CHEMISTRY

JEE MAIN AND ADVANCED

POLYMERS

Illustration

1. Identify A,B and C

View Text Solution

Examples

1.  is a homopolymer or a copolymer?

Watch Video Solution

2. Give the examples of cross-linked polymers.

Watch Video Solution

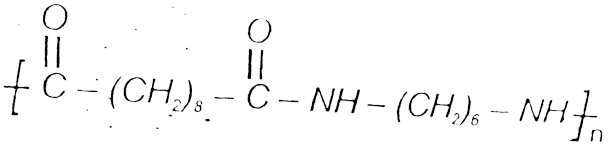
3. Which is used for making rayon (artifical silk)?

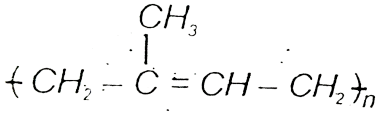
Watch Video Solution

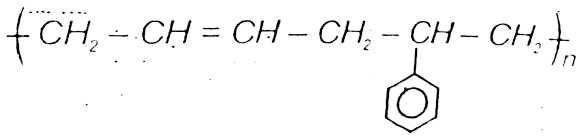
4. Name a substance which inhibits free radical polymerisation.

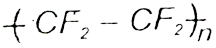
Watch Video Solution

5. Identify the monomers in the following polymeric structures.

(i) 

(ii) 

(iii) 

(iv) 

Watch Video Solution

6. Arrange the following polymers in increasing order of their intermolecular forces : (i) Buna-S, Nylon-6,6 ,Polythene (ii) Neoprene, PVC, Nylon-6

Watch Video Solution

Try Yourself

1. Classify the following as addition and condensation polymers

Nylon 6,6, Buna-N,Buna-S,Polythene,Polystyrene,Polyvinyl chloride

Watch Video Solution

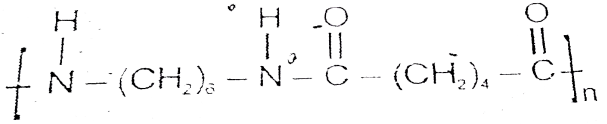
2. THERMOPLASTIC & THERMOSETTING POLYMER

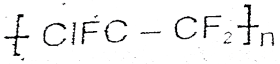
Watch Video Solution

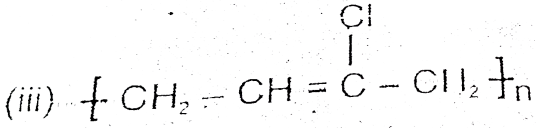
3. What is the difference between elastomers and fibres ?

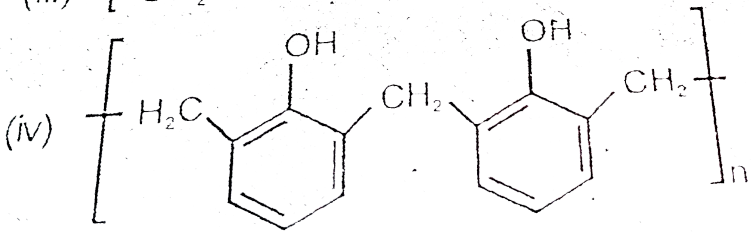
Watch Video Solution

4. Write the names of monomers of the following polymers :

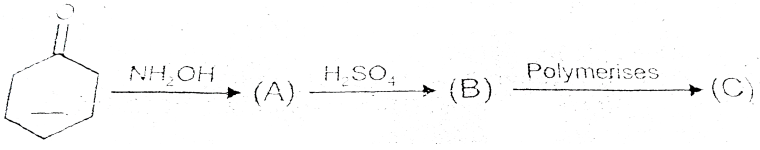
(i) 

(ii) 

(iii) 

(iv) 

Watch Video Solution

5. 

What is (A),(B) and (C) respectively?

Watch Video Solution

6. Name some biopolymers which are biodegradable.

Watch Video Solution

7. Write the name and structures of the monomers of the following biodegradable polymers :

(i) Nylon 2-nylon 6

(ii) PHBV

(iii) PHB

Watch Video Solution

Assignment Section A Competition Level Questions

1. Which of the following is a natural polymer?

A. Cellulose

B. Buna-S

C. Rayon

D. Nylon 6, 6

Answer: A

Watch Video Solution

2. Which of the following is a synthetic polymer?

A. Starch

B. Natural rubber

C. Cellulose acetate

D. Polyethylene

Answer: D

Watch Video Solution

3. Which of the following is a linear polymer?

A. Low density polythene

B. High density polythene

C. Malamine

D. Amylopectin

Answer: B

Watch Video Solution

4. Which of the following is a cross-linked polymer?

A. Starch

B. Bakelite

C. PVC

D. Polythene

Answer: B

Watch Video Solution

5. Which of the following is an addition polymer?

A. Nylon 6

B. Nylon 6, 6

C. Buna-S

D. Dacron

Answer: C

Watch Video Solution

6. Which of the following is a condensation polymer?

A. Buna-N

B. Polystyrene

C. Nylon-6

D. Natural rubber

Answer: C

Watch Video Solution

7. Which of the following is a thermosetting polymer?

A. Urea-formaldehyde resin

B. Polyvinylchloride

C. Polyester

D. Neoprene

Answer: A

Watch Video Solution

8. Which of the following is an elastomer?

A. Bakelite

B. Polythene

C. Buna-S

D. Polystyren

Answer: C

Watch Video Solution

9. PVC polymer can be prepared by which of the monomers'?

A. $CH_2 = CH_2$

B. $CH_2 = CH - Cl$

C. $C_6H_5 - CH = CH_2$

D. $CH_3 - CH = CH_2$

Answer: B

Watch Video Solution

10. Which one of the following statements is wrong?

A. Buna-N stands for natural rubber

B. PVC stands for polyvinyl chloride

C. PAN stands for polyacrylonitrile

D. PMMA stands for polymethylmethacrylate

Answer: A

Watch Video Solution

11. The process involving heating of rubber with sulphur is called:

A. Sulphonation

B. Vulcanisation

C. Bessemerisation

D. Galvanisation

Answer: B

Watch Video Solution

12. which of the following is chain growth polymer?

