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CHEMISTRY · JEE MAIN

Polymers

Previous Year Questions with answers

89 questions · **87** papers · **2002–2023** · newest paper first

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What is in this PDF: every Polymers question we hold from past JEE Main and AIEEE papers, with its options and answer. Where an answer comes from a source other than the official final key, it says so next to the answer.

Step-by-step solutions for every question are free in the EdLoop JEE app (Google Play) and on app.edloop.in. More chapters: pyq.edloop.in/free-pdfs/

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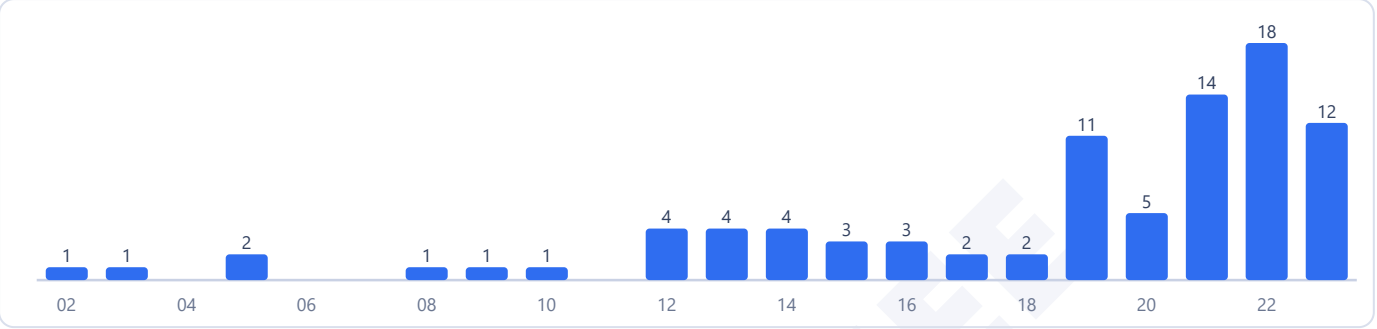
Chapter at a glance

1.3%	89	60 of 162	88 / 1
of Chemistry questions, 2019–2026	questions, 2002–2023	papers asked it, 2019–2026	MCQ / numerical, 2002–2023

Trend. Steady: 0.6 questions per paper in 2021–2023 against 0.5 in 2019–2020.

Questions per year



Counts are the questions we hold: 89 in 87 papers. 6 questions in this chapter came back in more than one paper.

Most-asked topics in this chapter (2002–2023)

Polymers — 89

How often it comes up

Polymers covers macromolecules and monomer linkages and was formerly in the Class 12 curriculum before being removed in 2024, standing at rank 30 of 31 chapters with a 1.3% share of the chemistry section. In the 2019 to 2026 testing timeframe, Polymers contributed 60 questions across 162 exam papers, delivering a 1.3% share of the chemistry section and standing at rank 30 of 31 chapters. During the 2002 to 2018 period, it registered 29 questions across 38 papers with a 2.2% share. Across the 2024 to 2026 exam sessions, it recorded 0 questions across 58 papers, resulting in a 0.0% share. The overall testing trajectory has trended down following curriculum rationalization.

Because of its removal, the chapter was not asked in 2024, 2025, or 2026. Prior to deletion, the chapter averaged 0.4 questions per paper between 2019 and 2026, with only 1 numerical answer question recorded.

Most-asked topics

Historical test items concentrate under one comprehensive topic:

- Polymers: Encompasses 89 total questions (60 in 2019 to 2026), last examined in 2023. Core themes focused on matching polymers with monomers (such as caprolactam for nylon 6, hexamethylenediamine and adipic acid for nylon 6,6, chloroprene for neoprene, acrylonitrile for Orlon/PAN, and ethylene glycol with terephthalic acid for Dacron), classification of intermolecular forces, Ziegler-Natta coordination polymerization producing high-density polyethylene, and biodegradable polymers like PHBV and nylon-2-nylon-6.

What the questions look like

Exam items were predominantly direct and factual. A very frequent pattern presented a matching column of commercial polymers (such as glyptal, Bakelite, neoprene, and Buna-S) and asked students to pair each with its monomer components, polymer type (addition or condensation), or common industrial application.

Other recurring questions evaluated mechanical categories, contrasting elastomers with weak intermolecular forces (such as vulcanized rubber) against fibers with strong intermolecular hydrogen bonding (such as polyamides and polyesters).

How to practise it

Given that Polymers is excluded from the current syllabus, structure your study schedule accordingly:

1. Direct study time to active units: Focus on active organic chapters like Aldehydes, Ketones & Carboxylic Acids, and Biomolecules. 2. Note basic monomer formulas: Knowing monomers like caprolactam or chloroprene remains helpful for general chemical literacy and allied competitive tests. 3. Understand condensation versus addition: Addition polymers retain the complete formula of the monomer; condensation polymers eliminate small byproduct molecules like water or alcohol.

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Q1 JEE Main 2023 · 15 Apr · Shift 1 MCQ

Match List I with List II:
List I (Monomer) | List II (Polymer)
(A) Tetrafluoroethene | (I) Orlon
(B) Acrylonitrile | (II) Natural rubber
(C) Caprolactam | (III) Teflon
(D) Isoprene | (IV) Nylon-6
Choose the correct answer from the options given below:

(A) (A) – (III), (B) – (I), (C) – (IV), (D) – (II)
(B) (A) – (IV), (B) – (I), (C) – (II), (D) – (III)
(C) (A) – (III), (B) – (IV), (C) – (II), (D) – (I)
(D) (A) – (II), (B) – (III), (C) – (IV), (D) – (I)

Answer: (A) (A) – (III), (B) – (I), (C) – (IV), (D) – (II) · Key from source paper

Q2 JEE Main 2023 · 13 Apr · Shift 1 MCQ

Match the following
Column-A | Column-B
a. Nylon 6 | I. Natural Rubber
b. Vulcanized Rubber | II. Cross Linked
c. cis-1,4-polyisoprene | III. Caprolactam
d. Polychloroprene | IV. Neoprene
Choose the correct answer from options given below:

(A) a → III, b → II, c → I, d → IV
(B) a → III, b → IV, c → I, d → II
(C) a → IV, b → III, c → II, d → I
(D) a → II, b → III, c → IV, d → I

Answer: (A) a → III, b → II, c → I, d → IV · Key from source paper

Q3 JEE Main 2023 · 13 Apr · Shift 2 MCQ

Match Lis-I with List-II.
List-1 | List-II
A. Weak intermolecular forces of attraction | I. Hexamethylenediamine + adipic acid
B. Hydrogen bonding | II. $\mathrm{AlEt_3}$ + $\mathrm{TiCl_4}$
C. Heavily branched polymer | III. 2 - chloro - 1, 3 - butadiene
D. High density polymer | IV. Phenol + formaldehyde
Choose the correct answer from the options given below

