CHEMISTRY

BOOKS - KUMAR PRAKASHAN KENDRA CHEMISTRY (GUJRATI ENGLISH)

POLYMERS

Example

1. Is $[--CH_2-CH(C_6H_5)--]_n$ a homo - polymer or a copolymer?

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Section A Questions

1. What is polymer ? What we can say about the molecular mass of polymer ? In which four Industries polymers are mostly used ?

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2. What is monomer ? What is polymerization ?

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3. Do classification of polymers based on source.

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4. Write down the main types of polymerizations.

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5. What is Addition Polymerization ?

Explain the mechanism of Addition Poly- merization.

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6. What is copolymers ? Explain with example.

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7. What is polythene ? Write down its properties and types. Write down different preparation properties and uses of polythene.

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8. Write short note on polythene.

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9. Write short note : Polytetrafluoroethene (Teflon).

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10. Explain preparation of polyacrylonitrile and also write down its uses.

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11. What is condensation polymerization ? Explain with example.

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12. Write short note : Step growth polymerization.

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13. What we can say about condensation polymer of polyamide category. Write down any two example of it.

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14. Write short note : Nylon-6,6

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15. Explain preparation of Nylon-6 and also write its uses.

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16. Write down the name of known polymer of polyesters category and also explain its preparation and uses.

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17. What is phenol-formaldehyde polymer. Write down one polymer name of these category and also explain its preparation, properties and uses.

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18. Write down the preparation, uses and properties of bakelite.

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19. Write short note Melamine-formaldehyde polymer.

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20. What is copolymerization ? Explain with examples.

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21. Write short note : Natural rubber

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22. Explain the process of vulcanization of rubber.

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23. What is synthetic rubbers. Write its two examples.

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24. Write down the preparation, properties and used of Neoprene.

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25. Write short note : Buna - N

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26. Give reason : Why molecular mass of polymer is always expressed as an average ?

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27. Why biodegradable synthetic polymers have been designed and developed ?

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28. Write the full form of PHBV also write down its preparation and uses.

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29. Explain the preparation of Nylon-2-nylon-6.

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30. Write down the name of monomers, structure of polymer and uses for following polymer.

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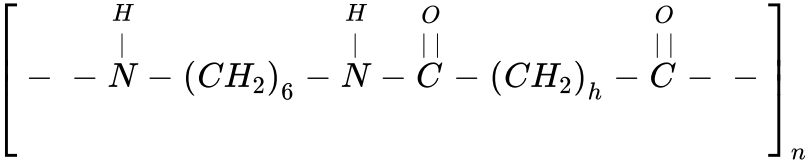
Section B Intext Questions And Answers

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

(i) 

(ii) $\left[- \; - \overset{O}{\overset{\|}{C}} - (CH_2)_3 - \overset{H}{\underset{|}{N}} - \; - \right]_n$

(iii) $[- \; - CF_2 - CF_2 - \; -]_n$

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2. Classify the following as addition and condensation polymers : Terylene, Bakelite, polyvinyle chloride, Polythene.

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3. Explain the difference between Buna-N and Buna-S.

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

Nylon-6,6, Buna-S, Polythene

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Section C Textual Exercise

1. Explain the terms polymer and monomer.

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2. Distinguish between the terms homopolymer and copolymer and give an example of each.

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3. How do you explain the functionality of a monomer ?

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4. Define the term polymerization.

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5. Is $(--NH-CHR-CO--)_n$ a homopolymer or copolymer ?

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6. In which classes, the polymers are classified on the basis of molecular forces ?

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7. How can you differentiate between addition and condensation polymerization ?

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8. Explain the term copolymerization and give two examples.

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9. Define thermoplastics and thermosetting polymers with two examples of each.

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10. Write the monomers used for getting the following polymers.

(i) Polyvinyl chloride

(ii) Teflon

(iii) Bakelite

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11. Write the name and structure of one of the common initiators used in free radical addition polymerization.

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12. How does the presence of double bonds in rubber molecules influence their structure and reactivity ?

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13. Discuss the main purpose of vulcanization of rubber.

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14. What are the monomeric repeating units of Nylon-6 and nylon-6,6 ?

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15. Write the names and structures of the monomers of the following polymers :

(i) Buna-S

(ii) Buna-N

(iii) Dacron

(iv) Neoprene

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16. 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) 

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17. How is dacron obtained from ethylene glycol and terephthalic acid ?

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

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Section D Ncert Exemplar Solution Multiple Choice Question Mcqs

1. Which of the following polymers of glucose is stored by animals ?

A. Cellulose

B. Amylose

C. Amylopectin

D. Glycogen

Answer: D

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2. Which of the following is not a semisynthetic polymer ?

A. cis-polyisoprene

B. Cellulose nitrate

C. Cellulose acetate

D. Vulcanized rubber

Answer: C

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3. The commercial name of polyacrylonitrile is .....

A. Dacron

B. Orlon (acrilan)

C. PVC

D. Bakelite

Answer: B

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4. Which of the following polymer biodegradable ?

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

B. $\left(- - CH_2 - CH = CH - CH_2 - CH_2 - \overset{CN}{\overset{|}{\text{CH}}} - - \right)_n$

C. $\left(- - O - \underset{CH_3}{\underset{|}{\text{CH}}} - CH_2 - \overset{||}{\underset{O}{C}} - O - \underset{CH_2CH_3}{\underset{|}{\text{CH}}} - CH_2 - \underset{O}{\underset{||}{C}} - - \right)_n$

D. $\left(- - \underset{H}{\underset{|}{N}} - (CH_2)_6 - \underset{H}{\underset{|}{N}} - \underset{O}{\underset{||}{C}} - (CH_2)_4 - \underset{O}{\underset{||}{C}} - - \right)_n$

Answer: C

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5. In which of the following polymers ethylene glycol is one of the monomer units ?

A. 

B. $(--CH_2-C_2--)_n$

C. 

D.

$$\left(--O-\underset{CH_3}{\overset{|}{CH}}-CH_2-\underset{O}{\overset{||}{C}}-O-\underset{CH_2CH_3}{\overset{|}{CH}}-CH_2-\underset{O}{\overset{||}{C}}--\right)_n$$

Answer: A

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6. Which of the following statements is not true about low density polythene ?

A. Tough

B. Hard

C. Poor conductor of electricity

D. Highly branched structure

Answer: D

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7. $\left(- - CH_2 - \underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - CH_2 - \underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}} - - \right)_n$ is a polymer having monomer units .....

A. 

B. 

C. 

D. 

Answer: A

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8. 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

Answer: D

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9. Which of the following polymers, need atleast one diene monomer for their preparation ?

A. Dacron

B. Buna-S

C. Neoprene

D. Novolac

Answer: B::C

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10. Which of the following are characteristics of thermosetting polymers ?

A. Heavily branched cross linked polymers.

B. Linear slightly branched long chain molecules.

C. Become infusible on moulding so cannot be reused.

D. Soften on heating and harden on cooling, can be reused.

Answer: A::C

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11. Which of the following polymers are thermoplastic ?

A. Teflon

B. Natural rubber

C. Neoprene

D. Polystyrene

Answer: A::D

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12. Which of the following polymers are used as fibre ?

A. Polytetrafluoroethane

B. Polychloroprene

C. Nylon

D. Terylene

Answer: C::D

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13. Which of the following are addition polymers ?

A. Nylon

B. Melamine formaldehyde resin

C. Orlon

D. Polystyrene

Answer: C::D

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14. Which of the following polymers are condensation polymers ?

