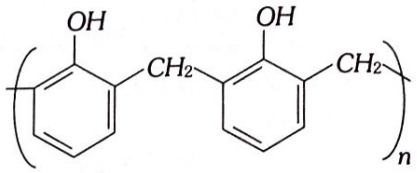
3. Which one of the following is not a condensation polymer **[2012]**

(a) Melamine (b) Glyptal

(c) Dacron (d) Neoprene

4. Which one of the following is an example of a thermosetting polymer **[2014]**

(a) $-\left(N-(CH_2)_6-\underset{\displaystyle H}{\underset{|}{N}}-\overset{\displaystyle O}{\overset{\|}{C}}-(CH_2)_4-\overset{\displaystyle O}{\overset{\|}{C}}\right)_n-$

(b) 

(c) $-\left(CH_2-\underset{\displaystyle Cl}{\underset{|}{C}}=CH-CH_2\right)_n-$

(d) $-\left(CH_2-\underset{\displaystyle Cl}{\underset{|}{CH}}\right)_n-$

5. Regarding cross – linked or network polymers, which of the following statements is incorrect **[2018]**

(a) They contain covalent bonds between various linear polymer chains

(b) They are formed from bi – and tri – functional monomers

(c) Examples are bakelite and melamine

(d) They contain strong covalent bonds in their polymer chains

6. Which of the following polymers is prepared by condensation polymerization **[2007]**

(a) Nylon 66 (b) Teflon

(c) Rubber (d) Styrene

7. Which of the following is a chain growth polymer **[2004]**

(a) Polystyrene (b) Protein

(c) Starch (d) Nucleic acid

8. The straight chain polymer is formed by **[2009]**

(a) Hydrolysis of $(CH_3)_3SiCl$ followed by condensation polymerisation

(b) Hydrolysis of CH_3SiCl_3 followed by condensation polymerisation

(c) Hydrolysis of $(CH_3)_4Si$ by addition polymerisation

(d) Hydrolysis of $(CH_3)_2SiCl_2$ followed by condensation polymerisation

9. The monomers used in the production of nylon-66 are **[1999]**

(a) Hexamethylene diamine and ethylene glycol

(b) Adipic acid and ethylene glycol

(c) Adipic acid and hexamethylene diamine

(d) Dimethyl terephthalate and ethylene glycol

10. The compound required for the formation of a thermosetting polymer with methanal is **[1992, 95]**

(a) Benzene (b) Phenyl amine

(c) Benzaldehyde (d) Phenol

11. Caprolactum is used for the manufacture of **[2015]**

(a) Nylon - 6 (b) Teflon

(c) Terylene (d) Nylon - 6, 6

12. Terylene is a **[2011]**

(a) Polyamide (b) Polyester

(c) Polyethylene (d) Polypropylene

13. $F_2C = CF_2$ is the monomer of **[2000]**

(a) Nylon-6 (b) Buna-S

(c) Glyptal (d) Teflon

14. Acrilan is a hard, horny and a high melting material. Which of the following represents its structure **[2003]**

(a) $\left(-CH_2-\underset{Cl}{CH}-\right)_n$ (b) $\left(-CH_2-\underset{CN}{CH}-\right)_n$

(c) $\left(-CH_2-\underset{\underset{COOCH_3}{|}}{\overset{\overset{CH_3}{|}}{C}}-\right)_n$ (d) $\left(-\underset{\underset{COOC_2H_5}{|}}{CH}-\right)_n$

15. Which is the monomer of Neoprene in the following **[2010; 2013]**

(a) $CH_2 = CH - C \equiv CH$ (b) $CH_2 = CH - CH = CH_2$

(c) $CH_2 = \underset{\underset{CH_3}{|}}{C} - CH = CH_2$ (d) $CH_2 = \underset{\underset{Cl}{|}}{C} - CH = CH_2$