A. Polypropylene

B. Nylon-6, 6

C. Terylene

D. Glyptal

Answer: A

Watch Video Solution

13. Terylene is an example of

A. Polyamide

B. Polyacrylate

C. Polyester

D. Polypropylene

Answer: C

Watch Video Solution

14. An example of natural biopolymer is :

A. Teflon

B. Rubber

C. DNA

D. Nylon

Answer: C

Watch Video Solution

15. Soft drinks and baby feeding bottles are generally made up of:

A. Polyamide

B. Polystyrene

C. Polyester

D. Dacron

Answer: B

Watch Video Solution

16. Nylon threads are made up of

A. Polyethylene polymers

B. Polyester polymers

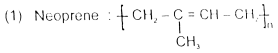
C. Polyvinyl polymers

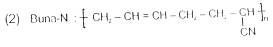
D. Polyamide polymers

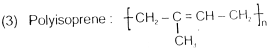
Answer: D

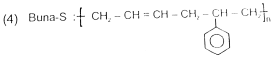
Watch Video Solution

17. Which of the following is not correctly matched?

A. (1) Neoprene : 

B. (2) Buna-N : 

C. (3) Polyisoprene : 

D. (4) Buna-S : 

Answer: A

Watch Video Solution

18. What is not true about polymers?

A. Polymers have high viscosity

B. Polymers do not carry any charge

C. Polymers scatter light

D. Polymers have low molecular weight

Answer: D

Watch Video Solution

19. Which percentage of sulphur is used in the vulcanization of rubber?

A. 0.55

B. 0.03

C. 0.05

D. 0.4

Answer: C

Watch Video Solution

20. Buna -S rubber (SBR) is a copolymer of

A. Styrene and butadiene

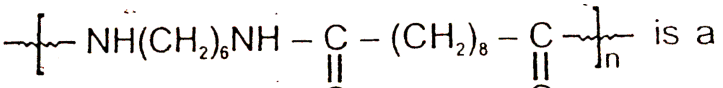
B. Isoprene and butadiene

C. Isoprene and sulphur

D. Butadiene and acrylonitrile

Answer: A

Watch Video Solution

21.  is a

A. Homopolymer

B. Copolymer

C. Addition polymer

D. Thermosetting polymer

Answer: B

Watch Video Solution

22. Which of the following sets contain only copolymers?

A. Melamine, Bakelite, PVC

B. Buna-N, Nylon-6, Polythene

C. Buna-S, Nylon-6, 6, Glyptal

D. Neoprene, Styron, Polyisoprene

Answer: C

Watch Video Solution

23. Ziegler-Natta catalyst is:

A. $TiCl_4$

B. $R_3Al/TiCl_4^-$

C. R_3Al

D. $R_3B/TiCl_2$

Answer: B

Watch Video Solution

24. Which of the following contains isoprene units?

A. Natural rubber

B. Nylon-6,10

C. Dacron

D. Polyethylene

Answer: A

Watch Video Solution

25. Orlon is a polymer of

A. Styrene

B. Teflon

C. Vinylchloride

D. Acrylonitrile

Answer: D

Watch Video Solution

26. Intermolecular force present in nylon-6, 6 is

A. van der Waal

B. Hydrogen bond

C. Sulphide linkage

D. Dipole-dipole interactions

Answer: B

Watch Video Solution

27. Which of the following polymers is are chlorinated?

A. Neoprene

B. PVC

C. Both (1) & (2)

D. Polythene

Answer: C

Watch Video Solution

28. Glyptal is copolymer of

A. Phthalic acid and glycerol

B. Phthalic acid and glycol

C. Terephthalic acid and glycerol

D. Terephthalic acid and glycol

Answer: B

Watch Video Solution

29. In order to give strength and elasticity, natural rubber is heated with

A. Sulphur

B. Oxygen

C. Chlorine

D. Nitrogen

Answer: A

Watch Video Solution

30. Which of the following is used in paints?

A. Terylene

B. Nylon

C. Chloroprene

D. Glyptal

Answer: D

Watch Video Solution

31. Which one of the following monomers gives the polymer neoprene on polymerization?

A. $CH_2 = CH - Cl$

B. $Cl_2C = \mathrm{CCl}_2$

C. $F_2C = CF_2$

D. $CH_2 = \underset{\underset{Cl}{|}}{C} - CH = CH_2$

Answer: D

Watch Video Solution

32. A condensation polymer among the following is

A. Dacron

B. Polythene

C. Buna-N

D. Natural rubber

Answer: A

Watch Video Solution

33. Bakelite is a product of the reaction between:

A. Reaction of HCHO and phenol

B. Reaction of polythene with HCI

C. Reaction of ethylene with phenol

D. Reaction of melamine with HCHO

Answer: A

Watch Video Solution

34. Which of the following is currently used as a tyre cord?

A. Terylene

B. Nylon-6

C. Bakelite

D. Polyethylene

Answer: B

Watch Video Solution

35. Which of the following is fully fluorinated polymer?

A. Neoprene

B. Teflon

C. PVC

D. Orlon

Answer: B

Watch Video Solution

36. Which of the following is biodegradable polymer?

A. PHBV

B. Nylon-6

C. Polyethene

D. Nylon-6, 10

Answer: A

View Text Solution

37. Name the monomers of nylon-2-nylon-6

A. Glycine and glycerol

B. Glycine and amino caproic acid

C. Glycine and caprolactum

D. Hexamethylene diamine and adipic acid

Answer: B

Watch Video Solution

38. Melamine resin is obtained from melamine by reacting with

A. $\underset{|}{\underset{OH}{CH_2}} - \underset{|}{\underset{OH}{CH_2}}$

B. $CH_3 - CHO$

C. $CH_3 - \underset{||}{\underset{O}{C}} - CH_3$

D. HCHO

Answer: D

Watch Video Solution

39. In propagation step, the reaction intermediate of radical polymerisation is

A. Carbocation

B. Carbanion

C. Free radical

D. Carbene

Answer: C

Watch Video Solution

40. Synthetic polymer prepared by using caprolactam is known as

A. Nylon 6, 6

B. Nylon 6, 10

C. Nylon, 6

D. Nylon 2-Nylon 6

Answer: C

Watch Video Solution

41. Given th polymers,

$A =$ Nylon-6,6, $B =$ Buna-S, $C =$ Polythene

Arrange these in decreasing order of their intermolecular forces:

A. $A > B > C$

B. $B > C > A$

C. $C < A < B$

D. $B < C < A$

Answer: D

Watch Video Solution

42. Which of the following statements is correct?

A. Caprolactum is the monomer of nylon 6, 6

B. Terylene is a polyamide

C. Phenol formaldehyde resin is known as malamine

D. Butadiene is not the monomer of natural rubber

Answer: D

Watch Video Solution

43. The monomer used to produce orlon is:

A. $CH_2 = CHF$

B. $CH_2 = CCl_2$

C. $CH_2 = CH - CN$

D. $CH_2 = CH - Cl$

Answer: C

Watch Video Solution

44. $PHBV$ is a copolymer of

A. 3-Hydroxybutanoic acid and 3-Hydroxypentanoic acid

B. 2-Hydroxybutanoic acid and 2-Hydroxypentanoic acid

C. Glycine and amino caproic acid

D. 3-Hydroxybutanoic acid and amino caproic acid

Answer: A

Watch Video Solution

45. Cis-1, 4 polyisoprene is known as

A. Neoprene

B. Natural rubber

C. PVC

D. Buna-N

Answer: B

Watch Video Solution

46. Which polymer is used in the manufacture of unbreakable crockery?

A. Bakelite

B. Malamine resin

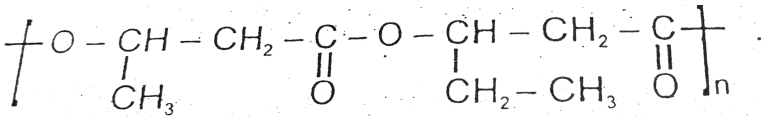
C. Dacron

D. PAN

Answer: B

Watch Video Solution

47. The name of



Copolymer is

A. PHBV

B. Nylon 2-Nylon-6

C. Nylon 6, 10

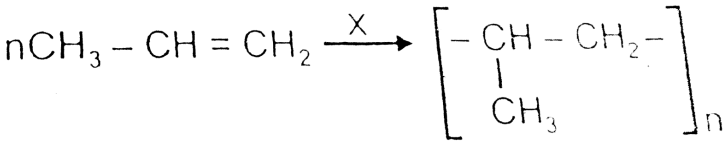
D. Nylon 6, 6

Answer: A

Watch Video Solution

Assignment Section B Objective Type Questions One Option Is Correct

1. In the reaction



Reagent X is

A. Triethyl aluminium and titanium tetrachloride

B. Triethyl aluminium

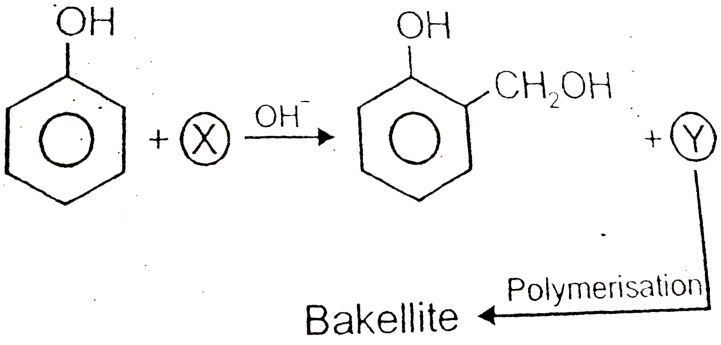
C. Zeigler Natta catalyst

D. Both (1)& (3)

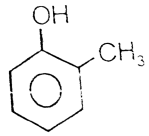
Answer: D

Watch Video Solution

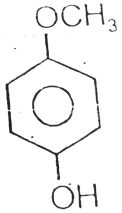
2. Complete the following reaction



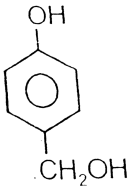
A. (1) CH_3OH;