A. Bakelite

B. Teflon

C. Butyl rubber

D. Melamine formaldehyde resin

Answer: A::D

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15. Which of the following monomers form biodegradable polymers ?

A. 3-hydroxybutanoic acid + 3-hydroxypentanoic

B. Glycine + amino caproic acid

C. Ethylene glycol + phthalic acid

D. Caprolactum

Answer: A::B

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16. Which of the following are example of synthetic rubber ?

A. Polychloroprene

B. Polyacrylonitrile

C. Buna-N

D. cis-polyisoprene

Answer: A::C

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17. Which of the following polymers can have strong intermolecular forces ?

A. Nylon

B. Polystyrene

C. Rubber

D. Polyesters

Answer: A::D

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18. Which of the following polymers have vinylic monomer units ?

A. Acrilan

B. Polystyrene

C. Nylon

D. Teflon

Answer: A::B::D

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19. Vulcanization makes rubber .....

A. more elastic

B. soluble in inorganic solvent

C. crystalline

D. more stiff

Answer: A::D

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Section D Ncert Exemplar Solution Short Answer Type Questions

1. A natural linear polymer of 2-methyl-1, 3-butadiene becomes hard on treatment with sulphur between 373 to 415 K and $-S-S-$ bonds are formed between chains. Write the structure of the product of this treatment ?

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2. Identify the type of polymer

$-A-A-A-A-A-A-$

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3. Identify the type of polymer

$-A-B-B-A-A-A-B-A-$

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4. Out of chain growth polymerization and step growth polymerization, in which type will you place the following.

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5. Identify the type of polymer given in the following figure.

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6. Identify the polymer given below :

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7. Why are rubber called elastomers ?

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8. Can enzyme be called a polymer ?

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9. Can nucleic acid, protein and starch be considered as step growth polymers ?

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10. How is the following resin intermediate prepared and which polymers is formed by this monomer unit ?

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11. To have practical applications why are cross links quetioined in rubber ?

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12. Why does cis-polyisoprene posses elastic property ?

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13. What is the structural difference between HDP and LDP ? How does the structure account for different behaviour and nature, hence the use of a polymer ?

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14. What is the role of benzoyl peroxide in addition polymerization of alkenes ? Explain l its mode of action with the help of an example.

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15. Which factor imparts crystalline nature to a polymer like nylon ?

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16. Name the polymer used in laminating sheets and give the name of monomeric units involved in its formation.

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17. Which type of biomolecules have some structural similarity with synthetic polyamides ? What is this similarity?

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18. Why should the monomer used in addition polymerization through free radical pathway be very pure ?

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Section D Ncert Exemplar Solution Matching The Columns

1. Match the polymer of column-I with correct monomer of column-II.

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2. Match the polymers given in Column-I with their chemical names given in Column-II.

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3. Match the polymers given in Column-I with their commercial names given in Column-II.

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4. Match the polymers given in Column-I with their main applications given in Column-II.

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5. Match the polymers given in Column-I with the preferred mode of polymerisation followed by their monomers Column-II.

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6. Match the polymers given in Column-I with the type of linkage present in them given in Column-II.

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7. Match materials given in Column-I with the polymers given in Column-II.

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8. Match the polymers given in Column-I with their repeating units given in Column-II.

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Section D Ncert Exemplar Solution Assertion And Reason Type

1. Assertion (A) : Rayon is a semisynthetic polymer and is taken as a better choice than cotton fabric.

Reason (R) : Mechanical and aesthetic properties of cellulose can be improved by acetylation.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement and reason is wrong statement.

Answer: B

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2. Assertion (A) : Most of the Synthetic polymers are not biodegradable.

Reason (R) : Polymerization process induces toxic character in organic molecules.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement and reason is wrong statement.

Answer: D

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3. Assertion (A) : Olefinic monomers undergo addition polymerization.

Reason (R) : Polymerization of vinylchloride is initiated by peroxides/persulphates.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement and reason is wrong statement.

Answer: A

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4. Assertion (A) : Polyamides are best used as fibres because of high tensile strength.

Reason (R) : Strong intermolecular forces (like hydrogen bonding within polyamides) lead to close packing of chains and increase the crystalline character, hence, provide high tensile strength to polymers.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement and reason is wrong statement.

Answer: B

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5. Assertion (A) : For making rubber synthetically, isoprene molecules are polymerized.

Reason (R) : Neoprene (a polymer of chloroprene) is a synthetic rubber.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is wrong statement and reason is correct statement.

Answer: D

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6. Assertion (A) : Network polymers are thermosetting.

Reason (R) : Network polymers have high - molecular mass.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement and reason is wrong statement.

Answer: A

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7. Assertion (A) : Polytetrafluoroethene is used in making non-stick cookwares.

Reason (R) : Fluorine has highest electro- negativity.

A. Assertion and reason both are correct statements but reason does not explain assertion.

B. Assertion and reason both are correct statements and reason explain the assertion.

C. Both assertion and reason are wrong statements.

D. Assertion is correct statement and reason is wrong statement.

Answer: A

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Section D Ncert Exemplar Solution Long Answer Type Questions

1. Synthetic polymers do not degrade in the environment for a long time. How can biodegradable synthetic polymers be made. Differentiate between biopolymers and biodegradable polymers and give examples of each type.

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2. Differentiate between rubbers and plastics on the basis of intermolecular forces.

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3. Phenol and formaldehyde undergo condensation to give a polymer (A) which on heating with formaldehyde gives a thermo- setting polymer (B). Name the polymers. Write the reactions involved in the formation of (A). What is the structural difference between two polymers ?

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4. Low density polythene and high density polythene, both are polymers of ethene but there is marked difference in their properties. Explain.

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5. Which of the following polymers soften on heating and harden on cooling ? What are the polymers with this property collectively called ? What are the structural similarities between such polymers? Bakelite, urea-formaldehyde resin, polythene, polyvinyls, polystyrene.

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Section E Multiple Questions Mcqs

1. Those simple organic molecules which chemically combine with one another and form a polymer, is called .....

A. monomer

B. tetramer

C. dimer

D. trimer

Answer: A

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2. The number 'n' of repeating unit in polymer molecule is called .....

A. degree of polymerization

B. oligomer

C. heavy polymer

D. repeating unit

Answer: A

View Text Solution

3. Which functional group is present in polyester ?

A. $-COO-$

B. $-CH_2-CH_2-$

C. $-CONH-$

D. $-CH_2-CN-$

Answer: A

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4. Which of the following substances is an elastomer ?

A. Nylon-6

B. Nylon-6,6

C. Vulcanized rubber

D. Melamine

Answer: B

View Text Solution

5. Which of the following polymers is obtained by condensation polymerization ?

A. PVC

B. Polythene

C. Nylon-6,6

D. Polystyrene

Answer: B

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6. Light scattering method is used

A. to find concentration

B. to find molar mass of polymer

C. to test elements

D. to find number of molecules.

Answer: B

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7. HDP is used in preparation of.....

A. Light and soft devices

B. Hard and durable devices

C. Cotton and wool

D. Light and cheap devices

Answer: D

View Text Solution

8. Which monomer is used to preparation orlon ?

A. $CF_2 = CF_2$

B. $CH_2 = CH - CN$

C. $CH_2 = CHCl$

D. $CH_2 = CH - OH$

Answer: B

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9. From the following ..... is the example of biopolymer.