(A) A-IV, B-II, C-III, D-I
(B) A-IV, B-I, C-III, D-II
(C) A-II, B-IV, C-I, D-III
(D) A-III, B-I, C-IV, D-II

Answer: (D) A-III, B-I, C-IV, D-II · Key from source paper

Q4 JEE Main 2023 · 12 Apr · Shift 1 MCQ

Match List I with List II
List I (Example)
A. 2-chloro-1, 3-butadiene
B. Nylon 2-nylon 6
C. Polyacrylonitrile
D. Dacron
List II (Type)
I. Biodegradable polymer
II. Synthetic Rubber
III. Polyester
IV. Addition Polymer
Choose the correct answer from the options given below:

(A) A(II), B(IV), C(I), D(III)
(B) A(II), B(I), C(IV), D(III)
(C) A(IV), B(I), C(III), D(II)
(D) A(IV), B(III), C(I), D(II)

Answer: (B) A(II), B(I), C(IV), D(III) · Key from source paper

Q5 JEE Main 2023 · 11 Apr · Shift 1 MCQ

The polymer X-consists of linear molecules and is closely packed. It is prepared in the presence of trimethylammoniumpropyl and titanium tetrachloride under low pressure. The polymer X is

(A) High density polythene
(B) Polyacrylonitrile
(C) Low density polythene
(D) Polytetrafluoroethane

Answer: (A) High density polythene · Key from source paper

Q6 JEE Main 2023 · 11 Apr · Shift 2 MCQ

Given below are two statements:
Statement I: Ethane at 333 to 343 K and 6 - 7 atm pressure in the presence of $\mathrm{AlEt_3}$ and $\mathrm{TiCl_4}$ undergoes addition polymerization to give LDP.

Statement II: Caprolactam at 533 - 543 K in H_2O through step growth polymerizes to give Nylon 6.
In the light of the above statements, choose the correct answer from the options given below:

(A) **Statement I** is false but **Statement II** is true
(B) **Statement I** is true but **Statement II** is false
(C) Both **Statement I** and **Statement II** are true
(D) Both **Statement I** and **Statement II** are false

Answer: (A) Statement I is false but Statement II is true · Key from source paper

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Q7 JEE Main 2023 · 10 Apr · Shift 1 MCQ

Match List-I with List-II.
List-I Polymer List-II Type/Class
A. Nylon-2-Nylon-6 I. Thermosetting polymer
B. Buna-N II. Biodegradable polymer
C. Ureaformaldehyde resin III. Synthetic rubber
D. Dacron IV. Polyester
Choose the correct answer from the options given below:

(A) A → IV; B → I; C → II; D → II
(B) A → II; B → III; C → I; D → IV
(C) A → IV; B → III; C → I; D → II
(D) A → II; B → I; C → IV; D → III

Answer: (B) A → II; B → III; C → I; D → IV · Key from source paper

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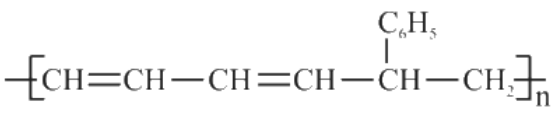
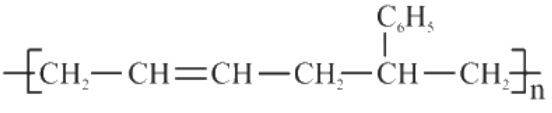
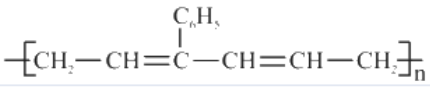
Q8 JEE Main 2023 · 10 Apr · Shift 2 MCQ

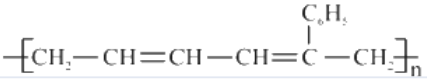
Buna - S can be represented as:

Q49. Buna - S can be represented as:

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q9 JEE Main 2023 · 6 Apr · Shift 1 MCQ

Polymer used in orlon is:

(A) Polyethene
(B) Polycarbonate
(C) Polyamide
(D) Polyacrylonitrile

Answer: (D) Polyacrylonitrile · Key from source paper

Q10 JEE Main 2023 · 30 Jan · Shift 1 MCQ

Caprolactam when heated at high temperature in presence of water, gives

(A) Teflon
(B) Dacron
(C) Nylon 6, 6
(D) Nylon 6

Answer: (D) Nylon 6 · Key from source paper

Q11 JEE Main 2023 · 29 Jan · Shift 2 MCQ

Match List-I and List-II.
List-I
A. Elastomeric polymer
B. Fibre polymer
C. Thermosetting polymer
D. Thermoplastic polymer
List-II
I. Urea formaldehyde resin
II. Polystyrene
III. Polyester
IV. Neoprene
Choose the correct answer from the options given below:

(A) A-II, B-III, C-I, D-IV
(B) A-II, B-I, C-IV, D-III
(C) A-IV, B-III, C-I, D-II
(D) A-IV, B-I, C-III, D-II

Answer: (C) A-IV, B-III, C-I, D-II · Key from source paper

Q12 JEE Main 2023 · 25 Jan · Shift 2 MCQ

Match List I with List II

List I (Name of polymer)	List II (Uses)
A. Glyptal	I. Flexible pipes
B. Neoprene	II. Synthetic wool
C. Acrilan	III. Paints and Lacquers
D. LDP	IV. Gaskets

Choose the correct answer from the options given below :-

(A) A – III, B – II, C – IV, D – I
(B) A – III, B – IV, C – II, D – I
(C) A – III, B – IV, C – I, D – II
(D) A – III, B – I, C – IV, D – II

Answer: (B) A – III, B – IV, C – II, D – I · Key from source paper

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Q13 JEE Main 2022 · 29 Jul · Shift 2 MCQ

Which of the following is NOT a natural polymer?

(A) Protein
(B) Starch
(C) Rubber
(D) Rayon

Answer: (D) Rayon · Key from source paper

Q14 JEE Main 2022 · 28 Jul · Shift 1 MCQ

Terylene polymer is obtained by condensation of

(A) Ethane-1, 2-diol and Benzene-1, 3 dicarboxylic acid
(B) Propane-1, 2-diol and Benzene-1, 4 dicarboxylic acid
(C) Ethane-1, 2-diol and Benzene-1, 4 dicarboxylic acid
(D) Ethane-1, 2-diol and Benzene-1, 2 dicarboxylic acid

Answer: (C) Ethane-1, 2-diol and Benzene-1, 4 dicarboxylic acid · Key from source paper

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Q15 JEE Main 2022 · 28 Jul · Shift 2 MCQ

Match List I with List II

List-I (Polymer)

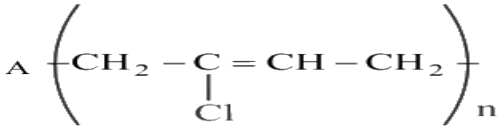
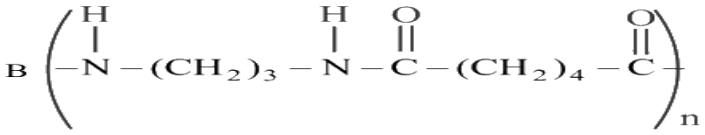
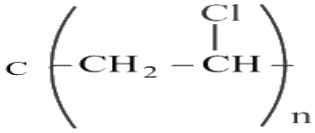
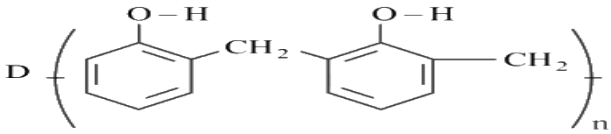
A. *(see the figure above)*
B. *(see the figure above)*
C. *(see the figure above)*
D. *(see the figure above)*