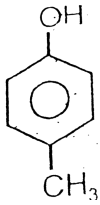
B. (2) HCHO;



C. (3) HCHO;



D. (4) HCHO;



Answer: C

Watch Video Solution

3. Which is incorrect?

A. Isoprene is the monomer of natural rubber

B. Neoprene is monomeric unit of chloroprene

C. Vulcanisation of rubber involves-S-S- cross- linking in natural rubber

D. Neoprene rubber is resistant to aerial axidation

Answer: B

Watch Video Solution

4. Cellulose acetate is a

A. Natural polymer

B. Semisynlthetic polymer

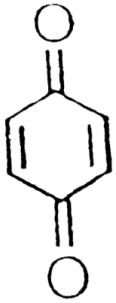
C. Synthetic polymer

D. Plasticizer

Answer: B

Watch Video Solution

5. Which of the following will act as inhibitor in free radical addition polymerisation?

A. (1) 

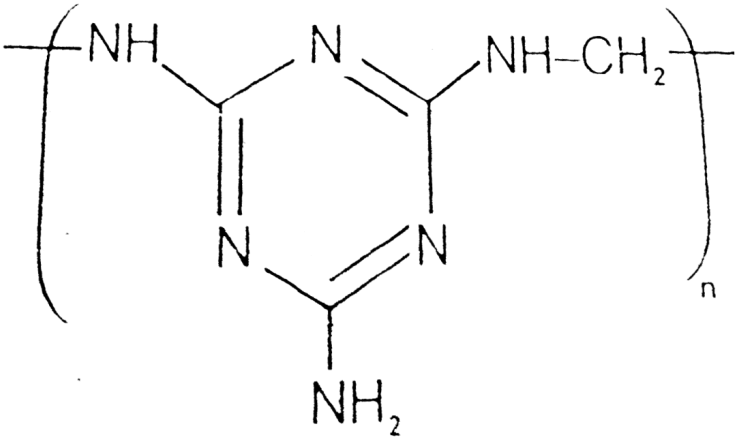
B. CCl_4

C. CBr_4

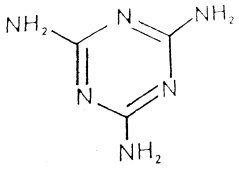
D. $H - Br$

Answer: A

Watch Video Solution



6. has the monomer

A. 

B. HCHO

C. Both (1) & (2)

D. None of these

Answer: C

Watch Video Solution

7. Terephthalic acid and ethylene glycol undcrgo step growth polymerisation to yield

A. Teflon

B. Rayon

C. Nylon-66

D. Terylene

Answer: D

Watch Video Solution

8. Which of the following contains isoprene unit ?

A. Natural rubber

B. Nylon-66

C. Bakelite

D. Orlon

Answer: A

Watch Video Solution

9. PMMA is the polymer of:

A. Methyl methacrylate

B. Methyl acrylate

C. Methacrylate

D. Ethylacrylale

Answer: A

Watch Video Solution

10. Nucleic acid is a condensation polymer of

A. Simple sugars

B. Amino acids

C. Nucleotides

D. Styrene

Answer: C

Watch Video Solution

Assignment Section C Objective Type Questions More One Option Is Correct

1. Examples of addition polymers are

A. Kevlar

B. Nylon 66

C. Natural rubber

D. Teflon

Answer: C::D

Watch Video Solution

2. Which of the following are Biopolymers?

A. Proteins

B. Polystyrene

C. DNA

D. Glucose

Answer: A::C

Watch Video Solution

3. Which of the following is not a monomer of neoprene?

A. Isoprene

B. Chloroprene

C. Vinyl chloride

D. Vinyl acetylene

Answer: A::C::D

Watch Video Solution

4. Which of the following are Thermoplastic polymers?

A. PVC

B. Teflon

C. Bakelite

D. Nylon

Answer: A::B::D

Watch Video Solution

5. In Buna-N, 'N' is not slands for

A. Nitrogen

B. Nitrile

C. Nitro

D. Nitrene

Answer: A::C::D

Watch Video Solution

6. Which of the followlng is/are polymer?

A. Enzyme

B. Starch

C. Cellulose

D. Protein

Answer: B::C::D

Watch Video Solution

7. Which of the following process can be used to prepare polystyrene?

A. Anionic

B. Cationic

C. Free radical

D. Benzyne

Answer: A::B::C

Watch Video Solution

8. Which of the following are biodegradable polymers?

A. PHBV

B. Nylon-2-Nylon-6

C. Nylon-6

D. Polyethene

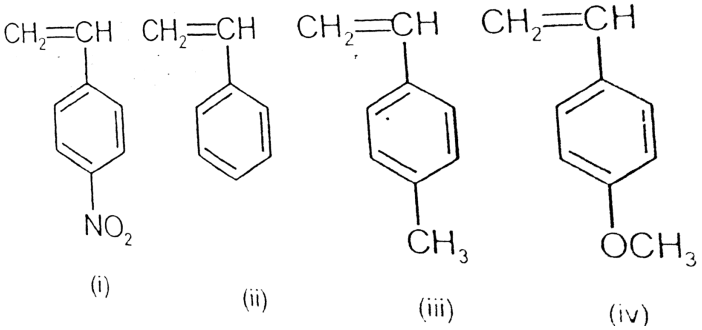
Answer: A::B

Watch Video Solution

Assignment Section D Linked Comprehension Type Questions

1. In cationic polymerizalion, the initiator is an electrophile that adds to the alkene, causing it to become a cation. The Initiator most often used in cationic polymerization is a lewis acid. Such as BF_3 or $AICI_3$ and in anionic polymerization, the iniliator is a nucleophile that reacts with the alkene to form a propagating site that is an anion.

Arrange the following group of monomers of decreasing ability to undergo cationic polymerization



A. $(iv) > (iii) > (ii) > (i)$

B. $(ii) > (iii) > (iv) > (i)$

C. $(iv) > (i) > (ii) > (iii)$

D. $(iv) > (ii) > (iii) > (i)$

Answer: A

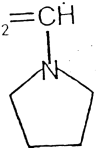
Watch Video Solution

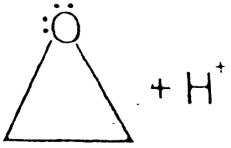
2. In cationic polymerizalion, the initiator is an electrophile that adds to the alkene, causing it to become a cation. The Initiator most often used in cationic polymerization is a lewis acid. Such as BF_3 or $AICI_3$ and in anionic polymerization, the iniliator is a nucleophile that reacts with the alkene to form a propagating site that is an anion.

Which of the follówing represents anionic polymerisation?

A. $Bu - Li + CH_2 = \underset{\underset{CN}{|}}{CH}$

B. $BF_3 + CH_2 = C(CH_3)_2$

C. (3) $BF_3 + CH_2{=}CH$ 

D. 

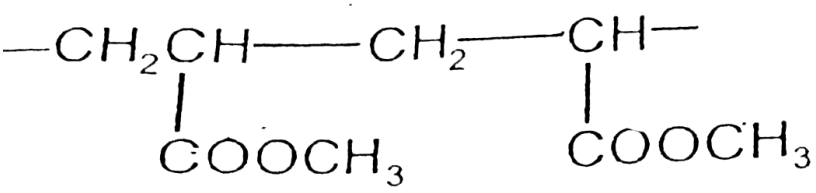
Answer: A

Watch Video Solution

3. In cationic polymerizalion, the initiator is an electrophile that adds to the alkene, causing it to become a cation. The Initiator most often used in cationic polymerization is a lewis acid. Such as BF_3 or $AICI_3$ and in anionic polymerization, the iniliator is a nucleophile that reacts with the alkene to form a propagating site that is an anion.

What monomer and what type initiator would you use to synthesize

following polymer ?