A. teflon

B. neoprene

C. nylon 66

D. DNA

Answer: B

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10. Which of the following two monomers are used in preparation of nylon-66 ?

A. Hexamethylene diamine and ethylene glycol

B. Adipic acid and hexamethylene diamine

C. Dimethyl terphthalate and ethylene glycol

D. Adipic acid and ethylene glycol

Answer: B

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11. ..... possesses biodegradable property.

A. PTFE

B. PAN

C. SBR

D. PHBV

Answer: D

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12. What is polymer ?

A. Micro molecules

B. Macro molecules

C. Medium molecules

D. None of these

Answer: B

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13. How many ethene molecule is present in ethenetetramer ?

A. 1

B. 2

C. 3

D. 4

Answer: D

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14. Name the process to prepare polythene from ethene.

A. Addition

B. Condensation

C. Displacement

D. Oxidation

Answer: A

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15. Starch is of which type polymer ?

A. Synthetic

B. Natural

C. Semi Synthetic

D. None of these

Answer: B

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16. Terylene is of which type polymer ?

A. Co-polymer

B. Homopolymer

C. Condensation polymer

D. None of these

Answer: A

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17. Which of the following is a condensation polymer ?

A. Polystyrene

B. Neoprene

C. PAN

D. Nylon-6,6

Answer: B

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18. Which monomer is present in PVC ?

A. Ethene

B. Chloro ethene

C. Fluoro ethene

D. None of these

Answer: D

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19. Which of the following is a co-polymer ?

A. Polypropelene

B. Terylene

C. PVC

D. Teflon

Answer: D

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20. Which polymer having caprolactum is one of the monomer ?

A. Nylon-6

B. Nylon-6,6

C. Nylon-2, Nylon-6

D. Terylene

Answer: A

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21. Which of the following have a strong inter- molecular attraction force ?

A. Elastomer

B. Thermoplastic

C. Fibres

D. Rubber

Answer: B

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

A. Starch

B. Cellulose

C. Rubber

D. Nylon-6

Answer: D

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23. Which polymer is obtained with help of Ziegler Natta catalyst ?

A. Polystryrene

B. Terylene

C. Polythene

D. Nylon-6

Answer: A

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24. What is the other name of Buna-S rubber ?

A. Nylon-6

B. Dacron

C. Buna-N

D. SBR

Answer: D

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25. Which of the following is non biodegradable ?

A. Nylon-6

B. Polyester

C. PGA

D. Daxtran

Answer: D

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26. Which one is a natural polymer ?

A. Protein

B. Polythene

C. Buna-S

D. Bakelite

Answer: A

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27. Which are the monomers of Nylon 66 ?

A. Adipic acid - HMDA

B. Adipic acid - Butadiene

C. Phenol - Formaldehyde

D. Melamine - Formaldehyde

Answer: A

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28. Which of the following group gives only addition polymer ?

A. Terylene, polypropylene, polyethylene

B. Polyethylene, PVC, Acrilon

C. Buna S, Nylon, polybuta diene

D. Bakelite, PVC, polyethylene

Answer: B

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29. Select the natural rubber from the following.

A. Isoprene

B. Nitro cellulose

C. Polythene

D. Bakelite

Answer: A

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30. Nylon is of which type fibre ?

A. Polyester

B. Polyamide

C. Polythene

D. None of these

Answer: B

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31. Which of the following is a protein fibre ?

A. Cotton

B. Rayon

C. Silk

D. Polyester

Answer: C

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32. Which one is wrong ?

A. PVC = Poly Vinyl Chloride

B. Terylene = Decron

C. Buna N = Styrene Butadiene rubber

D. PAN = Oron

Answer: C

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33. Which of the following polymer is of polyamide class ?

A. Dacron

B. Orlon

C. Nylon

D. Rayon

Answer: C

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34. Which monomer is present in Teflon polymer ?

A. Monofluoroethene

B. Difluoroethene

C. Trifluoroethene

D. Tetrafluoroethene

Answer: D

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35. Which is correct for Teflon ?

A. PAN

B. PTFE

C. PVC

D. Buna N

Answer: D

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36. PVC is of which type polymer ?

A. Branch

B. Cross linked

C. Linear

D. None of these

Answer: A

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37. SiO_2 is .....

A. plasticizer

B. filler

C. antioxident

D. none of these

Answer: B

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38. Match the following.

A. $(i-a), (ii-c), (iii-b), (iv-d)$

B. $(i-d), (ii-c), (iii-a), (iv-b)$

C. $(i-d), (ii-c), (iii-b), (iv-a)$

D. $(i-d), (ii-b), (iii-c), (iv-a)$

Answer: C

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

A. Starch

B. Cellulose

C. Nylon

D. Protein

Answer: C

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40. Which type of polymers are used in plastic paints ?

A. Heavy polymer

B. Oligomer

C. Natural polymer

D. None of these

Answer: B

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41. Which of the following is semisynthetic polymer ?

A. Cellulose

B. Cellulose nitrate

C. PVC

D. Polythene

Answer: B

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42. Polystyrene is of which type polymer ?

A. Natural

B. Semi synthetic

C. Synthetic

D. None of these

Answer: C

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43. Which one is a homopolymer ?

A. Terylene

B. SBR

C. Polythene

D. Nylon

Answer: C

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44. Nylon 66 is of which type polymer ?

A. Condensation

B. Homopolymer

C. Natural

D. None of these

Answer: A

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45. Which one is a thermosetting polymer ?

A. Polythene

B. PVC

C. Bakelite

D. Polystyrene

Answer: C

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46. Which one is a crosslinked polymer ?

A. Bakelite

B. PVC

C. Polystyrene

D. Silk

Answer: A

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47. Strong intermolecular attraction force in the Nylon-66 polymer is due to ..... bond.

A. Van-der Waals

B. Hydrogen

C. Covalent

D. Ionic

Answer: B

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48. Which property does not having by thermo- setting polymer ?

A. Strong

B. Hard

C. Electrical conductor

D. Insulator

Answer: C

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49. Which of the following is not a filler ?

A. TiO_2

B. $BaSO_4$

C. $CaSO_4$

D. SiO_2

Answer: C

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50. Which of the following is not a plasticizer ?

A. Phenol

B. Tricresyl phosphate

C. Oleic acid

D. All of these

Answer: A

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51. Which of the following is not an antioxident ?

A. Phenol

B. Cresol

C. Quinol

D. Oleic acid

Answer: B

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52. Which of the following is not a polymer ?

A. Protein

B. Cellulose

C. Glucose

D. Nucleic acid

Answer: C

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53. Which polymer is used to make pipes ?

A. Polystyrene

B. Nylon

C. Polythene

D. PVC

Answer: C

View Text Solution

54. At which temperature, the natural rubber becomes brittle:

A. less than $10^{\circ} C$

B. between $10^{\circ} C - 60^{\circ} C$

C. More than $60^{\circ} C$

D. None of these

Answer: D

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55. How much sulpher is present in the rubber used for tyres ?

A. $5\ \%$

B. $10\ \%$

C. $20\ \%$

D. $30\ \%$

Answer: A

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56. How much sulpher is present in the rubber used for bettery case ?

A. $5\ \%$

B. $30\ \%$

C. $20\ \%$

D. $50\ \%$

Answer: B

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57. Which substance is added during vulcanization to increase the rate of vulcanization process ?

A. Tio

B. TiO_2

C. ZnO

D. CrO_2

Answer: C

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58. At which temperature, natural rubber becomes soft ?