16. Which of the following statements is false **[2012]**

(a) Artificial silk is derived from cellulose

(b) Nylon- 66 is an example of elastomer

(c) The repeat unit in natural rubber is isoprene

(d) Both starch and cellulose are polymers of glucose

17. Nylon is an example of **[2013]**

(a) Polythene (b) Polyester

(c) Polysaccharide (d) Polyamide

18. Structures of some common polymers are given. Which one is *not* correctly represented **[2009]**

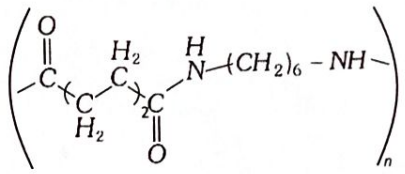
(a) Teflon $(-CF_2 - CF_2-)_n$

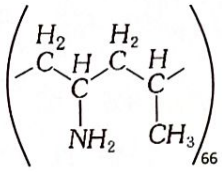
(b) Neoprene $\left(-CH_2-\underset{Cl}{C}=CH-CH_2-CH_2-\right)_n$

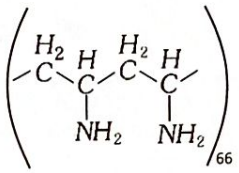
(c) Terylene $(-OC-C_6H_4-COOCH_2-CH_2-O-)_n$

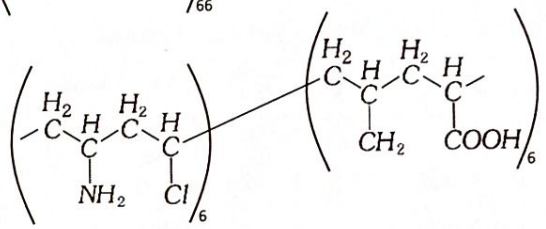
(d) Nylon 66 $[-NH(CH_2)_6NHCO(CH_2)_4-CO-]_n$

19. Which one of the following structures represents nylon 6,6 polymer **[2016]**

(a) 

(b) 

(c) 

(d) 

20. Which of the following organic compounds polymerizes to form the polyester Dacron **[2014]**

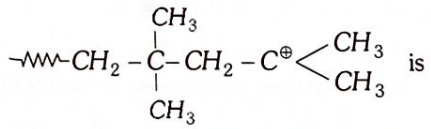
(a) Terephthalic acid and ethylene glycol

(b) Benzoic acid and para $HO-(C_6H_4)-OH$

(c) Propylene and para $HO-(C_6H_4)-OH$

(d) Benzoic acid and ethanol

21. The monomer of the polymer



is **[2005]**

(a) $H_2C = C\begin{matrix}CH_3\\CH_3\end{matrix}$ (b) $(CH_3)_2C = C(CH_3)_2$

(c) $CH_3CH = CHCH_3$ (d) $CH_3CH = CH_2$

22. Which of the following is not true **[2008]**

(a) In vulcanization the rubber becomes harder and stronger

(b) Natural rubber has '*trans*' configuration at every double bond

(c) Buna-S is a co-polymer of butene and styrene.