List-II (Nature)

I. Thermosetting polymer

II. Fibers
III. Elastomer
IV. Thermoplastic polymer
Choose the correct answer from the options given below

Q48. Match List I with List II

List-I (Polymer)		List-II (Nature)
A 	I	Thermosetting polymer
B 	II	Fibers
C 	III	Elastomer
D 	IV	Thermoplastic polymer

Choose the correct answer from the options given below

(1) A — II, B — III, C — IV, D — I
(2) A — III, B — II, C — IV, D — I
(3) A — III, B — I, C — IV, D — II
(4) A — I, B — III, C — IV, D — II

(A) A – II, B – III, C – IV, D – I
(B) A – III, B – II, C – IV, D – I
(C) A – III, B – I, C – IV, D – II
(D) A – I, B – III, C – IV, D – II

Answer: (B) A – III, B – II, C – IV, D – I · Key from source paper

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Q16 JEE Main 2022 · 27 Jul · Shift 1 MCQ

Match List I with List II

List-I Polymers		List-II Commenrcial names
A Phenol-formaldehyde resin	I	Glyptal
B Copolymer of 1, 3-butadiene and styrene	II	Novolac
C Polyester of glycol and phthalic acid	III	Buna-s
D Polyester of glycol and terephthalic acid	IV	Dacron

Choose the correct answer from the options given below

(A) A – II, B – III, C – IV, D – I
(B) A – II, B – III, C – I, D – IV
(C) A – II, B – I, C – III, D – IV
(D) A – III, B – II, C – IV, D – I

Answer: (B) A – II, B – III, C – I, D – IV · Key from source paper

Q17 JEE Main 2022 · 27 Jul · Shift 2 MCQ

Match List-I with List-II.

List-I (Polymer)	List-II (Monomer)
A Neoprene	I Acrylonitrile
B Teflon	II Chloroprene
C Acrilan	III Tetrafluoroethene
D Natural rubber	IV Isoprene

Choose the correct answer from the option given below:

(A) A – II, B – III, C – I, D – IV
(B) A – II, B – I, C – III, D – IV
(C) A – II, B – I, C – IV, D – III
(D) A – I, B – II, C – III, D – IV

Answer: (A) A – II, B – III, C – I, D – IV · Key from source paper

Q18 JEE Main 2022 · 26 Jul · Shift 2 MCQ

Vulcanization of rubber is carried out by heating a mixture of

(A) isoprene and styrene
(B) neoprene and sulphur
(C) isoprene and sulphur
(D) neoprene and styrene

Answer: (C) isoprene and sulphur · Key from source paper

Q19 JEE Main 2022 · 25 Jul · Shift 1 MCQ

Melamine polymer is formed by the condensation of

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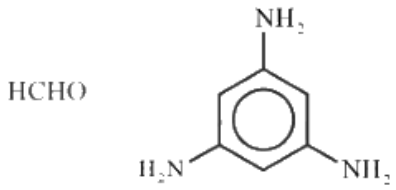
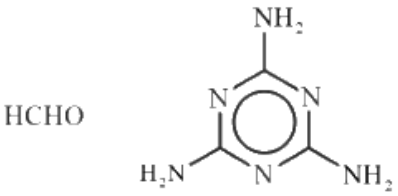
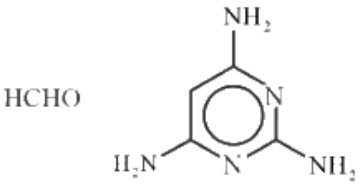
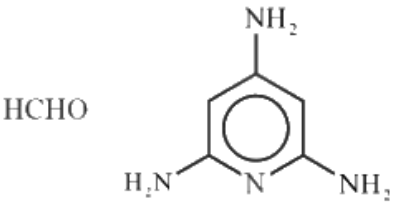
Q48. Melamine polymer is formed by the condensation of

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q20 JEE Main 2022 · 25 Jul · Shift 2 MCQ

Match List-I with List-II

List-I
A Nylon 6, 6
B Low density polythene
C High density polythene
D Teflon

List-II
I Buckets
II Non-stick utensils
III Bristles of brushes
IV Toys

Choose the correct answer from the options given below

(A) A – III, B – I, C – IV, D – II
(B) A – III, B – IV, C – I, D – II
(C) A – II, B – I, C – IV, D – III
(D) A – II, B – IV, C – I, D – III

Answer: (B) A – III, B – IV, C – I, D – II · Key from source paper

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Q21 JEE Main 2022 · 29 Jun · Shift 1 MCQ

The polymer, which can be stretched and retains its original status on releasing the force is

(A) Nylon- 6, 6
(B) Buna-N
(C) Terylene
(D) Bakelite

Answer: (B) Buna-N · Key from source paper

Q22 JEE Main 2022 · 29 Jun · Shift 2 MCQ

Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.
Assertion A: Dacron is an example of polyester polymer.
Reason R: Dacron is made up of ethylene glycol and terephthalic acid monomers.
In the light of the above statements, choose the most appropriate answer from the options given below.

(A) Both A and R are correct and R is the correct explanation of A
(B) Both A and R are correct but R is NOT the correct explanation of A.
(C) A is correct but R is not correct.
(D) A is not correct but R is correct.

Answer: (A) Both A and R are correct and R is the correct explanation of A · Key from source paper

Q23 JEE Main 2022 · 28 Jun · Shift 1 MCQ

Which one of the following is NOT a copolymer?

(A) Neoprene
(B) PHBV
(C) Buna-S
(D) Butadiene-styrene

Answer: (A) Neoprene · Key from source paper

Q24 JEE Main 2022 · 28 Jun · Shift 2 MCQ

Given below are two statements, one is Assertion and other is Reason.
Assertion: Natural rubber is a linear polymer of isoprene called cis-polyisoprene with elastic properties.
Reason: The cis-polyisoprene molecules consist of various chains held together by strong polar interactions with coiled structure.
In the light of the above statements, choose the correct one from the options given below

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(A) A Both Assertion and Reason are true and Reason is the correct explanation of Assertion
(B) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(C) Assertion is true but Reason is false.
(D) Assertion is false but Reason is true.

Answer: (C) Assertion is true but Reason is false. · Key from source paper

Q25 JEE Main 2022 · 27 Jun · Shift 1 MCQ

Match List - I with List - II.
List-I (Polymer)
A Bakelite
B Glyptal
C PVC
D Polystyrene
List-II (Used in)
I Radio and television cabinets
II Electrical switches
III Paints and Lacquers
IV Water pipes
Choose the correct answer from the options given below

(A) (A) – (II), (B) – (III), (C) – (I), (D) – (IV)
(B) (A) – (II), (B) – (III), (C) – (IV), (D) – (I)
(C) (A) – (I), (B) – (II), (C) – (III), (D) – (IV)
(D) (A) – (IV), (B) – (III), (C) – (II), (D) – (I)

Answer: (B) (A) – (II), (B) – (III), (C) – (IV), (D) – (I) · Key from source paper

Q26 JEE Main 2022 · 27 Jun · Shift 2 MCQ

Which is true about Buna-N?