A. (1) $CH_2=\underset{\displaystyle CH_3}{\overset{|}{C}}-CH_3 + BF_3$

B. (2) $CH_2=\underset{\displaystyle COOCH_3}{\overset{|}{C}}H + C_4H_9Si$

C. (3) $CH_2=\underset{\displaystyle CH_3}{\overset{|}{C}}-H + BF_3$

D. (4) $CH_2=\underset{\displaystyle COOCH_3}{\overset{|}{C}}-CH_3 + C_4H_9-Si$

Answer: B

Watch Video Solution

4. Addition polymers are those in which monomers are converting into polymer by addltlon reaction. This addition reaction follow Tedical.mechanism in which firstly radical form than this propagate a

chain than this chain terminate to form polymer

The polyethene is started as

A. $R - CH_2 - \dot{C}H_2$

B. $R - CH = \dot{C}H$

C. $CH_2 = \dot{C}H$

D. $R - CH - \dot{C}H$

Answer: A

Watch Video Solution

5. Addition polymers are those in which monomers are converting into polymer by addltlon reaction. This addition reaction follow Tedical.mechanism in which firstly radical form than this propagate a chain than this chain terminate to form polymer

Which of the following is a propagation rejection?

A. $\dot{R} + CH_2 = CH_2 \rightarrow R - CH_2 - \dot{C}H_2$

B.

$$RCH_2CH_2 + CH_2 = CH_2 \rightarrow R - CH_2 - CH_2 - CH_2 - \dot{C}H_2$$

C. $\left(RCH_2CH_2CH_2\dot{C}H_2\right)_n \rightarrow R(CH_2CH_2)_{2n}R$

D. None of these

Answer: B

Watch Video Solution

6. The condensation polymer are those which gives out some simple molecules like H_2O in course of reaction. Mostly in this reaction functional group changes.

Polyamide is

A. Nylon-6

B. Buna-N

C. Buna-S

D. Polyethene

Answer: A

Watch Video Solution

7. The condensation polymer are those which gives out some simple molecules like H_2O in course of reaction. Mostly in this reaction functional group changes.

Polyster is

A. Nylon-66

B. Decron

C. Teflon

D. Neoprene

Answer: B

Watch Video Solution

Assignment Section E Assertion Reason Type Questions

1. STATEMENT-1: Nylon-6 is a step-growth polymer.

and

STATEMENT-2 It is obtained from caprolactum.

A. Statement-1 is True, Statement-2 is True, Statement-2 is a correct explanation for Statement-1

B. Statement-1 is True, Statement-2 is True, Statement-2 is NOT a correct explanation for Statement-1

C. Statement-1 is True, Statement-2 is False

D. Statement-1 is False, Statement-2 is True

Answer: B

Watch Video Solution

2. STATEMENT-1-: Vulcanization introduces S-S crosslinking in rubber and

STATEMENT-2 Vulcanized rubber has low water absorption tendency.

A. Statement-1 is True, Statement-2 is True, Statement-2 is a correct explanation for Statement-2

B. Statement-1 is True, Statement-2 is True, Statement-2 is NOT a correct explanation for Statement-2

C. Statement-1 is True, Statement-2 is False

D. Statement-1 is False, Statement-2 is True

Answer: A

Watch Video Solution

Watch Video Solution

3. STATEMENT-1: Styrene is more reactive than ethylene towards free radical polymerization

and

STATEMENT-2: Polymerization of styrene proceeds through more stable benzyl free radical.

A. Statement-1 is True, Statement-2 is True, Statement-2 is a correct explanation for Statement-3

B. Statement-1 is True, Statement-2 is True, Statement-2 is NOT a correct explanation for Statement-3

C. Statement-1 is True, Statement-2 is False

D. Statement-1 is False, Statement-2 is True

Answer: A

Watch Video Solution

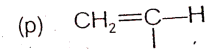
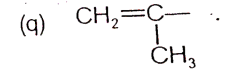
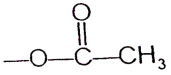
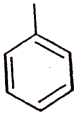
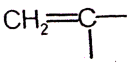
Assignment Section F Matrix Match Type Questions

1. Match the following

Column I	Column II
(A) Nylon–6	(p) $-\overset{|}{N}-\overset{\overset{O}{||}}{C}-$ linkage
(B) Starch	(q) Glycosidic linkage
(C) Haemoglobin	(r) Natural polymer
(D) Glycogen	(s) Synthetic polymer
	(t) Polysaccharides

View Text Solution

2. Match the following

Column I (Monomer)	Column II (Unit)
(A) Propylene	(p) 
(B) Isobutylene	(q) 
(C) Vinyl acetate	(r) 
(D) Styrene	(s) 
	(t) 

View Text Solution

3. Match the following

Column I	Column II
(A) Cellulose	(p) Have ether linkage
(B) Amylose	(q) Have (—OH) functional group
(C) Amylopictin	(r) Natural polymer
(D) Decrone	(s) Have ester linkage
	(t) Formed by liberation of H_2O

View Text Solution

4. Match the following

Column I	Column II
(A) Bakalite	(p) Cross linked polymer
(B) Decron	(q) Have more than one type of functionality
(C) Cellulose	(r) Natural polymer
(D) Nylon-2-nylon-6	(s) Synthetic polymer
	(t) Glucose as monomer

View Text Solution

5. Match the following

Column I	Column II
(A) Polypeptide	(p) Nothing is produced as a side product
(B) Polyester	(q) Have hydrogen bonding
(C) Polyamide	(r) Addition polymer
(D) Polyethene	(s) Condensation polymer
	(t) Side product is produced

View Text Solution

6. Match the following

Column I	Column II
(A) Low density polyethene	(p) Branched chain polymer
(B) High density polyethene	(q) Straight chain polymer
(C) Bakalite	(r) Cross-linked polymer
(D) Teflons	(s) Homopolymer
	(t) Copolymer

View Text Solution

Assignment Section G Integer Answer Type Questions

1. What is the number of atoms present in the backbone of each repeating unit of Nylon-6?

Watch Video Solution

2. How many types of monomers are present in synthetic rubber?

Watch Video Solution

3. How many functional groups are present in monomer of polymer nylon-6?

Watch Video Solution

4. How many among the following are biodegradable polymers?

(i) Polyhydroxybutyrate (PHB)

(ii) PHBV

(iii) SBR

(iv) Polyglycolic acid

(v) Bakelite

(vi) Thiokol

(vii) Nylon-2-Nylon-6

(vii) PMMA

(ix) Nylon-6, 6.

Watch Video Solution

Assignment Section H Multiple True False Type Questions

1. STATEMENT-1: Nylon-66 is a polyamide.

STATEMENT-2 : Nylon-66 is a polymer of caprolactam.

STATEMENT-3 : It is a copolymer.

A. TTT

B. FFF

C. TFT

D. FFT

Answer: C

Watch Video Solution

2. STATEMENT-1: Glycogen is a biopolymer.

STATEMENT-2:Chloroprene is polymer of isoprene.

STATEMENT-3 : Buna-S is natural rubber.

A. TTT

B. FFF

C. TFT

D. TFF

Answer: D

Watch Video Solution

3. STATEMENT-1 Decron form with liberation of H_2O

STATEMENT-2 : Nylon-6 has cyclic monamer

STATEMENT-3 : Polyester form with liberation of H_2O

A. TTT

B. TFT

C. FFF

D. FTF

Answer: A

Watch Video Solution

4. STATEMENT-1 : Celuloso is a natural polymer

STATEMENT-2 : Amylose is a natural polymer

STATEMENT-3 : Polyethene is a nalural polymer

A. TTF

B. TFT

C. FFT

D. TTT

Answer: A

Watch Video Solution

Assignment Section I Subjective Type Questions

1. Write chemical equation to prepare

(i) Nylon-6 (ii) Nylon-66

Watch Video Solution

2. A polymeric substance, tetra fluoro ethylene, can be represented by the formula (C_2F_4) where x is a large number. The material was prepared by polymensing C_2F_4 in the presence of sulphur bearing calalyst thal served as a nucleus upon which the polymer grew. The final product was found to contain 0.012% S. What is the value of x if each polymeric molecule conlain 2 sulphur atoms? Assume that the calalyst contribution is negligible amount to the lotal mass of polymer.