A. Less than $60^\circ C$

B. More than $60^\circ C$

C. Less than $10^\circ C$

D. More than $100^{\circ} C$

Answer: B

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59. Which of the following is a biodegradable polymer ?

A. PVC

B. PHBV

C. SBR

D. Nylon-6,6

Answer: B

View Text Solution

60. Which polymer is used in preparation of orthopedic devices ?

A. Bakelite

B. Melamine

C. PHBV

D. Dacron

Answer: C

View Text Solution

61. Which polymer is used to prepare capsule for drugs ?

A. PHBV

B. PGA

C. PLA

D. Nylon-2

Answer: A

View Text Solution

62. Which polymer is used for post operative stiches ?

A. PLA

B. PTFE

C. PAN

D. SBR

Answer: A

View Text Solution

63. Which one is used as a Lubricating agent ?

A. PVC

B. PTFE

C. PAN

D. SBR

Answer: B

View Text Solution

64. Which polymer is used to prepare fishing net ?

A. Terylene

B. Nylon-6,6

C. Nylon-6

D. Polythene

Answer: C

View Text Solution

65. Which polymer is used in conveyer belt and printing roller ?

A. Butyl rubber

B. Neoprene

C. Nylon-6

D. Melamine

Answer: B

View Text Solution

66. Which polymer is used in preparation of crokery ?

A. Melamine

B. Bakelite

C. Neoprene

D. Decron

Answer: A

View Text Solution

67. Which polymer is used in preparation of carpet ?

A. PVC

B. Nylon-6

C. Nylon-6,6

D. Terylene

Answer: B

View Text Solution

68. Which polymer is used to prepare synthetic wool ?

A. SBR

B. PTFE

C. PAN

D. PHBV

Answer: C

View Text Solution

69. Which substance is used as a substitue for natural rubber ?

A. Butyl rubber

B. Neoprene

C. Nylon

D. Dacron

Answer: A

View Text Solution

70. Which of the following is not a copolymer ?

A. Terelyne

B. Polythene

C. Nylon-66

D. Nylon-2

Answer: B

View Text Solution

71. Which catalyst is used in preparation of polystyrene ?

A. Nickel

B. Iron

C. Ziegler Natta

D. Cobalt

Answer: C

View Text Solution

72. Name the polymer obtained from HMDA and Adipic acid.

A. Nylon-6

B. Nylon-6,6

C. Terylene

D. Malamine

Answer: B

View Text Solution

73. Pick the correct use of Quinol.

A. As a filler

B. As a plasticizer

C. As an antioxident

D. As a catalyst

Answer: C

View Text Solution

74. Which is the monomer of PVC ?

A. Ethane

B. Vinyl Chloride

C. Ethyne

D. Ethyl chloride

Answer: B

View Text Solution

75. State the monomer present in natural rubber.

A. Isoprene

B. Ethene

C. Ethyne

D. None of these

Answer: A

View Text Solution

76. Natural rubber is .....

A. cis polystyrene

B. trans polystyrene

C. cis polyisoprene

D. trans polyisoprene

Answer: C

View Text Solution

77. Which of the following is used in Nylon-6 ?

A. Adipic acid

B. Caprolectum

C. Ethyne

D. Ethene

Answer: B

View Text Solution

78. Which polymer obtained from dimethyl terphthalate and ethylene glycol ?

A. Nylon-6

B. Nylon-66

C. Dacron

D. Bakelite

Answer: C

View Text Solution

79. Which is the second monomer used with phenol to prepare bakelite ?

A. Adipic acid

B. Ethylene glycol

C. Acetaldehyde

D. Formaldehyde

Answer: D

View Text Solution

80. What is the molecular mass of polymers ?

A. $10^3 - 10^7 u$

B. $10^7 - 10^{12} u$

C. $10^8 - 10^{10} u$

D. None of these

Answer: A

View Text Solution

81. Which of the following is a semi synthetic polymer ?

A. Cellulose nitrate

B. Rayon

C. Vulcanized rubber

D. All of these

Answer: D

View Text Solution

82. Which one is a natural linear polymer ?

A. Cotton

B. Linen

C. Silk

D. All of these

Answer: D

View Text Solution

83. Which one is a cross linked polymer ?

A. Bakelite

B. Malamine

C. Polystyrene

D. (A) and (B) both

Answer: D

View Text Solution

84. On which basis homopolymer will named ?

A. Monomer unit

B. Polymer chain

C. Molecular mass

D. All of these

Answer: A

View Text Solution

85. Which of the following is produced during condensation polymerization ?

A. Water

B. Alcohol

C. Ammonia

D. All of these

Answer: D

View Text Solution

86. Polymer with which functional group is known as polyamide ?

A. $-CONH-$

B. $-COO-$

C. $-CH_2-CH_2-$

D. $-CO-$

Answer: A

View Text Solution

87. Polymer with which functional group is known as polyester ?

A. $-CONH-$

B. $-COO-$

C. $-CF_2-CF_2-$

D. $-CH_2-$

Answer: B

View Text Solution

88. Due to which polymer having tensile strength and elasticity ?

A. Intemolecular forces

B. Hydrogen bond

C. (A) and (B) both

D. Metallic bond

Answer: C

View Text Solution

89. Which of the following is an elastomer ?

A. Neoprene

B. Isoprene

C. Buna-S

D. All of these

Answer: C

View Text Solution

90. The polymer with high tensile strength and high modulus are known as .....

A. fibres

B. elastomers

C. thermo plastic

D. thermo setting

Answer: A

View Text Solution

91. Which polymer having, intermoleculer forces are more than elastomers and less fibers ?

A. Thermosetting

B. Thermoplastic

C. Polyamide

D. Polyester

Answer: B

View Text Solution

92. Which substance is used as an initiator in free radical addition polymerization reaction ?

A. Benzoyl peroxide

B. Acetyl peroxide

C. 3° butyl peroxide

D. All of these

Answer: D

View Text Solution

93. Which is the use of low density polythene (LDP) ?

A. Insulator

B. Flexible pipes

C. Squeeze pipes

D. All of These

Answer: D

View Text Solution

94. Which combination is called Ziegler Natta catalyst ?

A. Triethyl Tetrachloride aluminium pue Titanium

B. Trimethyl aluminium and Titanium Trichloride

C. Tri Methyl aluminium and Titanium Trichloride

D. Tri methyl aluminium and Titanium dichloride

Answer: A

View Text Solution

95. Which one is used to prepare unbreakable

A. Teflon

B. Orlon

C. HDP

D. LDP

Answer: C

View Text Solution

96. Which catalyst is used in preparation of Teflon ?

A. Ziegler Natta

B. Persulphate

C. Peroxide

D. Alkyl Lithium

Answer: B

View Text Solution

97. Which one is corrosion resistant ?

A. Orlon

B. PVC

C. Teflon

D. Polystyrene

Answer: C

View Text Solution

98. Which one is used to prepare non-stick kitchen vessels ?

A. Nylon-6

B. Polystyrene

C. Bakelite

D. Teflon

Answer: D

View Text Solution

99. Which catalyst is used in preparation of orlon ?

A. Peroxide

B. Ziegler Natta

C. Alkyl Mercaptant

D. Water

Answer: A

View Text Solution

100. Which polymer is used in preparation of ragzin foot ware ?

A. Teflon

B. Orlon

C. Butyl rubber

D. PVC

Answer: D

View Text Solution

101. Which połymer is used instead of natural rubber ?

A. Butyl rubber

B. SBR

C. Vulcanized rubber

D. All of these

Answer: A

View Text Solution

102. By use of which free radical reactive intermediate, emulsion type SBR is obtained ?

A. Alkyl mercaptan and water