(A) It is a linear polymer of 1, 3-butadiene.
(B) It is obtained by copolymerization of 1, 3 - butadiene and styrene.
(C) It is obtained by copolymerization of 1, 3 - butadiene and acrylonitrile.
(D) The suffix N in Buna- N stands for its natural occurrence.

Answer: (C) It is obtained by copolymerization of 1, 3 - butadiene and acrylonitrile. · Key from source paper

Q27 JEE Main 2022 · 26 Jun · Shift 1 MCQ

Which of the following sets are correct regarding polymer:
(A) Copolymer : Buna-S
(B) Condensation polymer : Nylon-6, 6
(C) Fibres : Nylon-6, 6

(D) Thermosetting polymer : Terylene

(E) Homopolymers : Buna-N

Choose the correct answer from given options below

(A) (A), (B) and (C) are correct

(B) (B), (C) and (D) are correct

(C) (A), (C) and (E) are correct

(D) (A), (B) and (D) are correct

Answer: (A) (A), (B) and (C) are correct · Key from source paper

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Q28 JEE Main 2022 · 25 Jun · Shift 2 Numerical

The Novolac polymer has mass of 963 g. The number of monomer units present in it are

Numerical value type: the answer is a number.

Answer: 9. · Key from source paper

Q29 JEE Main 2022 · 24 Jun · Shift 1 MCQ

Which of the following is an example of polyester?

(A) Butadiene-styrene copolymer

(B) Melamine polymer

(C) Neoprene

(D) Poly- β-hydroxybutyrate-co- β-hydroxyvalerate

Answer: (D) Poly- β-hydroxybutyrate-co- β-hydroxyvalerate · Key from source paper

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Q30 JEE Main 2022 · 24 Jun · Shift 2 MCQ

Which of the following is not a condensation polymer?

(A) Nylon-6, 6

(B) Nylon-6

(C) Dacron

(D) Buna-S

Answer: (D) Buna-S · Key from source paper

Q31 JEE Main 2021 · 1 Sep · Shift 2 MCQ

Monomer units of Dacron polymer are :

(A) glycerol and phthalic acid
(B) ethylene glycol and phthalic acid
(C) ethylene glycol and terephthalic acid
(D) glycerol and terephthalic acid

Answer: (C) ethylene glycol and terephthalic acid · Key from source paper

Q32 JEE Main 2021 · 31 Aug · Shift 1 MCQ

Monomer of Novolac is :

(A) 3-Hydroxybutanoic acid.
(B) $1,3$ -Butadiene and styrene.
(C) phenol and melamine.
(D) o-Hydroxymethylphenol.

Answer: (D) o-Hydroxymethylphenol. · Key from source paper

Q33 JEE Main 2021 · 31 Aug · Shift 2 MCQ

Which among the following is not a polyester ?

(A) Glyptal
(B) PHBV
(C) Novolac
(D) Dacron

Answer: (C) Novolac · Key from source paper

Q34 JEE Main 2021 · 26 Aug · Shift 1 MCQ

The polymer formed on heating Novolac with formaldehyde is:

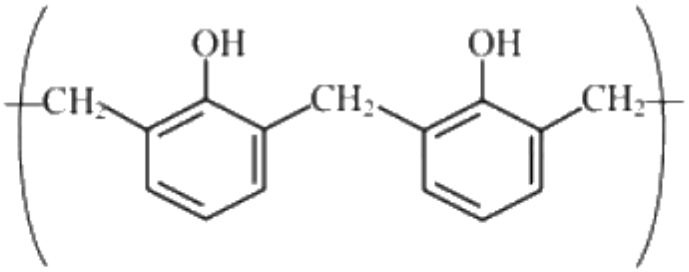
(A) Polyester
(B) Bakelite
(C) Nylon- 6, 6
(D) Melamine

Answer: (B) Bakelite · Key from source paper

Q35 JEE Main 2021 · 25 Jul · Shift 1 MCQ

see figure

Q48.



is a repeating unit for :

(1) Novolac
(2) Buna-N
(3) Acrilan
(4) Neoprene

(A) Novolac
(B) Buna-N
(C) Acrilan
(D) Neoprene

Answer: (A) Novolac · Key from source paper

Q36 JEE Main 2021 · 25 Jul · Shift 2 MCQ

A biodegradable polyamide can be made from:

(A) Glycine and isoprene
(B) Hexamethylene diamine and adipic acid
(C) Glycine and aminocaproic acid
(D) Styrene and caproic acid

Answer: (C) Glycine and aminocaproic acid · Key from source paper

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Q37 JEE Main 2021 · 22 Jul · Shift 1 MCQ

Match List-I with List-II :

List - I | List - II

(a) Chloroprene | (i) *(see the figure above)*

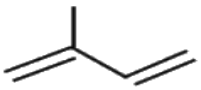
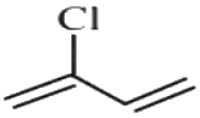
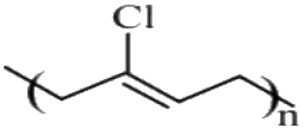
(b) Neoprene | (ii) *(see the figure above)*

(c) Acrylonitrile | (iii) *(see the figure above)*

(d) Isoprene | (iv) $CH_2=CH-CN$

Choose the correct answer from the options given below.

Q49. Match List-I with List-II :

	List - I		List - II
(a)	Chloroprene	(i)	
(b)	Neoprene	(ii)	
(c)	Acrylonitrile	(iii)	
(d)	Isoprene	(iv)	$CH_2=CH-CN$

Choose the correct answer from the options given below:

(1) (a) - (iii), (b)-(iv), (c) -(ii), (d) -(i)

(2) (a) - (ii), (b)-(iii), (c)-(iv), (d) -(i)

(3) (a) - (ii), (b)-(i), (c) -(iv), (d) -(iii)

(4) (a) - (iii), (b)-(i), (c) -(iv), (d) -(ii)

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

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

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

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

Answer: (B) (a) - (ii), (b)-(iii), (c)-(iv), (d) -(i) · Key from source paper

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Q38 JEE Main 2021 · 20 Jul · Shift 1 MCQ

Orlon fibres are made up of:

(A) Polyacrylonitrile

(B) Polyesters

(C) Polyamide

(D) Cellulose

Answer: (A) Polyacrylonitrile · Key from source paper

Q39 JEE Main 2021 · 20 Jul · Shift 2 MCQ

Bakelite is a cross-linked polymer of formaldehyde and:

