



CHEMISTRY

BOOKS - MTG WBJEE CHEMISTRY

(HINGLISH)

POLYMERS

**Wb Jee Workout Category 1 Single Option Correct
Type**

1. Polymer obtained by condensation polymerization is

A. Polythene

B. Teflon

C. Phenol - formaldehyde

D. Nitrile rubber.

Answer: C



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2. Which of the following fibres is made up of polyamides?

A. Dacron

B. Orlon

C. Nylon

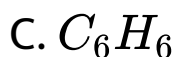
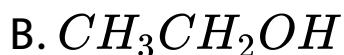
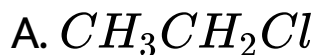
D. Rayon

Answer: C



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3. Which one of the following can be used as a monomer in a polymerization reaction?

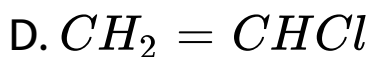
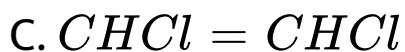
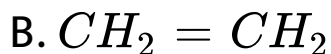
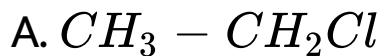


Answer: D



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4. The monomer unit of polyvinyl chloride has the formula



Answer: D



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5. The process involving heating of rubber with sulphur is called

- A. galvanisation
- B. vulcanization
- C. bessemerisation
- D. sulphonation.

Answer: B



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6. Teflon and neoprene are

A. copolymers

B. condensation polymers

C. homopolymers

D. monomers

Answer: C



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7. Caprolactam polymerises to give

A. terylene

B. teflon

C. glyptal

D. nylon-6.

Answer: D



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8. Monomer of $\left[\begin{array}{c} CH_3 \\ | \\ - - C - CH_2 - - \\ | \\ CH_3 \end{array} \right]_n$ is

A. 2-methylpropene

B. styrene

C. propylene

D. ethene.

Answer: A



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9. Polymer formation from monomers in step growth polymerisation starts by

A. condensation reaction between monomers

B. coordination reaction between monomers

C. conversion of monomer to monomer ions by protons

D. hydrolysis of monomers.

Answer: A



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10. Natural rubber is a polymer of

A. pyrene

B. isoprene

C. urea

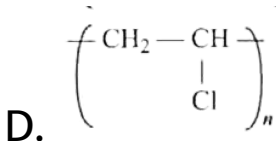
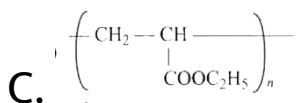
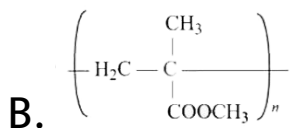
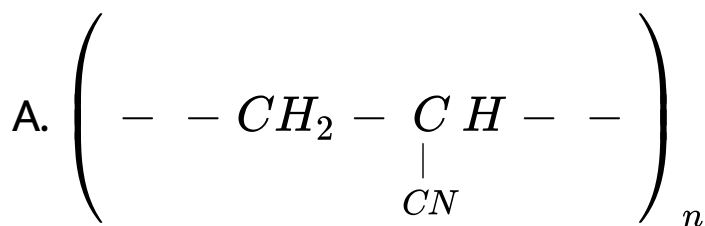
D. ethylene.

Answer: B



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11. Acrilan is a hard, horny and a high melting material. Which of the following represents its structure?



Answer: A

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12. The biodegradable polymer among the following is

A. nylon-6

B. nylon-6-nylon-6, 6

C. nylon-2-nylon-6

D. nylon-6-nylon-6, 10

Answer: C

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13. Super glue or crazy glue is

A. Poly methyl methacrylate

B. Poly ethyl acrylate

C. Poly methyl alpha-cyanoacrylate

D. Poly ethyl methacrylate.

Answer: C



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14. Which of the following is a polymer?

A. Carnauba wax

B. Carbowax

C. Beeswax

D. Paraffin wax

Answer: B



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15. The catalyst used for olefin polymerization is

A. Ziegler-Natta catalyst

B. Wilkinson catalyst

C. Raney nickel catalyst

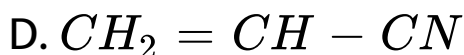
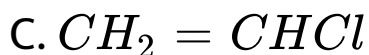
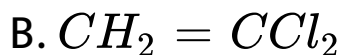
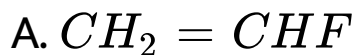
D. Merrifield resin.

Answer: A



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16. The monomer used to produce orlon is



Answer: D



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17. Which one of the following is an example of co-polymer?

A. Buna-S

B. Teflon

C. PVC

D. Polypropylene

Answer: A



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18. Which of the following sets contains only addition polymers?