B. Alkyl lithium

C. Ziegler Natta

D. Peroxideahetal

Answer: A

View Text Solution

103. Which type of Buna-S is used to prepare paints and rubber coating ?

A. Solution

B. Elastomer

C. (A) and (B) both

D. None of these

Answer: B

View Text Solution

104. Which type of Buna-S is used in preparation of tyres and shoes sole ?

A. Solution

B. Elastomer

C. (A) and (B) both

D. None of these

Answer: A

View Text Solution

105. Which one is a main polymer of polyamide class ?

A. Nylon-6,6

B. Nylon-6

C. (A) and (B) both

D. Terylene

Answer: C

View Text Solution

106. Which polymer is used to prepare fishing nets?

A. Nylon-6,6

B. Nylon-6

C. Terylenel

D. Butyl rubber

Answer: A

View Text Solution

107. Which polymer is obtained by self condensation polymerization process ?

A. Nylon-6,6

B. Nylon-6

C. Dacron

D. Melamine

Answer: D

View Text Solution

108. Which one is a chief polymer of polyester class ?

A. Terylene

B. Nylon-6,6

C. Bakelite

D. Melamine

Answer: A

View Text Solution

109. Which catalyst is used in preparation of Bakelite ?

A. Ziegler Natta

B. Peroxide

C. Acid or Base

D. Water

Answer: C

View Text Solution

110. Which polymer is used to prepare plastic crockery ?

A. Melamine

B. Bakelite

C. (A) and (B) both

D. Neoprene

Answer: A

View Text Solution

111. The colloidal suspension of milky rubber with water is called .....

A. latex

B. emulsion

C. vulcanized rubber

D. natural rubber

Answer: A

View Text Solution

112. Natural rubber is a linear polymer of which monomer ?

A. Neoprene

B. Isoprene

C. Butal 1,3-diene

D. All of these

Answer: B

View Text Solution

113. Which one is Isoprene ?

A. $CH_2 = CH_2$

B. $CF_2 - CF_2$

C. $CH_2 = C = CH_2 - CH_3$

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

Answer: D

View Text Solution

114. Up to which temperature, natural rubber do not become soft ?

A. 273 K

B. 335 K

C. 553 K

D. 445 K

Answer: B

View Text Solution

115. Natural rubber becomes brittle at less than .....temp.

A. 273 K

B. 335 K

C. 723 K

D. 373 K

Answer: A

View Text Solution

116. Which of the following is used to get vulcanized rubber ?

A. Phosphrous

B. Sulphur

C. Carbon

D. Silicon

Answer: B

View Text Solution

117. Which additive is used during vulcanization, to accelarate rate of reaction ?

A. Zno

B. MgO

C. CaO

D. Bao

Answer: A

View Text Solution

118. Synthetic rubber is a copolymer of which ?

A. Buta-1,3-diene

B. Buta-1,2-diene

C. cis-1,4-isoprene

D. None of these

Answer: A

View Text Solution

119. Which polymer is useful in printing rollers ?

A. Vulcanize rubber

B. Neoprene

C. Nitrile rubber

D. Natural rubber

Answer: B

View Text Solution

120. Which catalyst is used to prepare Nitrile rubber ?

A. Ziegler Natta

B. Acid - Base

C. Peroxide

D. Alkyl mercaptan

Answer: C

View Text Solution

121. Which rubber is used to prepare oil seal ?

A. Butadiene

B. Nitrile

C. Vulcanized

D. Latex

Answer: B

View Text Solution

122. Which polymer is used in petrol tank linings ?

A. Buna-S

B. Buna-N

C. Polychloroprene

D. Natural rubber

Answer: B

View Text Solution

123. Which polymer is used in tyre and footwear industry ?

A. Buna-S

B. Buna-N

C. Vulcanize rubber

D. None of these

Answer: A

View Text Solution

124. Which of the following is a Biopolymer ?

A. Polysaccharide

B. Protein

C. Nucleic acid

D. All of these

Answer: D

View Text Solution

125. How the biodegradable polymers are decomposed ?

A. By hydrolysis

B. By micro organisams

C. By enzymes

D. All of these

Answer: D

View Text Solution

126. Which of the following polymer is biodegradable ?

A. PHBV

B. Daxtran

C. PGA

D. All of these

Answer: D

View Text Solution

127. PHBV is of which class polymer ?

A. Polyester

B. Polyamide

C. Polycynide

D. Polyethene

Answer: A

View Text Solution

128. By which of the following PHBV will degrade ?

A. Enzymes

B. Bacteria

C. Oxidation

D. Hydrolysis

Answer: B

View Text Solution

129. Which is the use of PHBV ?

A. Packaging

B. Orthopaedic devices

C. Capsules

D. All of these

Answer: D

View Text Solution

130. Which is the first biodegradable polymer used for post operative stiches ?

A. PGA

B. PLA

C. Daxtran

D. Nylon-2 Nylon-6

Answer: C

View Text Solution

Section E Mcqs Asked In Competitive Exam

1. Widely used PVC is made from which monomer ?

A. $CH_2 = CH_2$

B. $CH_2 = CH - Cl$

C. $CH_2 = \mathbb{C}I_2$

D. $CHCI = CHCI$

Answer: B

View Text Solution

2. Natural rubber is a polymer of which of the following ?

A. Chloroprene

B. Butadiene

C. Isoprene

D. Neoprene

Answer: C

View Text Solution

3. Bakelite is obtained by the reaction between phenol and .....

A. chloro benzene

B. acetal

C. acetaldehyde

D. formaldehyde

Answer: D

View Text Solution

4. Which polymer is obtained by condensation polymerization between HMDA and Adipic acid ?

A. Dacron

B. Nylon-6,6

C. Rayon

D. Teflon

Answer: B

View Text Solution

5. Which one is a thermosetting polymer ?

A. PVC

B. PLA

C. PVA

D. Bakelite

Answer: D

View Text Solution

6. Which polymer is not obtained by addition polymerization ?

A. Polystyrene

B. Nylon

C. Polypropene

D. PVC

Answer: B

View Text Solution

7. Which is the monomer of Orlon ?

A. Vinyl chloride

B. Styrene

C. Vinyl cynide

D. Butadiene

Answer: C

View Text Solution

8. Teflon, Orlon and Neoprene are .....

A. Homopolymer

B. Co-polymer

C. Monomer

D. None of these

Answer: A

View Text Solution

9. Which statement is wrong for polymer ?

A. They are non-conductor of electricity

B. Their molar mass is very less

C. They scatter the light

D. They are more dense

Answer: C

View Text Solution

10. $F_2C = CF_2$ is a monomer of which polymer ?

A. Teflon

B. Nylon-6

C. Buna-S

D. Buna-N

Answer: B

View Text Solution

11. From which of the following Nylon 6 is prepared ?

A. 1,3-butadiene

B. Chloroprene

C. Adipic acid

D. Caprolectum

Answer: A

View Text Solution

12. Which are the monomers of Terylene ?

A. Phenol + Formaldehyde

B. Ethylene glycol + Adipic acid

C. Adipic acid + HMDA

D. Ethyleneglycol + Terephthelic acid

Answer: D

View Text Solution

13. Which polymer having a "ester" linkage ?

A. Nylon

B. Bakelite

C. Terylene

D. Rubber

Answer: D

View Text Solution

14. Which of the following monomer will give Neoprene by polymerization ?

A. $CH_2 = CH - CI$

B. $CCl_2 = CCl_2$

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

D. $CF_2 = CF_2$

Answer: C

View Text Solution

15. Which of the following is not correct ?

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

B. Nylon - 6,6 :

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

C. 