(A) PHBV

(B) Buna-S

(C) Novolac

(D) Dacron

Answer: (C) Novolac · Key from source paper

Q40 JEE Main 2021 · 16 Mar · Shift 2 MCQ

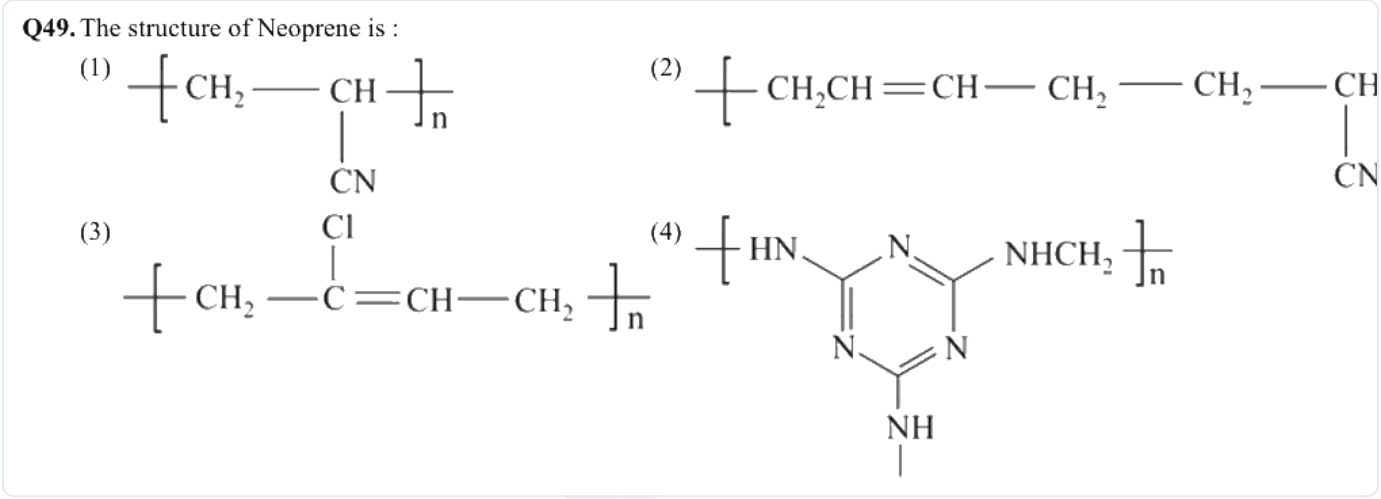
Which of the following polymer is used in the manufacture of wood laminates ?

(A) cis-poly isoprene
(B) Melamine formaldehyde resin
(C) Urea formaldehyde resin
(D) Phenol and formaldehyde resin

Answer: (C) Urea formaldehyde resin · Key from source paper

Q41 JEE Main 2021 · 26 Feb · Shift 1 MCQ

The structure of Neoprene is :
(see the figure above)



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q42 JEE Main 2021 · 25 Feb · Shift 1 MCQ

Which statement is correct?

(A) Synthesis of Buna-S needs nascent oxygen.
(B) Buna-S is a synthetic and linear thermosetting polymer.
(C) Buna-N is a natural polymer.
(D) Neoprene is an addition copolymer used in plastic bucket manufacturing.

Answer: (A) Synthesis of Buna-S needs nascent oxygen. · Key from source paper

Q43 JEE Main 2021 · 24 Feb · Shift 1 MCQ

Match List I with List II.
List I (Monomer Unit)
(a) Caprolactum
(b) 2 - Chloro-1, 3 - butadiene
(c) Isoprene
(d) Acrylonitrile
List II (Polymer)
(i) Natural rubber
(ii) Buna-N
(iii) Nylon 6
(iv) Neoprene
Choose the correct answer from the options given below:

(A) a → iii, b → iv, c → i, d → ii
(B) a → i, b → ii, c → iii, d → iv
(C) a → ii, b → i, c → iv, d → iii
(D) a → iv, b → iii, c → ii, d → i

Answer: (A) a → iii, b → iv, c → i, d → ii · Key from source paper

Q44 JEE Main 2021 · 24 Feb · Shift 2 MCQ

In polymer Buna-S : 'S' stands for:

(A) Strength
(B) Sulphur
(C) Sulphonation
(D) Styrene

Answer: (D) Styrene · Key from source paper

Q45 JEE Main 2020 · 6 Sep · Shift 1 MCQ

Consider the Assertion and Reason given below.
Assertion (A) : Ethene polymerized in the presence of Ziegler Natta Catalyst at high temperature and pressure is used to make buckets and dustbins.
Reason (R) : High density polymers are closely packed and are chemically inert. Choose the correct answer from the following:

(A) (A) is correct but (R) is wrong.
(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A).
(C) Both (A) and (R) are correct and (R) is the correct explanation of (A).
(D) (A) and (R) both are wrong.

Answer: (C) Both (A) and (R) are correct and (R) is the correct explanation of (A). · Key from source paper

Q46 JEE Main 2020 · 6 Sep · Shift 2 MCQ

The correct match between item - I and item - II is :
Item - I Item - II
(a) Natural rubber (I) 1, 3-butadiene + styrene
(b) Neoprene (II) 1, 3-butadiene
(c) Buna-N (III) chloroprene
(d) Buna-S (IV) Isoprene

(A) (a)-(III), (b)-(IV), (c)-(I), (d)-(II)
(B) (a)-(III), (b)-(IV), (c)-(II), (d)-(I)
(C) (a)-(IV), (b)-(III), (c)-(II), (d)-(I)
(D) (a)-(IV), (b)-(III), (c)-(I), (d)-(II)

Answer: (C) (a)-(IV), (b)-(III), (c)-(II), (d)-(I) · Key from source paper

Q47 JEE Main 2020 · 5 Sep · Shift 2 MCQ

Which one of the following polymers is not obtained by condensation polymerisation ?

(A) Nylon 6, 6
(B) Buna – N
(C) Bakelite
(D) Nylon 6

Answer: (B) Buna – N · Key from source paper

Q48 JEE Main 2020 · 9 Jan · Shift 2 MCQ

Which polymer has 'chiral' monomer(s)?

(A) Neoprene
(B) Buna –N
(C) Nylon 6,6
(D) PHBV

Answer: (D) PHBV · Key from source paper

Q49 JEE Main 2020 · 8 Jan · Shift 2 MCQ

Preparation of Bakelite proceeds via reactions:

(A) Electrophilic addition and dehydration
(B) Condensation and elimination
(C) Electrophilic substitution and dehydration
(D) Nucleophilic addition and dehydration

Answer: (C) Electrophilic substitution and dehydration · Key from source paper

Q50 JEE Main 2019 · 12 Apr · Shift 1 MCQ

Which of the following is a thermosetting polymer?

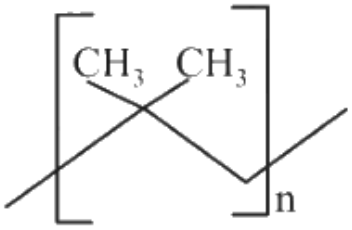
(A) Bakelite
(B) PVC
(C) Nylon 6
(D) Buna-N

Answer: (A) Bakelite · Key from source paper

Q51 JEE Main 2019 · 12 Apr · Shift 2 MCQ

The correct name of the following polymer is:
(see the figure above)

Q59. The correct name of the following polymer is:



(1) Polyisobutylene
(2) Polytert-butylene
(3) Polyisobutane
(4) Polyisoprene

(A) Polyisobutylene
(B) Polytert-butylene
(C) Polyisobutane
(D) Polyisoprene

Answer: (A) Polyisobutylene · Key from source paper

Q52 JEE Main 2019 · 10 Apr · Shift 1 MCQ

Which of the following is a condensation polymer?