View Text Solution

3. Name the monomer of nylon-6. How is nylon-6 prepared ?

Watch Video Solution

4. Explain the mechanism of formation of polyethene.

Watch Video Solution

5. Explain the formation of low density polyethene

Watch Video Solution

6. What is the biodegradable polymer?Give an example of a biodegradable aliphatic polyester.

Watch Video Solution

Assignment Section J Aakash Challengers Questions

1. Thermosetting plastic is an example of

A. Linear polymer

B. Cross-linked polymer

C. Branched chain polymer

D. None of these

Answer:

Watch Video Solution

2. The structure of the monomer used for the preparation of plexiglass is

A. $CH_2 = \overset{CN}{\overset{|}{C}} - COOC_2H_5$

B. $CH_2 = \overset{CH_3}{\underset{|}{C}} - COOC_2H_5$

C. $CH_3 - CH = CH - \overset{CH_3}{\underset{|}{C}}H - COOCH_3$

D. $CH_2 = \overset{CH_3}{\underset{|}{C}} - COOCH_3$

Answer:

Watch Video Solution

3. How is Dacron obtained from ethylene glycol and terephthalic acid?

A. Glyptal

B. Kevlar

C. Dacron

D. Bakelite

Answer:

Watch Video Solution

4. Which among the following species is an elastomer?

A. Nylon

B. Neoprene

C. Terylene

D. Polystyrene

Answer:

Watch Video Solution

Example

1.  is a homopolymer or a copolymer?

Watch Video Solution

2. Give the examples of cross-linked polymers.

Watch Video Solution

3. What is artificial silk or rayon? Give an example.

Watch Video Solution

4. Name a substance which inhibits free radical polymerisation.

Watch Video Solution

5. Identify the monomer in the following polymeric structures.

(i) $\left\{\overset{O}{\overset{||}{C}}-(CH_2)_8-\overset{O}{\overset{||}{C}}-Nh-(CH_2)_6-NH\right\}_n$

(ii) $\left\{CH_2-\overset{CH_3}{\overset{|}{C}}=CH-CH_2\right\}_n$

(iii)

(iv) $\{CF_2-CF_2\}_n$

View Text Solution

6. Arrange the following polymers in increasing order of their intermolecular forces :

(i) Buna-S,Nylon-6,Polyvinyl chloride

(ii) Polysterene,Dacron,Buna-N

Watch Video Solution

Watch Video Solution

Try Your Self

1. Classify the following as addition and condensation polymers

Nylon 6,6, Buna-N,Buna-S,Polythene,Polystyrene,Polyvinyl chloride

Watch Video Solution

2. Name one thermosetting and one thermoplastic polymer.

Watch Video Solution

3. What is the difference between elastomers and fibres ?

Watch Video Solution

4. Write the name of monomers of the following polymers.

View Text Solution

5. 

What is (A), (B) and (C) respectively?

View Text Solution

6. Name some biopolymers which are biodegradable.

Watch Video Solution

7. Write the name and structures of the monomers of the following biodegradable polymers :

(i) Nylon 2-nylon 6

(ii) PHBV

(iii) PHB

Watch Video Solution

Exercise

1. Which among the following is a cross-linked polymer ?

A. Amylopectin

B. Melamine formaldehyde resin

C. Glycogens

D. Polysters

Answer: B

Watch Video Solution

2. Which of the following is a chain-growth polymer?

A. Nylons

B. Polyesters

C. Glycogens

D. Bakelite

Answer: C

Watch Video Solution

3. Which of the following type of force are present in Nylon-66?

A. vasn dar Waal's forces of attraction

B. Hydrogen bonding

C. Three dimensional network of bonds

D. None of these

Answer: B

Watch Video Solution

4. Which of the following is a natural polymer?

A. Polythene

B. Polysaccharides

C. Nylon

D. Terylene

Answer: B

Watch Video Solution

5. Which of the following is an elastomer?

A. Vulcanized rubber

B. Dacron

C. Polystyrene

D. Malamine

Answer: A

Watch Video Solution

6. Which of the followning is a condensation polymer?

A. Teflon

B. orlon

C. Dacron

D. Polyethene

Answer: C

Watch Video Solution

7. Identify the co-polymer

A. Buna-N

B. Neoprene

C. Natural rubber

D. All of these

Answer: A

Watch Video Solution

8. Which one is biodegradable polymer?

A. Nylon-2-Nylon-6

B. Nylon-6,6

C. Nylon-6

D. All of these

Answer: A

Watch Video Solution

9. The monomer unit of PHBV is

A. $CH_3 - \overset{OH}{\overset{|}{C}}H - CH_2COOH$

B. $CH_3 - CH_2 - \underset{OH}{\underset{|}{C}}H - CH_2COOH$

C. $HO - CH_2 - CH_2 - COOH$

D. Both 1 and 2

Answer: D

Watch Video Solution

10. Which of the following is true about natural rubber?

A. Its monomer is 2-methyl-1,3-butadiene

B. It is also called as trans-1,4-polyisoprene

C. Its repeating unit is $\left\{ CH_2 - \overset{CH_3}{\overset{|}{C}} = \underset{OH}{\overset{|}{C}} - CH_2 \right\}_2$

D. It is a branched polymer

Answer: A

Watch Video Solution

Assignment Section A

1. Which of the following is a natural polymer?

A. Cellulose

B. Buna-S

C. Rayon

D. Nylon 6, 6

Answer: A

Watch Video Solution

2. Which of the following is a synthetic polymer?

A. Starch

B. Natural rubber

C. Cellulose acetate

D. Polyethylene

Answer: D

Watch Video Solution

3. Which of the following is a linear polymer?

A. Low density polythene

B. High density polythene

C. malamine

D. Amylopectin

Answer: B

Watch Video Solution

4. Which of the following is a cross-linked polymer?

A. Starch

B. Bakelite

C. PVC

D. Polythene

Answer: B

Watch Video Solution

5. Which of the following is an addition polymer?

A. Nylon-6

B. Nylon-6,6

C. Buna-S

D. Dacron

Answer: C

Watch Video Solution

6. Which of the following ia a condensation polymer?

A. Buna-N

B. Polystyrene

C. Nylon-6

D. Natural rubber

Answer: C

Watch Video Solution

7. Which of the following is a thermosetting polymer?

A. Urea formaldehydre resin

B. Polyvinychloride

C. Polyester

D. Neoprene

Answer: A

Watch Video Solution

8. Which of the following is an elastomer?

A. Bakelite

B. Polythene

C. Buna-S

D. Polystyrene

Answer: C

Watch Video Solution

9. PVC polymer can be prepared by which of the monomers'?

A. $CH_2 = CH_2$

B. $CH_2 = CH - Cl$

C. $C_6H_5 - CH = CH_2$

D. $CH_3 - CH = CH_2$

Answer: B

Watch Video Solution

10. Which one of the following statements is wrong?

A. Buna-N stands fro natural rubber

B. PVC stanes for polyvinyl chloride

C. PAN stands for polyacrylonitrile

D. PMMA stands for polymethylmethacrylate

Answer: A

Watch Video Solution

11. Heating rubber with sulphur is known as

A. Sulphonation

B. Vulcanisation

C. Bessemerisation

D. Galvanisation

Answer: B

Watch Video Solution

12. Which of the following is chain growth polymer?

A. Polypropylene

B. Nylon-6,6

C. Terylene

D. Glyptal

Answer: A

View Text Solution

13. Terylene is an example of

A. Polyaminde

B. Polyacrylate

C. Polyester

D. Polypropylene

Answer: C

Watch Video Solution

14. An example of natural biopolymer is :

A. Teflon

B. Rubber

C. DNA

D. Nylon

Answer: C

Watch Video Solution

15. Soft drinks and baby feeding bottles are generally made up of:

A. Polyamide

B. Polystyrene

C. Polyester

D. Dacron

Answer: B

Watch Video Solution

16. Nylon threads are made up of

A. Polyethylene polymers

B. Polyester polymers

C. Polyvinyl polymers

D. Polyamide polymers

Answer: D

Watch Video Solution

17. Which of the following is not correctly matched?

A. Neoprene $\left\{ CH_2 - \underset{\underset{CH_3}{|}}{C} = CH - CH_2 \right\}_n$

B. Buna-N: $\left\{ CH_2 - CH = CH - CH_2 - CH_2 - \underset{\underset{CN}{|}}{CH} \right\}_n$

C. Polyisoprene $\left\{ CH_3 - \underset{\underset{CH_3}{|}}{C} = CH - CH_2 \right\}_n$

D. 