A. Polyethylene, polypropylene, terylene

B. Polyethylene, PVC, acrilan

C. Buna-s, nylon, polybutadiene

D. Bakelite, PVC, polyethylene

Answer: B



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19. Co-polymer is

A. nylon-6

B. nylon-6,6

C. PMMA

D. polyethylene.

Answer: B



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20. Bakelite is a polymer of

A. benzaldehyde and phenol

B. formaldehyde and phenol

C. formaldehyde and benzyl alcohol

D. acetaldehyde and phenol.

Answer: B



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21. A synthetic polyamide prepared by prolonged heating of caprolactum is

A. nylon-6, 6

B. nylon-6

C. nylon-6,10

D. glyptal

Answer: B



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22. Which of the following is not a condensation (step growth) polymer?

A. Melamine-formaldehyde resin

B. Bakelite

C. Polythene

D. Polyester

Answer: C



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23. In vulcanisation of rubber

- A. sulphur reacts to form a soft compound
- B. sulphur cross-links are introduced
- C. sulphur forms a very thin protective layer
over rubber
- D. all statements are correct.

Answer: B



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24. Which of the following is a polyamide?

A. Nylon

B. Orlon

C. Teflon

D. Terylene

Answer: A



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25. Which of the following has ester linkage?

A. Nylon

B. Bakelite

C. Terylene

D. PVC

Answer: C



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26. Which of the following is a biodegradable polymer?

A. Cellulose

B. Polythene

C. Polyvinyl chloride

D. Nylon-6

Answer: A



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27. Which of the following polymers can be used for lubrication and as an insulator?

A. SBR

B. PVC

C. PTFE

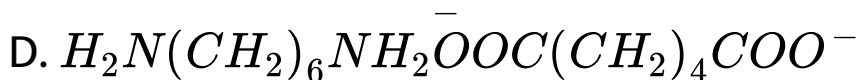
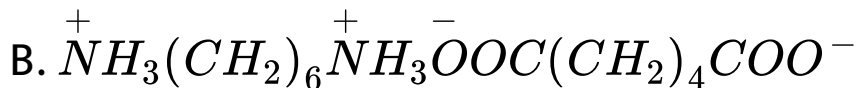
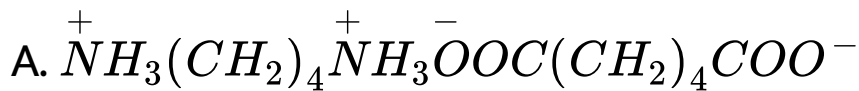
D. PAN

Answer: C



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28. The nylon salt (Hexamethylenediammonium adipate) is



Answer: B



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29. What is the monomer of nylon-2-nylone-6?

A. Glycine and amino caproic acid

B. Amino caproic acid and adipic acid

C. 3-Hydroxybutanoic acid and glycine

D. Ethylene glycol and adipic acid

Answer: A



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30. Drugs which are to be released in a controlled manner in the body are enclosed in capsules made up of

A. PGA

B. PCL

C. PHBV

D. none of these

Answer: C

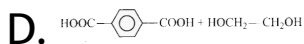
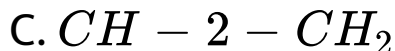
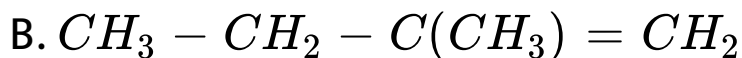


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**Wb Jee Workout Category 2 Single Option
Correct Type**

1. Which compound set of compounds is used in the manufacture of Nylon - 6, 6?

A.



Answer: A



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2. Novolac is

- A. linear condensation product of phenol and formaldehyde
- B. cross linked condensation product of urea and formaldehyde
- C. cross linked condensation product of phenol and formaldehyde
- D. linear condensation product of urea and formaldehyde.

Answer: A



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3. Natural rubber and gutta - percha respectively are

A. cis - polyisoprene and trans - polyisoprene

B. both are cis - polyisoprene

C. both are trans - polyisoprene

D. trans-polychloroprene and cis -
polychloroprene.

Answer: A



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4. Consider the following statements :

(i) Tensile strength of vulcanised rubber is almost ten times more than raw rubber.

(ii) Elasticity of raw rubber is very high.

The correct statement is/are

A. (i) is true and (ii) is false.

B. (i) is false and (ii) is true.

C. both (i) and (ii) are true.

D. both (i) and (ii) are false.

Answer: A



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5. Which one of the following pairs is not correctly matched?

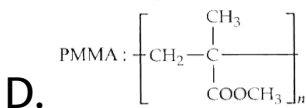
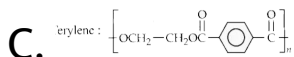
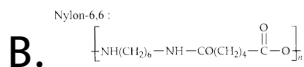
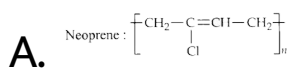
- A. Terylene-condensation polymer of terephthalic acid and ethylene glycol.
- B. Teflon-thermally stable cross-linked polymer of phenol and formaldehyde.
- C. Perspex-homopolymer of methylmethacrylate.
- D. Synthetic rubber Buna-N-copolymer of butadiene and acrylonitrile.