D. 

Answer: C

View Text Solution

16. Which is not correct for terylene ?

A. Stepwise polymerization

B. Natural fibres

C. Condensation polymer

D. It is also called dacron

Answer: C

View Text Solution

17. Which monomer is present in $CH_3 - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}} - CH_2 - \overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}$ polymer ?

A. 

B. $CH_3CH = CH - CH_3$

C. $CH_3 - CH = CH_2$

D. $(CH_3)_2C = C - (CH_3)_2$

Answer: A

View Text Solution

18. $\left[- \ - NH - (CH_2)_6 - CONHCO - (CH_2)_4 - CO - \ - \right]_n$ is a .....

A. addition polymer

B. thermosetting polymer

C. homopolymer

D. copolymer

Answer: D

View Text Solution

19. Which of the following polymer is obtained by condensation polymerization reaction ?

A. Teflon

B. Rubber

C. Styrene

D. Nylon-6,6

Answer: D

View Text Solution

View Text Solution

20. Which are the monomer of Buna-S rubber ?

A. Styrene and Butadiene

B. Isoprene and Butadiene

C. Vinyl chloride and Sulphur

D. Butadiene and vinyl chlonide

Answer: A

View Text Solution

21. Which polymer is used in capsule and orthopaedic devices ?

A. Orlon

B. PTFE

C. SBR

D. PHBV

Answer: D

View Text Solution

22. Which polymer is obtained from following reaction ?

$CF_2CF_2 \xrightarrow[\text{high pressure}]{[NH_4]_2S_2O_8}$?

A. Teflon

B. Polypropene

C. Orlon

D. Rayon

Answer: A

View Text Solution

23. Which statement is wrong ?

A. Caprolectum is a monomer of Nylon 6

B. Terylene is a polyester polymer

C. Bakelite is a polymer of phenol - formaldehyde

D. Butadiene is monomer of natural rubber

Answer: D

View Text Solution

24. Bakelite can be prepared from which monomer ?

A. Benzaldehyde and phenol

B. Formaldehyde and phenol

C. Formaldehyde and benzyl alcohol

D. Acetaldehyde and phenol

Answer: B

View Text Solution

25. Which is the monomer of polystyrene ?

A. $C_2H_5 - CH = CH_2$

B. $CH_2 = CHCI$

C. $C_6H_5 - CH = CH_2$

D. $CH_2 = CH - CHO$

Answer: C

View Text Solution

26. Which is the example of copolymer ?

A. Buna-S

B. Teflon

C. PVC

D. Polypropylene

Answer: A

View Text Solution

27. Which of the following is obtained by condensation polymerization ?

A. Terylene

B. Buna-S

C. Buna-N

D. Neoprene

Answer: A

View Text Solution

View Text Solution

28. Which are the monomer to get Nylon-2 Nylon-6 ?

A. Caprolectum and Aniline

B. Alinine and Amino Caproic acid

C. Glycine and Amino Caproic acid

D. Glycine and Acetic acid

Answer: C

View Text Solution

29. Ziegler Natta catalyst is used in preparation of which of the following ?

A. LDP

B. HDP

C. Decron

D. All of these

Answer: B

View Text Solution

Section E Mcqs Asked In Jee Neet Aiims

1. The process of heating rubber with sulphur is called .....

A. vulcanization

B. galvanization

C. sulphonation

D. besemerization

Answer: A

View Text Solution

View Text Solution

2. $F_2C = CF_2$ is a monomer of which substance ?

A. Teflon

B. Nylon-6,6

C. Buna-N

D. Styrene

Answer: A

View Text Solution

3. Which one is a monomer of natural rubber ?

A. $(CH_3)_2 - C = CH - CH_3$

B. $CH_3 - CH = CH - CH_3$

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

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

Answer: C

View Text Solution

4. Arrange the following polymer in their decreasing order of their molar mass.

a= Nylon-66, b= Buna S and c = Polythene

A. `a gt b gt c (B)

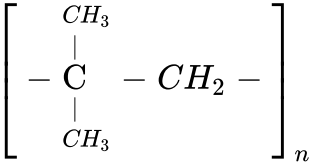
B. $b > c > a$

C. $b < c < a$

D. $c < a < b$

Answer: A

View Text Solution

5. Which monomer is present in  polymer ?

A. Propylene

B. Propane

C. 2-methyl propene

D. Isopropane

Answer: C

View Text Solution

6. Which of the following combination gives bakelite ?

A. Malamine + Formaldehyde

B. Formaldehyde + Adipic acid

C. Phenol + Adipic acid

D. Phenol + Formaldehyde

Answer: D

View Text Solution

7. By which reaction between monomer, the polymers are obtained ?

A. Condensation

B. Internal reaction

C. Hydrolysis

D. By joining with eachother

Answer: D

View Text Solution

8. Which one will give nylon fibres ?

A. Polyamide

B. Polyester

C. Polyvinyl

D. Polythene

Answer: A

View Text Solution

9. Which of the following is a polyamide ?

A. Teflon

B. Nylon-6,6

C. Terylene

D. Bakelite

Answer: B

View Text Solution

10. Which one is a completely fluorinated polymer ?

A. Neoprene

B. Teflon

C. Orlon

D. PVC

Answer: B

View Text Solution

11. Bakelite is obtained by the reaction between phenol and which of the following ?

A. $HCHO$

B. $(CH_2OH)_2$

C. CH_3COOH

D. CH_3COCH_3

Answer: A

View Text Solution

12. Synthetic rubber Buna-N is a polymer of

A. $H_2C = CH - CH = CH_2$ and $C_6H_5 - CH = CH_2$

B. $H_2C = CH - CH$ and $H_2C = CH - CH = CH_2$

C. $H_2C = CH - CN$ and $H_2C = CH - \overset{|}{C} = CH = CH_2\overset{|}{C}H_3$

D. $H_2C = CH - C = CH_2$ and $H_2C = CHCH = CH_2\overset{|}{C}l$

Answer: B

View Text Solution

13. Which structure of polymer is correct ?

A. 

B. Nylon - 66 rarr

$$\left[- HN - (CH_2)_6 - NH - (CH_2)_4 - CO - \ - \right]_n$$

C. Teflon $\rightarrow [CF_2 - CF_2 - \ -]_n$

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

Answer: C

View Text Solution

14. Which of the following is a natural polymer ?

A. Cellulose

B. Codel

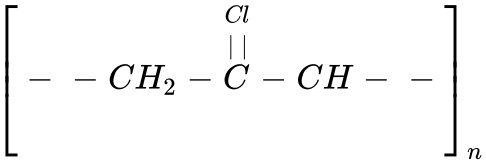
C. Nylon

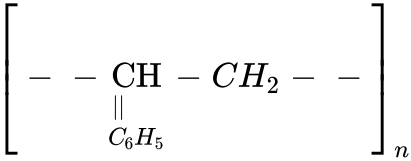
D. Terylene

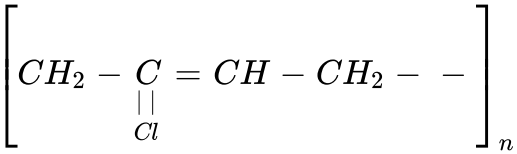
Answer: A

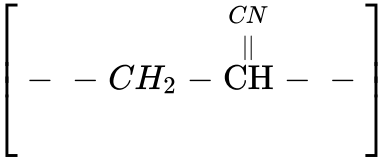
View Text Solution

15. Which of the following structure represent Neoprene ?

A. 