Answer: A

View Text Solution

18. What is not true about polymers?

A. Polymers have high viscosity

B. Polymers do not carry any large

C. Polymers scatter light

D. Polymers have low molecular weight

Answer: B

Watch Video Solution

19. Which percentage of sulphur is used in the vulcanization of rubber?

A. 55

B. 30

C. 5

D. 40

Answer: C

Watch Video Solution

20. The monomers of Buna -S rubber are

A. Styrene and butadiene

B. Isoprene and butadiene

C. Isoprene and sulphur

D. Butadiene and acrylonitrile

Answer: A

Watch Video Solution

21. $\left\{ NH(CH_2)_6NH - \underset{\underset{O}{||}}{C} - (CH_2)_4 - \underset{\underset{O}{||}}{C} \right\}_n$ is a

A. Homopolymer

B. Copolymer

C. Additioin polymer

D. Thermosetting polymer

Answer: B

Watch Video Solution

22. Zeirler-Natta catalyst is

A. $TiCl_4$

B. $R_3Al/TiCl_4$

C. R_3Al

D. $R_3B/TiCl_2$

Answer: B

Watch Video Solution

23. Which of the following contains isoprene units?

A. Natural rubber

B. Nylon-6,10

C. Dacron

D. Polyethlene

Answer: A

Watch Video Solution

24. Orlon is a polymer of

A. Styrene and butadiene

B. Teflon

C. Vinylchloride

D. Acrylonitrile

Answer: D

Watch Video Solution

25. Intermolecular force present in nylon-6, 6 is

A. van der waal

B. Hydrogen bond

C. Sulphide linkage

D. Dipole dipole interactions

Answer: B

Watch Video Solution

26. Which of the following polymers is are chlorinated?

A. Neoprene

B. PVC

C. Bohth 1 and 2

D. Polythene

Answer: C

Watch Video Solution

27. Glyptal is copolymer of

A. Phthalic acid and glyclrol

B. Phthalic acid and glycol

C. Terephthalic acid and glyclrol

D. Terephthalic acid and glycol

Answer: B

Watch Video Solution

28. In order to give strength and elasticity, natural rubber is heated with

A. Sulphur

B. Oxygen

C. Chlorine

D. Nitrogen

Answer: A

Watch Video Solution

29. Which one of the following monomers gives the polymer neoprene on polymerization?

A. $CH_2 = CH - Cl$

B. $Cl_2C = CCl_2$

C. $F_2C = CF_2$

D. $CH_2 = \underset{\underset{Cl}{|}}{C} - CH = CH_2$

Answer: D

Watch Video Solution

30. A condensation polymer among the following is

A. Dacron

B. Polythene

C. Buna-N

D. Natural rubber

Answer: A

Watch Video Solution

31. Bakelite is a product formed from:

A. Reaction of HCHO and phenol

B. Reaction of polythene with HCL

C. Reaction of ethylene with phenol

D. Reaction of melamine with HCHO

Answer: A

Watch Video Solution

32. Which of the following is currently used as a tyre cord?

A. Teryline

B. Nylon-6

C. Bakelite

D. Polyethylene

Answer: A

Watch Video Solution

33. Which of the following is fully fluorinated polymer?

A. Neoprne

B. Teflon

C. PVC

D. Orion

Answer: B

Watch Video Solution

34. Which of the following is biodegradable polymer?

A. PHBV

B. Nylon-6

C. Polyethene

D. Nylon-6,10

Answer: A

Watch Video Solution

35. Monomers of nylon 2-nylon 6 are-

A. Glycine and glycerol

B. Glycine and amino caproic acid

C. Glycine and caprolactum

D. Hexamethylene diamine and adipic acid

Answer: B

Watch Video Solution

36. The monor unit of the following polymer

$\{NH - CO - NH - CH_2\}_n$

A. Glycine and formadehyde

B. Urea and ethanol

C. Urea and formaldenyde

D. Glycine and adipic acid

Answer: C

Watch Video Solution

37. Melamine resin is obtained from melamine by reacting with

A. $\underset{|}{CH_2}\underset{OH}{} - \underset{|}{CH_2}\underset{OH}{}$

B. $CH_3 - CHO$

C. $CH_3 - \underset{||}{\overset{}{C}}\underset{O}{} - CH_3$

D. $HCHO$

Answer: D

Watch Video Solution

38. In propagation step, the reaction intermediate of radical polymerisation is

A. Carbocation

B. Carbanion

C. Free radical

D. Carbene

Answer: C

Watch Video Solution

39. Which of the following polymer is preapred from caprolactam

A. Nylon 6,6

B. Nylon 6,10

C. Nylon, 6

D. Nylon 2-Nylon 6

Answer: C

Watch Video Solution

40. Given th polymers,

$A =$ Nylon-6,6, $B =$ Buna-S, $C =$ Polythene

Arrange these in decreasing order of their intermolecular forces:

A. $A > B > C$

B. $B > C > A$

C. $C < A < B$

D. $B < C < A$

Answer: A

Watch Video Solution

41. Which of the following statements is correct?

A. Caprolactum is the monomer of nylon 6,6

B. Terylene is a polyamide

C. Phenol formaldehyde resin is known as bakelite

D. Butadiene is not the monomer of natural rubber

Answer: C

Watch Video Solution

42. The monomer units PHBV is

A. 3Hydroxybutanoic acid and 3-kHydroxypentanoic acid

B. 2-Hydroxybutanoic acid and 2-Hydroxypentanoic and

C. Glycine and amino caproic acid

D. 3-Hydroxybutanoic acid and amino caproic acid

Answer: A

Watch Video Solution

43. Cis-1, 4 polyisoprene is known as

A. Neoprene

B. Natural rubber

C. PVC

D. Bura-N

Answer: B

Watch Video Solution

44. Which polymer is used in the manufacture of unbreakable crockery?

A. Bakalite

B. Malamine resin

C. Dacron

D. PAN

Answer: B

Watch Video Solution

Assignment Section B

1. Which is not an example of addition polymer?

A. Neoprene

B. PMMA

C. PVC

D. Dacron

Answer: D

Watch Video Solution

2. The monomers of Bakelite are

A. Ethylene glycol+phthalic acid

B. Phenol+formaldehyde

C. Ethylene glycol+terephthalic acid

D. Phenol+methanoic acid

Answer: B

Watch Video Solution

3. Polymerisation of acrylonitrile will best take place by

A. Cationic polymerisation

B. Anionic polymerisation

C. Free radical polymerisation

D. All of these

Answer: B

Watch Video Solution

4. Fibre among the following is

A. Rubber

B. Buna-S

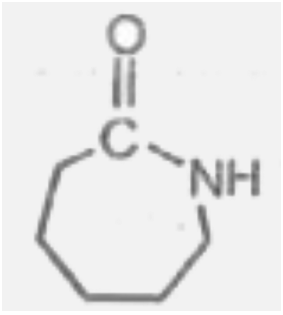
C. Nylon-66

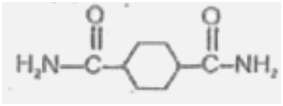
D. Bakelite

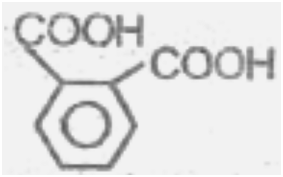
Answer: C

Watch Video Solution

5. Monomer of $\left[NH-(CH_2)_5-\overset{O}{\overset{||}{S}} \right]_n$ is

A. 