Answer: B



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6. Which of the following is not correctly matched?



Answer: B



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7. During the polymerisation of caprolactum to get nylon-6 polymer, the temperature range is of about

A. 533 K to 543 K

B. 473 K to 523 K

C. 533 K to 573 K

D. 273 K to 373 K

Answer: A



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8. The proportion of hexamethylenediamine and adipic acid used in the preparation of nylon-6,6 is

A. 1 : 2

B. 1 : 1

C. 2 : 1

D. 2 : 3

Answer: B



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9. Which of the following pairs is not correct?

A. Viscose - Synthetic fibre

B. Polysaccharide - Artificial silk

C. Nylon-6,6 - Heteropolymer

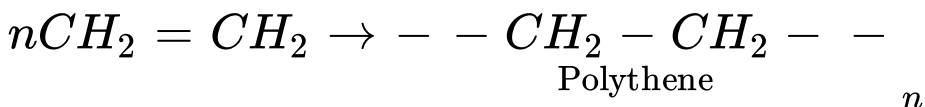
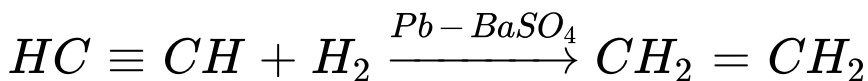
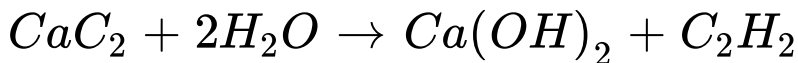
D. Nylon-6 - Perlon - L

Answer: A



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10. What would be the amount of polythene formed from 20 kg of calcium carbide from the reactions given below?



A. 28g

B. 6g

C. 9kg

D. 64kg

Answer: C



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Wb Jee Workout Category 3 One Or More Than One Option Correct Type

1. Which of the following are correct?

A. Thermosetting polymers can be reclaimed.

B. Thermosetting polymers are insoluble in organic solvents.

C. Thermosetting polymers soften on heating and harden on cooling irreversibly.

D. Thermosetting polymers are cross linked polymers.

Answer: B::C::D



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2. Which of the following statements are true about the addition polymerization?

A. Addition polymerization occurs between molecules containing double or triple bond.

B. It takes place in the presence of organic peroxides.

C. It proceeds via ionic mechanism in the presence of organic peroxides.

D. Polythene and polystyrene are addition polymers.

Answer: A::B::D



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3. Which of the following are biodegradable polymers?

A. Nylon -6, 6

B. PHBV

C. Nylon-2-nylon-6

D. Polychloroprene

Answer: B::C



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4. Which of the following polymers exist in geometrical isomeric forms?

A. Polypropylene

B. Polyacetylene

C. Polybutadiene

D. Polyisoprene

Answer: B::C::D



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5. Which of the following sets does contain only addition homopolymers?

A. Polythene, natural rubber, cellulose

B. Starch, nylon, polyester

C. Teflon, Buna-S, orlon

D. Neoprene, PVC, polythene

Answer: D



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6. Which of the following statements regarding thermoplastic are correct?

A. These are linear polymers which are soluble in many organic solvents.

B. These are the polymers which soften on heating and become rigid on cooling.

C. The process of heat - softening, moulding and cooling affects the properties of thermoplastics.

D. Nylon is an example of thermoplastics.

Answer: A::B::D



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7. Which of the following are addition homopolymer?

A. Teflon

B. SBR

C. PVC

D. Natural rubber

Answer: A::C::D



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8. Cross-linking is not present in

A. polythene

B. bakelite

C. nylon-6

D. polyester.

Answer: A::C::D



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9. Which of the following fibres are made of polyamides?

A. Wool

B. Natural silk

C. Rayon

D. Nylon

Answer: A::B::D



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10. Among the following, chain transfer reagent(s) is/are

A. carbon tetrachloride

B. benzoyl peroxide

C. benzoquinone

D. carbon tetrabromide.

Answer: A::D



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Wb Jee Previous Years Questions Category 1

Single Option Correct Type

1. Silicone oil is obtained from the hydrolysis and polymerization of

A. trimethylchlorosilane and

dimethyldichlorosilane

B. trimethylchlorosilane and

methyltrichlorosilane

C. methyltrichlorosilane and

dimethyldichlorosilane

D. triethylchlorosilane

and

diethyldichlorosilane.

Answer: A



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2. Which one of the following is a condensation polymer?

A. PVC

B. Teflon

C. Dacron

D. Polystyrene

Answer: C



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