B. 

C. 

D. 

Answer: C

View Text Solution

16. Which polymer shows strong intermolecular attraction force like hydrogen bond ?

A. Polystyrene

B. Natural rubber

C. Teflon

D. Nylon-6

Answer: D

View Text Solution

17. Which of the following is a polyester polymer ?

A. Terylene

B. Bakelite

C. Melamine

D. Nylon-66

Answer: A

View Text Solution

18. Thermosetting polymer Bakelite is prepared by the reaction between phenol and .....

A. CH_2CHO

B. $HCHO$

C. $HCOOH$

D. CH_3CH_2CHO

Answer: B

View Text Solution

19. Which of the following is a non biodegradable polymer ?

A. PHBV

B. PGA

C. PMMA

D. PCL

Answer: B

View Text Solution

20. Which one is classified as a condensation polymer ?

A. Teflon

B. Acrylonitrile

C. Dacron

D. Neoprene

Answer: C

View Text Solution

21. Which polymer is used in the manufacture of paints and lacquers ?

A. Bakelite

B. Glyptal

C. Polypropene

D. Poly vinyl chloride

Answer: B

View Text Solution

22. Biodegradable polymer which can be produced from glycine and aminocaproic acid is :

A. Nylon-2 - nylon-6

B. PHBV

C. Buna-N

D. Nylon-6,6

Answer: A

View Text Solution

23. Caprolactam is used for the manufacture of :

A. Terylene

B. Nylon-6,6

C. Nylon-6

D. Teflon

Answer: C

View Text Solution

24. Natural rubber has :

A. All trans-configuration

B. Alternate cis and trans - configuration

C. Random cis - and trans - configuration

D. All cis-configuration

Answer: D

View Text Solution

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

A. 

B. 

C. 

D. 

Answer: B

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26. Which of the following statements about low density polythene is FALSE :

A. It is used in the manufacture of buckets, dust-bins etc.

B. Its synthesis requires high pressure.

C. It is a poor conductor of electricity.

D. Its synthesis requires dioxygen or a peroxide initiator as a catalyst

Answer: A

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27. The formation of which of the following polymers involves hydrolysis reaction ?

A. Nylon-6

B. Bakelite

C. Nylon-6,6

D. Terylene

Answer: A

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28. Regarding cross-linked or network polymers, which of the following statements is incorrect ?

A. They contain strong covalent bonds in their polymer chains.

B. They contain covalent bonds between various linear polymer chains.

C. Examples are bakelite and melamine.

D. They are formed from bi- and tri-functional monomers.

Answer: A

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29. The biodegradable polymer is .....

A. Nylon-6,6

B. Nylon-2-Nylon-6

C. Nylon-6

D. Buna-S

Answer: B

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Section E Mcqs Asked In Board Exams

1. Which polymer is used in preparation of capsules ?

A. Decron

B. Nylon-6

C. PLA

D. PHBV

Answer: D

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2. Which polymer is useful as a lubricant ?

A. Orlon

B. Teflon

C. Dacron

D. Nylon

Answer: B

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3. How much sulphur is added during vulcanization to get rubber for tyre ?

A. $30\ \%$

B. $5\ \%$

C. $55\ \%$

D. $3\ \%$

Answer: B

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4. Which one is a monomer of teflon ?

A. $CH_2 = C - CH = CH_2$

B. $CH_2 = CH - CN$

C. $CF_2 = CF_2$

D. $CH_2 = CH - CI$

Answer: C

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5. Which of the following polymer form net like structure ?

A. Polythene

B. Butyl rubber

C. Polystyrene

D. Melamine polymer

Answer: D

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6. 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

Answer: A

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7. Which of the following polymer is formed by cationic addition polymerization reaction ?

A. Butyl rubber

B. Poly styrene

C. Teflon

D. PVC

Answer: A

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8. Which of the following polymer is used in pigment ?

A. Buna-S

B. Neoprene

C. Teflon

D. Orlon

Answer: D

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9. Which Polymer is a cross-linked Polymer ?

A. Bakelite

B. Dacron

C. Teflon

D. Orlon

Answer: A

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10. What is the IUPAC name of monomer of Neoprene ?

A. 2-chloro buta-1,2-diene

B. 3-chloro buta-1,3-diene

C. 2-chloro buta-1,3-diene

D. 3-chloro buta-1,2-diene

Answer: C

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11. Which of the following polymer is condensation as well as cross-linked polymer ?

A. Nylon 6,6

B. Dacron

C. Nylon-2, Nylon-6

D. Bakelite

Answer: D

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12. Which polymer is used in the preparation of hose-pipe ?

A. Polystyrene

B. Neoprene

C. Teflon

D. Orlon

Answer: B

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13. Which is the correct structural formula for terylene ?

A. 

B. 

C. 

D. 

Answer: C

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14. Which are the monomers of Buna-N ?

A. Buta-1,3-diene and prop-1-ene-1-nitrile

B. Buta-1,2-diene and acrylonitrile

C. Buta-1,3-diene and prop-2-ene-1-nitrile

D. Buta-1,2-diene and prop-2-ene-1-nitrile

Answer: C

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15. Terylene is a condensation polymer of ..... and .....

A. 

B. 

C. 

D. 

Answer: A

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16. Which of the following acid has property of flexibility?

A. $\begin{array}{l} HO-CH-CH_2-COOH \\ \quad\quad\quad\quad\quad\quad | \\ \quad\quad\quad\quad\quad CH_2-CH_3 \end{array}$

B. $HOOC-(CH_2)_4-COOH$

C. $HO-\underset{\underset{CH_3}{|}}{CH}-CH_2-COOH$

D. $HOOC-(CH_2)_2-COOH$

Answer: C

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17. What is cellulose diacetate ?

A. Semisynthetic polymer

B. Plasticizer

C. Natural polymer

D. Synthetic polymer

Answer: A

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18. Name the first biodegradable polymer used for post operative stiches.

A. Daxtran

B. PGA

C. PLA

D. PHBV

Answer: A

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19. Which of the following statements are correct ?

(1) After degradation, biopolymers can be converted into life essential products

(2) Non-biodegradable polymers are active towards environmental process

(3) Non-biodegradable polymers can be converted into life essential products

(4) PHBV undergoes bacterial degradation in environmental conditions

A. (1) and (3)

B. (1) and (4)

C. (2) and (4)

D. (2) and (3)

Answer: B

View Text Solution

20. Which monomer is used in preparation of orlon ?

A. $CF_2 = CF_2$

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

C. $CH_2 = CH - CN$

D. 

Answer: C

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21. Which of the following chromatography mode method is used to determine molecular mass of polymer ?

A. QELS

B. DLS

C. CLS

D. SEC

Answer: D

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22. Which of the following polymers is elastomer ?

A. Buna-S

B. Nylon

C. PVC

D. Terylene

Answer: A

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23. Which of the following polymer is formed by anionic addition polymerization ?