B. 

C. 

D. H_2NCONH_2

Answer: A

View Text Solution

6. Polymer of perfluoroethylene is

A. Polythene

B. PVC

C. Teflon

D. Buna-N

Answer: C

Watch Video Solution

7. Which of the following is a chain growth polymer?

A. Starch

B. Nucleic acid

C. Polysthrene

D. Protein

Answer: C

Watch Video Solution

8. Orlon is a polymer of

A. Styrene and butadiene

B. Vinyl chloride

C. Tetrafluoroethylene

D. Acrylonitrile

Answer: D

Watch Video Solution

9. Which of the following is a thermosetting polymer?

A. PVC

B. Neoprene

C. Bakelite

D. Polythene

Answer: C

Watch Video Solution

10. Which of the following is a semisynthetic polymer?

A. Natural rubber

B. Gun cotton

C. Cellulose

D. Nucleic acids

Answer: B

Watch Video Solution

11. Which of the following is correct statement?

A. Low density polyethylene is obtained under high pressure and room temperature

B. High density polyethylene has highly branched structure

C. High density polyethylene is obtained at atmospheric pressure

D. High density polythlene is more flexible than low density polyethylene

Answer: C

Watch Video Solution

12. Which is not the biodegradable polymer?

A. Nylon-2-Nylon-6

B. Poly (Glycolic acid) and Poly (Lactic acid)

C. Glyptal

D. PHBV

Answer: C

Watch Video Solution

13. Which of the following is a biodegradable polymer?

A. Cellulose

B. Polythene

C. Polyvinyl chloride

D. Nylon-6,10

Answer: A

Watch Video Solution

14. Formation of polyethylene from calcium carbide takes place as follows

$$CaC_2 + 2H_2O \rightarrow Ca(OH)_2 + C_2H_2$$

$$C_2H_2 + H_2 \rightarrow C_2H_2$$

$$N(C_2H_4) \rightarrow (-CH_2 - CH_2-)_n$$

The amount of polyethylene obtained from $64.1 kg CaC_2$ is

A. 7kg

B. 14kg

C. 21 kg

D. 28 kg

Answer: D

Watch Video Solution

15. Which is used for the formation of nylon-66 ?

A. Sulphur hexafluoride

B. Adipic acid

C. Sulphurous acid

D. Phthalilc acid

Answer: B

Watch Video Solution

16. Monomer of $\left[-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}} - CH_2 - \right]_n$ *is*

A. 2-methylpropene

B. Styrene

C. Propylene

D. Ethene

Answer: A

Watch Video Solution

17. Polymer formation from monomers starts by:

A. Condensation reaction between monomers

B. Coordination reaction between monomers

C. Conversion of monomer to monomer ion by protons

D. Hydrolysis of monomers.

Answer: A

Watch Video Solution

18. In a polymer sample, 30% of molecules have a molecualr mass of $20,000$, 40% have 30,000 and the rest 60,000. What is the weight average molecular mass of the polymer?

A. 40300

B. 30600

C. 43333

D. 50400

Answer: C

Watch Video Solution

19. Which of the following polymers is prepared by condensation polymerisation?

A. Styrene

B. Nylon-66

C. Teflon

D. Rubber

Answer: B

Watch Video Solution

20. Which one of the following is not a correct match?

A.	(Polymer	Monomer(s)
	(Teflon	Tetra fluoroethylene
B.	(Polymer	Monomer(s)
	(Pierce glass	Methyl methacrylate
C.	(Polymer	Monomer(s)
	(Buna-S	Styrene,1,3-butadiene
D.	(Polymer	Monomer(s)
	(Thiokol	Sodium tetrasulphide

Answer: B

Watch Video Solution

Assignement Section C

1. Which one of the following structures represents nylon-6,6 polymer?

A. 

B. 

C. 

D. 

Answer: D

Watch Video Solution

2. Natural rubber has :

A. Random cis-and tans-configuration

B. All cis-configuration

C. All trans-configuration

D. Alternate cis-and trans -configuration

Answer: B

Watch Video Solution

3. Caprolactam is used for the manufacture of :

A. Terylene

B. Nylon-6,6

C. Nylon-6

D. Teflon

Answer: C

Watch Video Solution

4. Biodegradable polymer which can be produced from glycine and aminocaproic acid.

A. Nylon 6,6

B. Nylon 2-nylon 6

C. PHBV

D. Buna-V

Answer: B

Watch Video Solution

5. Which of the following organic compounds polymerize to form the polyester Dacron?

A. Propylene and para $HO-(C_6H_4)-OH$

B. Benzoic acid and ethanol

C. Terephtalic acid and ethylene gycol

D. Benzoic acid and para $HO-(C_6H_4)-OH$

Answer: C

Watch Video Solution

6. Which one of the following is an example of a thermosetting polymer?

A. $\left(CH_2-\underset{cl}{\underset{|}{C}}=CH-CH_2\right)_n$

B. $\left(CH_2-\underset{Cl}{\underset{|}{CH}}\right)_n$

C. $N-\overset{H}{\overset{|}{(CH_2)_6}}-\overset{H}{\overset{|}{N}}-\overset{O}{\overset{||}{C}}-(CH_2)_4-\overset{O}{\overset{||}{C}}\Bigg)_n$

D. 

Answer: D

Watch Video Solution

7. Which is the monomer of neoprene in the following?

A. $CH_2 = \underset{\underset{CH_3}{|}}{C} - CH = CH_2$

B. $CH_2 = \underset{\underset{Cl}{|}}{C} - CH = CH_2$

C. $CH_2 = CH - C = CH$

D. $CH_2 = CH - CH = CH_2$

Answer: B

Watch Video Solution

8. Nylon is an example of

A. Polysachharide

B. Polyamide

C. Polythene

D. Polyester

Answer: B

Watch Video Solution

9. Which one of the following is not a condensation polymer?

A. Dacron

B. Neoprene

C. Me

D. Glyptal

Answer: B

Watch Video Solution

10. Which one of the following sets forms the biodegradable polymer?

A. $CH_2 = CH - CH$ 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 

D. None of these

Answer: B

View Text Solution

11. Which of the following statements is false?

A. The repeat unit in natural rubber is isoprene

B. Both starch and cellulose are polymers of glucose

C. Artificial silk is derived from cellulose

D. Nylon -66 is an example of elastomer

Answer: D

Watch Video Solution

12. Of the following which one is classified as polyester polymer?

A. Nylon-6,6

B. Terylene

C. Bakelite

D. Malamine

Answer: B

Watch Video Solution

13. Which of the following structures represents neoprene polymer?

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

B. $\left(-CH_2 - \overset{\overset{CN}{|}}{C}H - \right)_n$

C. $\left(-CH_2 - \overset{\overset{Cl}{|}}{C}H - \right)_n$

D. $\left(-\underset{\underset{C_6H_5}{|}}{C}H - CH_2 - \right)_n$

Answer: A

Watch Video Solution

14. The straight chain polymer is formed by

A. Hydrolysis of CH_3SiCl_3 followed by condensation polymerisation

B. Hydrolysis of $(CH_3)_4$ Si by addition polymerisation

C. Hydrolysis of $(CH_3)_2SiCl_2$ followed by condensation polymerisation.

D. Hydrolysis of $(CH_3)_3$ SiCl. Followed by condensation polymerisation

Answer: C

Watch Video Solution

15. Struchures of some common polymers are given. Which one is not correctly represented?

A. Neoprene

$$\left[-CH_2 - \underset{\underset{Cl}{|}}{C} = CH - CH_2 - CH_2 - \right]_n$$

B. 