(A) Nylon 6, 6
(B) Neoprene
(C) Buna−S
(D) Teflon

Answer: (A) Nylon 6, 6 · Key from source paper

Q53 JEE Main 2019 · 10 Apr · Shift 2 MCQ

The correct match between Item - I and Item - II is:
Item - I
(a) High density polythene
(b) Polyacrylonitrile
(c) Novolac
(d) Nylon 6
Item - II
(I) Peroxide catalyst
(II) Condensation at high temperature & pressure
(III) Ziegler-Natta catalyst
(IV) Acid or base catalyst

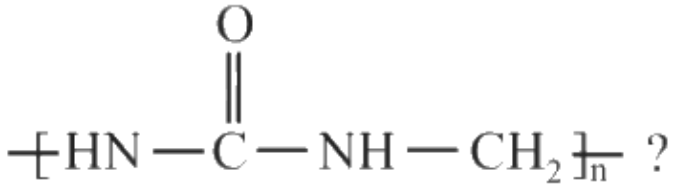
(A) a → IV, b → (II), (c) → (I), (d) → (III)
(B) (a) → III, (b) → (I), (c) → (IV), (d) → (II)
(C) (a) → III, (b) → (I), (c) → (II), (d) → (IV)
(D) (a) → II, b → IV, c → I, d → III

Answer: (B) (a) → III, (b) → (I), (c) → (IV), (d) → (II) · Key from source paper

Q54 JEE Main 2019 · 9 Apr · Shift 2 MCQ

Which of the following compounds is a constituent of the polymer
(see the figure above)
?

Q58. Which of the following compounds is a constituent of the polymer



(1) Methylamine
(2) Ammonia
(3) Formaldehyde
(4) N-Methyl urea

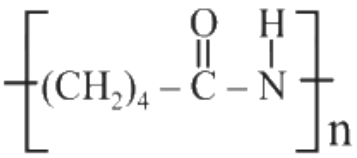
(A) Methylamine
(B) Ammonia
(C) Formaldehyde
(D) N-Methyl urea

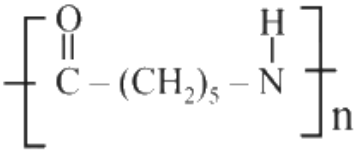
Answer: (C) Formaldehyde · Key from source paper

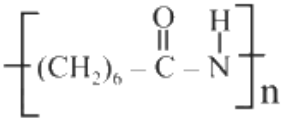
Q55 JEE Main 2019 · 8 Apr · Shift 2 MCQ

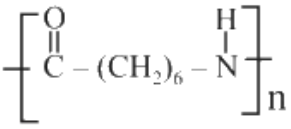
The structure of Nylon - 6 is:

Q59. The structure of Nylon - 6 is:

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q56 JEE Main 2019 · 12 Jan · Shift 1 MCQ

Poly-β-hydroxybutyrate-co-β-hydroxyvalerate ($PHBV$) is a copolymer of _____.

(A) 3– hydroxybutanoic acid and 4– hydroxypentanoic acid
(B) 3– hydroxybutanoic acid and 2– hydroxypentanoic acid
(C) 3– hydroxybutanoic acid and 3– hydroxypentanoic acid
(D) 2– hydroxybutanoic acid and 3– hydroxypentanoic acid

Answer: (C) 3– hydroxybutanoic acid and 3– hydroxypentanoic acid · Key from source paper

Q57 JEE Main 2019 · 12 Jan · Shift 2 MCQ

The two monomers for the synthesis of nylon 6, 6 are

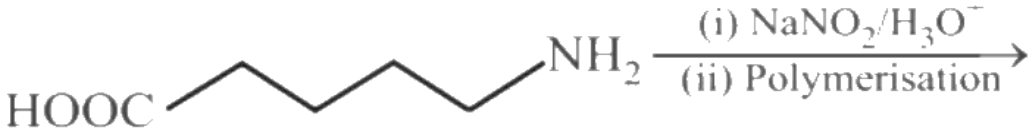
(A) HOOH $(CH_2)_4$ COOH, $H_2N(CH_2)_4$ NH_2
(B) HOOC $(CH_2)_4$ COOH, $H_2N(CH_2)_6$ NH_2
(C) HOOC $(CH_2)_6$ COOH, $H_2N(CH_2)_4$ NH_2
(D) HOOC $(CH_2)_6$ COOH, $H_2N(CH_2)_6$ NH_2

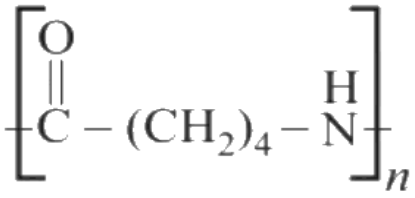
Answer: (B) HOOC $(CH_2)_4$ COOH, $H_2N(CH_2)_6$ NH_2 · Key from source paper

Q58 JEE Main 2019 · 11 Jan · Shift 1 MCQ

The polymer obtained from the following reactions is
(see the figure above)

Q57. The polymer obtained from the following reactions is



(1)


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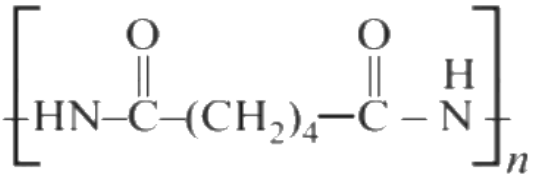
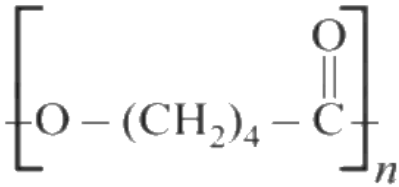


(3)


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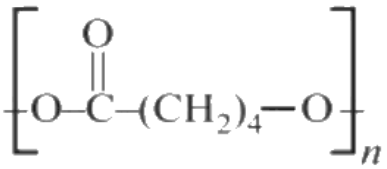


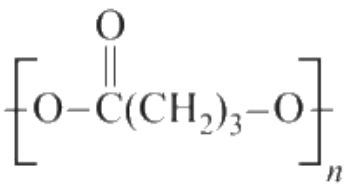
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

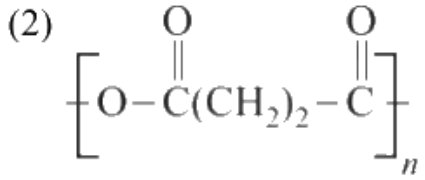
Answer: (C) · Key from source paper

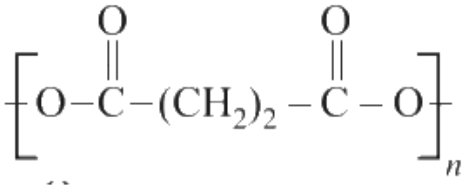
Q59 JEE Main 2019 · 11 Jan · Shift 2 MCQ

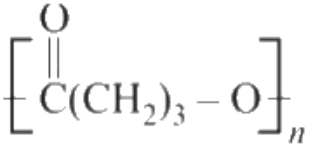
The homopolymer formed from 4-hydroxy-butanoic acids is.
(see the figure above)

Q58. The homopolymer formed from 4-hydroxy-butanoic acids is.