(d) Natural rubber is 1,4-polymer of isoprene

23. Which of the following is not polyamide **[2001]**

(a) Nylon-66 (b) Protein

(c) Glyptal (d) Nylon-6

24. Biodegradable polymer which can be produced from glycine and aminocaproic acid is **[2015]**

(a) PHBV (b) Buna-N

(c) Nylon 6, 6 (d) Nylon 2-nylon 6

25. Which one of the following sets forms the biodegradable polymer **[2012]**

(a) $CH_2 = CH - CN$ and $CH_2 = CH - CH = CH_2$

(b) $H_2N - CH_2 - COOH$ and $H_2N - (CH_2)_5 - COOH$

(c) $HO - CH_2 - CH_2 - OH$ and $HOOC-C_6H_4-COOH$

(d) $CH = CH_2$ and $CH_2 = CH - CH = CH_2$

26. Neoprene (Synthetic Rubber) is a polymer of **[1991]**

(a) Propene (b) Vinyl chloride

(c) Chloroprene (d) Butadiene

27. Heating of rubber with sulphur is known as **[1989]**

(a) Galvanisation (b) Vulcanisation

(c) Bessemerisation (d) Sulphonation

28. The monomer of natural polymer rubber is **[1991]**

(a) Neoprene (b) Isoprene

(c) Chloroprene (d) Butadiene

29. Natural rubber has **[2016]**

(a) All cis-configuration

(b) All trans-configuration

(c) Alternate cis-and trans-configuration

(d) Random cis-and trans-configuration

30. Ebonite is **[2000]**

(a) Polropene (b) Natural rubber

(c) Synthetic rubber (d) Highly vulcanized rubber

8. AIIMS

1. Which one among the following is a thermosetting plastic **[1999]**

(a) PVC (b) PVA

(c) Bakelite (d) Perspex

2. Which of the following polymer is an example of fibre **[2000]**

(a) Silk (b) Dacron

(c) Nylon-66 (d) All of these

3. Phenol is used in the manufacture of **[1996]**

(a) Bakelite (b) Polystyrene

(c) Nylon (d) PVC

4. Teflon is a polymer of the monomer **[2002]**

(a) Monofluoroethene (b) Difluoroethene

(c) Trifluoroethene (d) Tetrafluoroethene

5. In elastomer, intermolecular forces are **[2000]**

(a) Nil (b) Weak

(c) Strong (d) Very strong

6. A polymer containing nitrogen is **[2008]**

(a) Bakelite (b) Dacron

(c) Rubber (d) Nylon-66

7. Which one of the following is used to make 'non-stick' cookware **[1998]**

(a) PVC

(b) Polystyrene

(c) Polyethylene terephthalate

(d) Polytetrafluoroethylene

8. Plexiglass is a commercial name of **[2007]**

(a) Glyptal (b) Polyacrylo nitrile

(c) Polymethyl methacrylate (d) Polyethyl acrylate

9. Which of the following is a biodegradable polymer **[2004]**

(a) Cellulose (b) Polythene

(c) Polyvinyl chloride (d) Nylon-6

10. Which of the following statement is correct regarding the drawbacks of raw rubber **[2001, 15]**

(a) It is plastic in nature

(b) It has little durability

(c) It has large water-absorption capacity

(d) All of these

9. Assertion & Reason

Read the assertion and reason carefully to mark the correct option out of the options given below :

(a) If both assertion and reason are true and the reason is the correct explanation of the assertion.

(b) If both assertion and reason are true but reason is not the correct explanation of the assertion.

(c) If assertion is true but reason is false.

(d) If the assertion and reason both are false.

(e) If assertion is false but reason is true.

1. Assertion : In vulcanisation of rubber, sulphur cross links are introduced.

Reason : Vulcanisation is a free radical initiated chain reaction.

2. Assertion : 1, 3-Butadiene is the monomer for natural rubber.

Reason : Natural rubber is formed through anionic addition polymerization.

34. Polymers – Answers Keys

1. Classification of Polymers

1	c	**2**	d	**3**	b	**4**	d	**5**	b
6	b	**7**	d	**8**	a				

2. Methods and Mechanism of Polymerisation

1	d	**2**	a	**3**	a	**4**	a	**5**	b
6	b	**7**	a	**8**	b	**9**	d	**10**	d
11	a								

3. Composition and Properties of Polymers

1	d	**2**	c	**3**	a	**4**	d	**5**	d
6	c	**7**	d	**8**	a	**9**	a	**10**	d
11	a	**12**	a	**13**	a	**14**	b	**15**	a
16	b	**17**	b	**18**	c	**19**	b	**20**	d
21	a	**22**	c	**23**	b	**24**	c	**25**	c
26	d	**27**	a	**28**	b	**29**	a	**30**	d
31	d								

4. Uses of Polymers

1	c	**2**	d	**3**	a	**4**	a	**5**	d
6	a								

5. Biodegradable Polymers

1	c	**2**	b	**3**	a	**4**	a		

6. IIT-JEE/ AIEEE

1	a	**2**	a	**3**	c	**4**	b	**5**	a
6	d	**7**	b	**8**	c	**9**	d	**10**	b
11	b	**12**	c	**13**	c	**14**	a		

7. NEET/ AIPMT/ CBSE-PMT

1	a	**2**	c	**3**	d	**4**	b	**5**	d
6	a	**7**	a	**8**	d	**9**	c	**10**	d
11	a	**12**	b	**13**	d	**14**	b	**15**	d
16	b	**17**	d	**18**	b	**19**	a	**20**	a
21	a	**22**	b	**23**	c	**24**	d	**25**	b
26	c	**27**	b	**28**	b	**29**	a	**30**	d

8. AIIMS

1	c	**2**	d	**3**	a	**4**	d	**5**	b
6	d	**7**	d	**8**	c	**9**	a	**10**	d

9. Assertion & Reason

1	b	**2**	d						