C. Nylon -6,6

$$\left[NH(CH_2)_6 NHCO(CH_2)_4 - CO - l_2 \right.$$

D. Teflon

$$(-CF_2 - CF_2 -)_n$$

Answer: A

Watch Video Solution

16. Which of the following statements is not ture?

A. Natural rubber is 1,4- polymer of isoprene

B. In vulcanization, the formation of sulphur bridges between different chains make rubber harder and stronger

C. Natural rubber has the trans configutation at every double bond

D. Buna-S is a copolymer of butadiene and styrene

Answer: C

Watch Video Solution

17. Which one of the following polymers is prepared by condensation polymerization?

A. Styrene

B. Nylon-6,6

C. Teflon

D. Rubber

Answer: B

Watch Video Solution

18. ~ $\left[NH(CH_2)NHCO(CH_2)_4CO\right]$ ~ is a

A. Co-polymer

B. Addition polymer

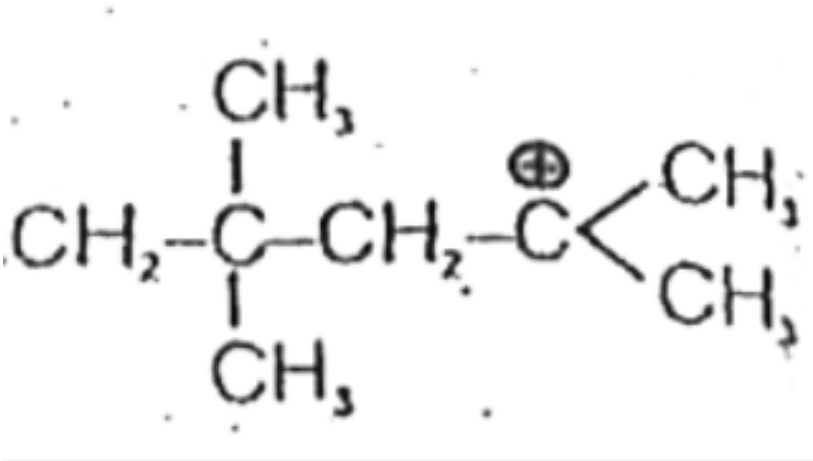
C. Thermo-setting polymer

D. Homopolymer

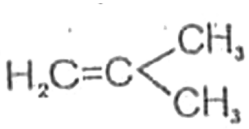
Answer: A

Watch Video Solution

19. The monmer of the polymer



is

A. 

B. $(CH_3)_2C = C(CH_3)_2$

C. $CH_3CH = CH.CH_3$

D. $CH_3CH = CH_2$

Answer: A

Watch Video Solution

20. Which of the following set of polymers contains same monomer which is used to prepare urotropine on reaction with NH_3?

A. Glyptal, urea -formaldehyde resin, Nylon-6,6

B. Glyptal, urea-formaldehyde resin, melamine-formaldehyde resin

C. Nylon-6, urea formaldehyde resin, melamine-formaldehyde resin

D. Nylon-6, glyptal, Nylon-6,6

Answer: B

Watch Video Solution

21. The bakelite is prepared by the reaction between

A. Phenol and formaldehyde

B. Tetramethylene glycol

C. Urea and formaldehyde

D. Ethylene glycol

Answer: A

View Text Solution

22. Which one of the following is used to make ' non – stick ' cookware ?

A. Poly-ethylene terephthalate

B. Polytetrafluoroethylene

C. PVC

D. Polystyrene

Answer: B

Watch Video Solution

23. Terylene is a condensation polymer of ethylene glycol and

A. Salicylic acid

B. Phthalic acid

C. Benzoic acid

D. Terephthalic acid and glycol

Answer: D

Watch Video Solution

24. Natural rubber is a polymer of

A. Styrene

B. Ethyne

C. Butadiene

D. Isoprene

Answer: D

Watch Video Solution

25. $CF_2 = CF_2$ is a monomer of

A. Teflon

B. orlon

C. Polythene

D. Nylon-6

Answer: A

Watch Video Solution

26. Which of the following is not correctly matched?

A. Neoprene:

$$\left[-CH_2 - \underset{\underset{Cl}{|}}{C} = CH - CH_2 - \right]_n$$

B. Nylon-6,6

$$\left[-NH-(CH_2)_6-NH-CO-(CH_2)_4-\overset{\overset{O}{||}}{C}- \right]_n$$

C. 

D. PMMA:

$$\left[-CH_2 - \underset{\underset{COOCH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - \right]_n$$

Answer: C

View Text Solution

27. Monomer of $\left[-\overset{CH_3}{\underset{CH_3}{\overset{|}{\underset{|}{C}}}} - CH_2 - \right]_n$ *is*

A. 2-methyl propene

B. Styrene

C. Propylene

D. Ethene

Answer: A

Watch Video Solution

28. Acrilan is a hard, horny and a high melting matrial. Which of the following represent its structure?

A. $\left(-CH_2 - \underset{CN}{\overset{|}{\underset{|}{CH}}} - \right)_n$

B. $\left(-CH_2- \underset{CHOOOCH_3}{\overset{CH_3}{\overset{|}{\underset{|}{C}}}} - \right)_n$

C. $\left(-CH_2- \underset{COOC_2H_5}{\overset{}{\overset{|}{\underset{|}{CH}}}} - \right)_n$

D. $\left(-CH_2-\underset{Cl}{\overset{}{\overset{|}{\underset{|}{CH}}}}- \right)_n$

Answer: A

Watch Video Solution

29. Which one of the following monomers gives the polymer neoprene on polymerization?

A. $CH_2 = CHCl$

B. $CCl_2 = CCl_2$

C. $CH_2 = \overset{Cl}{\overset{|}{C}} - CH = CH_2$

D. $CF_2 = CF_2$

Answer: C

Watch Video Solution

30. Which one of the following is a chain growth polymer?

A. Starch

B. Nucleic acid

C. Polystyrene

D. Protein

Answer: C

Watch Video Solution

Assignment Section D

1. A: $CH_3CH = CH_2$ can undergo cationic polymeisation with greater ease than $CH_2 = CH_2$.

R: $CH_3 -$ groups has +I effect.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: A

Watch Video Solution

2. A: During formation of condensation polymers, elimination of small molecules takes place.

R: Nylon -6,6 is a condensation polymer.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: B

Watch Video Solution

3. A: Nylon -6 is obtained by heating caprolactum with water.

R: It is used for making bristles for brushes.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: C

Watch Video Solution

4. A: Properties of copolymers are similar to homopolymers.

R:Copolymers are obtained by elimination of small molecules.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: D

Watch Video Solution

5. A: Phenol and formaldehyde are momers of Bakelite.

R: Bakelite is used for making combs.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: B

Watch Video Solution

6. A: Bakelite is hard and has high melting point.

R: Interparticle forces of attraction in it area H-bonding.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: C

Watch Video Solution

7. A:1,3-butadiene is the monomer for natural rubber.

R: Natural rubber is formed through anionic addition polymerisation.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: D

Watch Video Solution

Watch Video Solution

8. A: Teflon has high thermal stability and chemical inertness.

R: Teflon is a thermosetting polymer.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: C

Watch Video Solution

9. A : Polypropylene is an addition polymer.

R:Addition polymerization occurs among molecules which contain double bonds.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: A

Watch Video Solution

10. A: Durability of a polymer is not altogether an advantage.

R: The enormous increase in the use of thrown away the packaging material poses a serious waste disposal problem.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: A

Watch Video Solution

11. A: Polybutadiene is an example of chain growth polymer.

R: Copolymerization of butadiene and styrene gives Buna-S.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: B

Watch Video Solution

12. A: PMMA is used for making lenser and light cover.

R:It has excellent light transmission properties.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: A

Watch Video Solution

13. A: Glyptal is obtained by condensation polymerization of ethylene glycol and terephthalic acid.

R: Glyptal is used in the manufacture of fabrics.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark 1.

B. If both Assertion & Reason are true but the reason is not the correct explanation of the assertion, then mark 2.

C. If Assertion is true statement but Reason is false, then mark 3.

D. If both Assertion and Reason are false statements the mark 4.

Answer: D