(1) 

(2) 

(3) 

(4) 

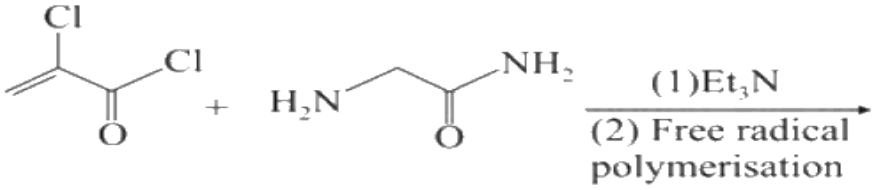
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

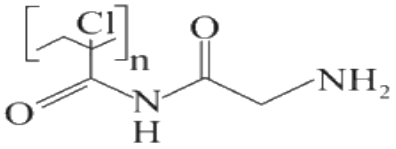
Answer: (D) · Key from source paper

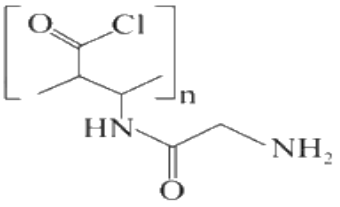
Q60 JEE Main 2019 · 9 Jan · Shift 1 MCQ

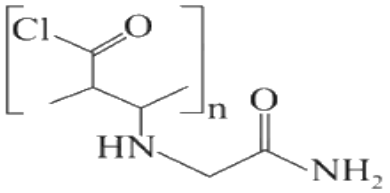
Major product of the given below reaction:
(see the figure above)

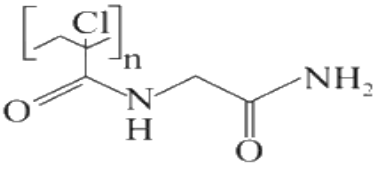
Q58. Major product of the given below reaction:



(1) 

(2) 

(3) 

(4) 

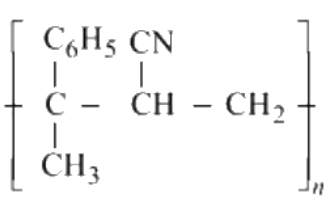
(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

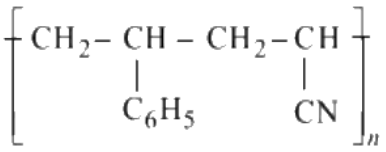
Answer: (D) · Key from source paper

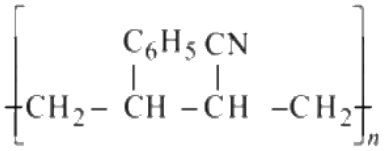
Q61 JEE Main 2018 · 15 Apr · Shift 1 MCQ

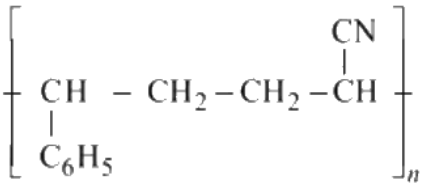
The copolymer formed by addition polymerization of styrene and acrylonitrile in the presence of peroxide is:

Q58. The copolymer formed by addition polymerization of styrene and acrylonitrile in the presence of peroxide is:

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q62 JEE Main 2018 · 15 Apr · Shift 2 MCQ

Which of the following statements is not true?

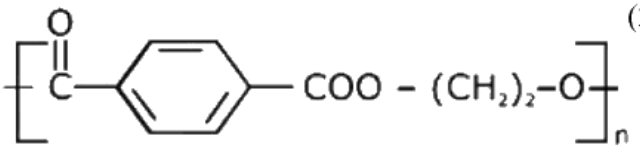
(A) Chain growth polymerisation involves homopoly-merisation only
(B) Chain growth polymerisation includes both homo-polymerisation and copolymerisation
(C) Nylon 6 is an example of step-growth polymerisation
(D) Step growth polymerisation requires a bifunctional monomer

Answer: (A) Chain growth polymerisation involves homopoly-merisation only · Checked by our team

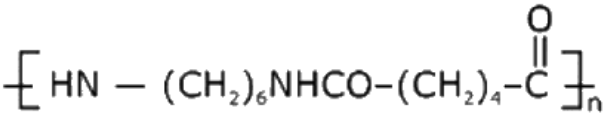
Q63 JEE Main 2017 · 9 Apr · Online MCQ

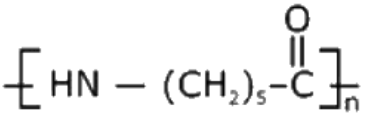
Which of the following is a biodegradable polymer?

Q59. Which of the following is a biodegradable polymer?

(1) 

(2) 

(3) 

(4) 

A *see figure*

B *see figure*

C *see figure*

D *see figure*

Answer: (B) · Key from source paper

Q64 JEE Main 2017 · 2 Apr · Offline MCQ

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

A Bakelite

B Nylon- 6,6

C Terylene

D Nylon-6

Answer: (D) Nylon-6 · Key from source paper

Q65 JEE Main 2016 · 10 Apr · Online MCQ

Which of the following polymers is synthesized using a free radical polymerization technique?

A Terylene

B Melamine polymer

C Nylon 6, 6

D Teflon

Answer: (D) Teflon · Key from source paper

Q66 JEE Main 2016 · 9 Apr · Online MCQ

Assertion: Rayon is a semisynthetic polymer whose properties are better than natural cotton.
Reason: Mechanical and aesthetic properties of cellulose can be improved by acetylation.

(A) Both assertion and reason are correct, but the reason is not the correct explanation for the assertion.
(B) Both assertion and reason are correct, and the reason is the correct explanation for the assertion.
(C) Assertion in incorrect statement, but the reason is correct.
(D) Both assertion and reason are incorrect.

Answer: (B) Both assertion and reason are correct, and the reason is the correct explanation for the assertion. · Key from source paper

Q67 JEE Main 2016 · 3 Apr · Offline MCQ

Which of the following statements about low density polythene is FALSE?

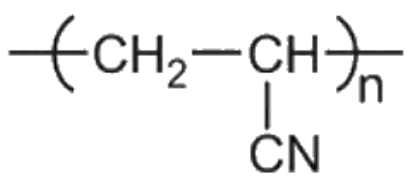
(A) Its synthesis required dioxygen or a peroxide initiator as a catalyst
(B) It is used in the manufacture of buckets, dust - bins etc.
(C) Its synthesis requires high pressure
(D) It is a poor conductor of electricity

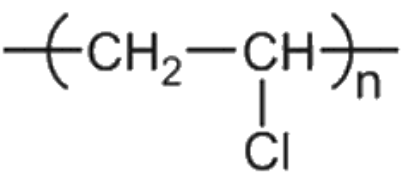
Answer: (B) It is used in the manufacture of buckets, dust - bins etc. · Key from source paper

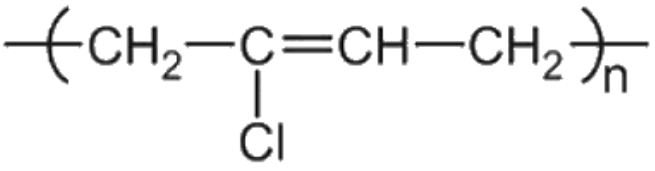
Q68 JEE Main 2015 · 11 Apr · Online MCQ

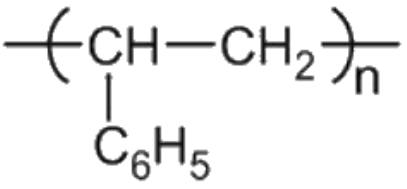
Which one of the following structures represents the neoprene polymer?