A. Polythene

B. Butyl rubber

C. Polystyrene

D. Teflon

Answer: C

View Text Solution

24. Which of the following is cross linked polymer ?

A. Orlon

B. Melamine

C. Teflon

D. Nylon

Answer: B

View Text Solution

25. Which of the following polymer is used in chewing-gum ?

A. Neoprene

B. Buna-S

C. Buna-N

D. Polystyrene

Answer: B

View Text Solution

26. What are the monomers of Nylon-6,6 ?

A. Hexanoic acid and hexamethylene diamine.

B. Hexane-1,6-dioic acid and hexane-1,6-diamine.

C. Hexane-1, 6-dioic acid and hexane 1,2-diamine.

D. Adipic acid and hexane amine.

Answer: B

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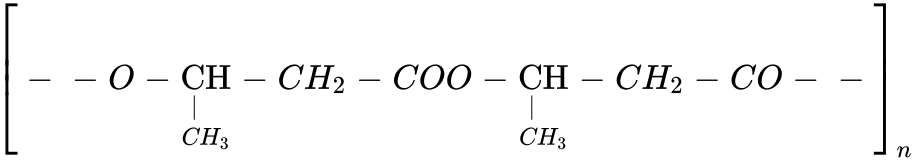
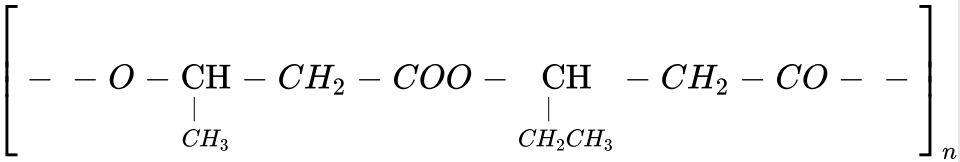
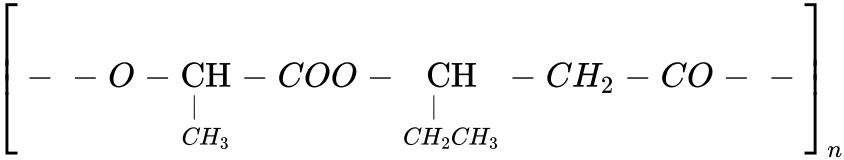
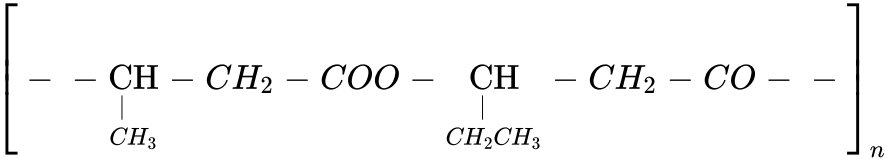
27. Which is the formula for PHBV ?

A. 

B.



C. 

D. 

Answer: B

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28. Which one of the following is not a semi- synthetic polymer ?

A. Cellulose nitrate

B. Resin

C. Rayon

D. Vulcanised rubber

Answer: B

View Text Solution

29. Which initiator is used for free radical addition polymerization reaction ?

A. Base

B. Acetyl peroxide

C. Acid

D. Sulphate salt

Answer: B

View Text Solution

30. Which of the following statements is incorrect ?

A. Daxtran is a biodegradable polyamide polymer.

B. Orlon is useful in making of synthetic wool.

C. Butyl rubber is a linear polymer.

D. Dacron is copolymer.

Answer: A

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31. Which polymer is used as lubricant and insulator both ?

A. PVC

B. Polythene

C. Poly styrene

D. Teflon

Answer: D

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32. Which of the following Amino acid is monomer of nylon-2-nylon-6?

A. Arginine

B. Alanine

C. Glycine

D. Lysine

Answer: C

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33. Which of the following is not the biopolymer ?

A. Protein

B. Cellulose diacetate

C. Glycogen

D. Nucleic acid

Answer: B

View Text Solution

34. Which catalyst is used during preparation of Teflon ?

A. Ziegler-Natta

B. Persulphate

C. Base

D. Alkyl Mercaptan

Answer: B

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35. The monomer unit of orlon is .....

A. Acrolene

B. Chloroprene

C. Acrylonitrile

D. Isoprene

Answer: C

View Text Solution

36. At what temperature natural rubber becomes brittle ?

A. Lower than $60^\circ C$

B. Lower than $10^\circ C$

C. Lower than $0^\circ C$

D. Higher than $60^\circ C$

Answer: C

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37. Which of the following is Oligomer ?

A. Orlon

B. Fevicol

C. Melamine

D. Polythene

Answer: B

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38. Which polymer is used to prepare plastic crokery ?

A. Nylon-6

B. Melamine

C. PVC

D. BakelitE

Answer: B

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39. What is determined by Ultra-centrifuge technique in polymers ?

A. Solution

B. Molecular mass

C. Precipitate

D. Concentration

Answer: B

View Text Solution

40. Choose the incorrect statement from the following.

A. Cis-1,4-Poly-isoprene is natural polymer

B. In preparation of Buna-N, peroxide is used as catalyst

C. Neoprene is copolymer

D. Buna-S is addition polymer

Answer: C

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41. Which polymer is used to prepare fishing net ?

A. Nylon-6,6

B. Bakelite

C. Decron

D. Nylon-6

Answer: A

View Text Solution

42. Which monomer is used in preparation of orlon ?

A. $CH_2 = CH-OH$

B. $CH_2 = CH - CN$

C. $CH_2 = CH-CI$

D. $CF_2 = CF_2$

Answer: B

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43. Which of the following has PDI value = 1.

A. PVC

B. SBR

C. Cellulose

D. Dacron

Answer: C

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44. Which monomer is responsible for the flexibility property in PHBV ?

A. $HO-\underset{\underset{CH_3}{|}}{CH}-CH_2-CH_2-COOH$

B. $HO-\underset{\underset{CH_3}{|}}{CH}-CH_2-COOH$

C. $HO-\underset{\underset{CH_2-CH_3}{|}}{CH}-CH_2-CHO$

D. $HO-\underset{\underset{CH_2-CH_3}{|}}{CH}-CH_2-COOH$

Answer: C

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45. What type of polymer can be considered novolac ?

A. Linear

B. Branched

C. Cross linked

D. (A) and (B) both

Answer: A

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46. Novolac is of which type polymer ?

A. Linear

B. Branched

C. Cross linked

D. None of these

Answer: A

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47. For synthetic polymer which of the following is correct option ?

A. $\overline{M}_w > \overline{M}_n$

B. $\overline{M}_w \geq \overline{M}_n$

C. $\overline{M}_w = \overline{M}_n$

D. $\overline{M}_w < \overline{M}_n$

Answer: A

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48. Which of the following drug is analgesic and non-narcotic ?

A. Penicillin

B. Aspirin and paracetamol

C. Morfin

D. Varonal

Answer: B

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49. Which of the following statement is correct ?

A. Terylene is an addition polymer.

B. Buna-N is a copolymer.

C. Nylon-2-Nylon-6 is non-biodegradable polymer.

D. Nylon-6 is polyester type of polymer.

Answer: B

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50. Which are monomers of polymer having structure $(NH-CO-NH-CH_2)_n$?

A. Acetamide, Formaldehyde

B. Acetamide, Methenamine

C. Urea, Formaldehyde

D. Urea, Ammonia

Answer: C

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51. Which is the repeating unit in Neoprene ?

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

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

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

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

Answer: D

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