Q58. Which one of the following structures represents the neoprene polymer?

(1) 

(2) 

(3) 

(4) 

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (C) · Key from source paper

Q69 JEE Main 2015 · 10 Apr · Online MCQ

Match the polymers in **column-A** with their main uses in **column-B** and choose the correct answer:
Column - A

A. Polystyrene
B. Glyptal
C. Polyvinyl chloride
D. Bakelite
Column - B
i. Paints and lacquers
ii. Rain coats
iii. Manufacture of toys
iv. Computer discs

(A) A - iii , B - i , C - ii , D - iv
(B) A - ii , B - i , C - iii , D - iv
(C) A - ii , B - iv , C - iii , D - i
(D) A - iii , B - iv , C - ii , D - i

Answer: (A) A - iii , B - i , C - ii , D - iv · Key from source paper

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Q70 JEE Main 2015 · 4 Apr · Offline MCQ

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

(A) Poly vinyl chloride
(B) Bakelite
(C) Glyptal
(D) Polypropene

Answer: (C) Glyptal · Key from source paper

Q71 JEE Main 2014 · 19 Apr · Online MCQ

Which one of the following is an example of thermosetting polymer?

(A) Nylon -6,6
(B) Bakelite
(C) Buna - N
(D) Teflon

Answer: (B) Bakelite · Key from source paper

Q72 JEE Main 2014 · 9 Apr · Online MCQ

Structure of some important polymers are given. Which one represents Buna-S ?
(see the figure above)

Q59. Structure of some important polymers are given. Which one represents Buna-S ?

(1) $(-CH_2-CH=CH-CH_2-\underset{\underset{CN}{|}}{CH}-CH_2-)_n$ (2) $(-CH_2-CH=CH-CH_2-\underset{\underset{C_6H_5}{|}}{CH}-CH_2-)_n$

(3) $(-CH_2-\overset{\overset{CH_3}{|}}{C}=CH-CH_2-)_n$ (4) $(-CH_2-\overset{\overset{Cl}{|}}{C}=CH-CH_2-)_n$

(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (B) · Key from source paper

Q73 JEE Main 2014 · 9 Apr · Online MCQ

Which one of the following class of compounds is obtained by polymerization of acetylene ?

(A) Poly-ene
(B) Poly-amide
(C) Poly-yne
(D) Poly-ester

Answer: (A) Poly-ene · Checked by our team

Q74 JEE Main 2014 · 6 Apr · Offline MCQ

Which among the following is classified as a condensation polymer?

(A) Dacron
(B) Neoprene
(C) Teflon
(D) Acrylonitrile

Answer: (A) Dacron · Key from source paper

Q75 JEE Main 2013 · 25 Apr · Online MCQ

Bakelite is obtained from phenol by reacting with:

(A) Acetal
(B) CH_3CHO
(C) HCHO
(D) Chlorobenzene

Answer: (C) HCHO · Key from source paper

Q76 JEE Main 2013 · 23 Apr · Online MCQ

Which of the following polymer is a polyamide ?

(A) Terylene
(B) Nylon
(C) Rubber
(D) Vulcanised rubber

Answer: (B) Nylon · Key from source paper

Q77 JEE Main 2013 · 22 Apr · Online MCQ

The polymer used for optical lenses is :

(A) polypropylene
(B) polyvinyl chloride
(C) polythene
(D) polymethyl methacrylate

Answer: (D) polymethyl methacrylate · Key from source paper

Q78 JEE Main 2013 · 9 Apr · Online MCQ

If a polythene sample contains two monodisperse fractions in the ratio 2 : 3 with degree of polymerization 100 and 200, respectively, then its weight average molecular weight will be :

(A) 4900
(B) 4600
(C) 4300
(D) 5200

Answer: (A) 4900 · Key from source paper

Q79 AIEEE 2012 · 26 May · Online MCQ

Bakelite is obtained from phenol by reacting it with

(A) Acetaldehyde
(B) Chlorobenzene
(C) Formaldehyde
(D) Acetamide

Answer: (C) Formaldehyde · Key from source paper

Q80 AIEEE 2012 · 19 May · Online MCQ

Which of the following is a polyamide?

(A) Teflon
(B) Orlon
(C) Nylon
(D) Terylene

Answer: (C) Nylon · Key from source paper

Q81 AIEEE 2012 · 12 May · Online MCQ

Synthetic polymer bakelite can be prepared from following compounds

(A) Styrene and vinyl chloride
(B) Acrylonitrile and vinyl chloride
(C) Adipic acid and ethylene glycol
(D) Phenol and formaldehyde

Answer: (D) Phenol and formaldehyde · Key from source paper

Q82 AIEEE 2012 · 7 May · Online MCQ

Which one of the following is a chain growth polymerisation?

(A) Nucleic acid
(B) Polystyrene
(C) Protein
(D) Starch

Answer: (B) Polystyrene · Key from source paper

Q83 AIEEE 2010 MCQ

The polymer containing strong intermolecular forces e.g. hydrogen bonding, is

(A) teflon
(B) nylon 6,6
(C) polystyrene
(D) natural rubber

Answer: (B) nylon 6,6 · Key from source paper

Q84 AIEEE 2009 MCQ

Buna-N synthetic rubber is a copolymer of :

(A) $H_2C = CH - C(Cl) = CH_2$ and $H_2C = CH - CH = CH_2$
(B) $H_2C = CH - CH = CH_2$ and $H_5C_6 - CH = CH$
(C) $H_2C = CH - CN$ and $H_2C = CH - CH$
(D) $H_2C = CH - CN$ and $H_2C = CH - C(CH_3) = CH_2$

Answer: (C) $H_2C = CH - CN$ **and** $H_2C = CH - CH$ · Key from source paper

Q85 AIEEE 2008 MCQ

Bakelite is obtained from phenol by reacting with

(A) $(CH_2OH)_2$
(B) CH_3CHO
(C) CH_3COCH_3
(D) HCHO

Answer: (D) HCHO · Key from source paper

Q86 AIEEE 2005 MCQ

Which of the following is a polyamide?

(A) Teflon
(B) Nylon – 66
(C) Terylene
(D) Bakelite

Answer: (B) Nylon – 66 · Key from source paper

Q87 AIEEE 2005 MCQ

Which of the following is fully fluorinated polymer?

(A) Neoprene
(B) Teflon
(C) Thiokol
(D) PFC

Answer: (B) Teflon · Key from source paper

Q88 AIEEE 2003 MCQ

Nylon threads are made of

(A) polyester polymer
(B) polyamide polymer
(C) polyethylene polymer
(D) polyvinyl polymer

Answer: (B) polyamide polymer · Key from source paper

Q89 AIEEE 2002 MCQ

Polymer formation from monomers starts by

(A) condensation reaction between monomers
(B) coordinate reaction between monomers
(C) conversion of monomer to monomer ions by protons
(D) hydrolysis of monomers

Answer: (A) condensation reaction between monomers · Key from source paper

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