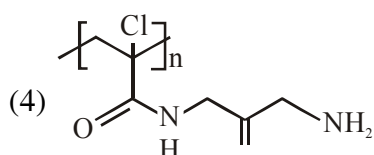
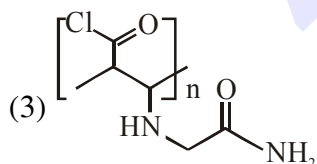
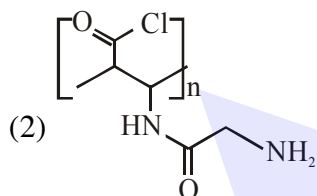
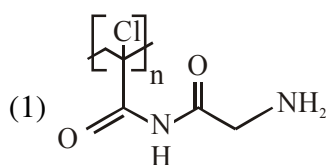
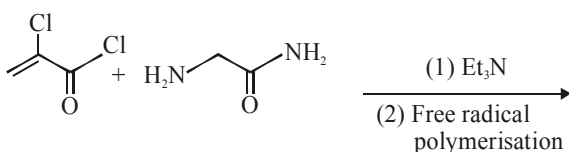


POLYMER

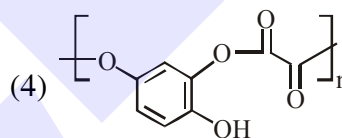
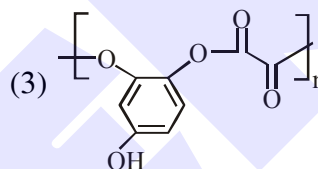
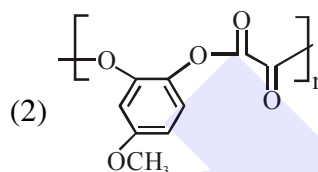
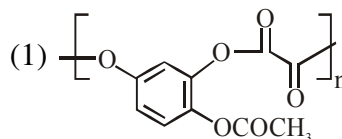
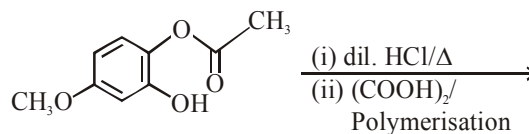
1. The two monomers for the synthesis of Nylon 6, 6 are :

- (1) $\text{HOOC}(\text{CH}_2)_6\text{COOH}$, $\text{H}_2\text{N}(\text{CH}_2)_6\text{NH}_2$
- (2) $\text{HOOC}(\text{CH}_2)_4\text{COOH}$, $\text{H}_2\text{N}(\text{CH}_2)_4\text{NH}_2$
- (3) $\text{HOOC}(\text{CH}_2)_6\text{COOH}$, $\text{H}_2\text{N}(\text{CH}_2)_4\text{NH}_2$
- (4) $\text{HOOC}(\text{CH}_2)_4\text{COOH}$, $\text{H}_2\text{N}(\text{CH}_2)_6\text{NH}_2$

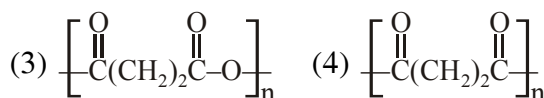
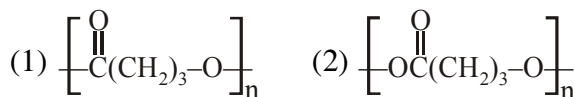
2. Major product of the following reaction is :



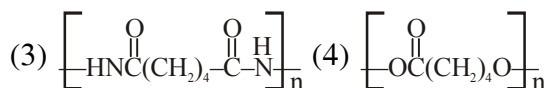
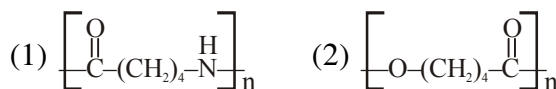
3. The major product of the following reaction is:



4. The homopolymer formed from 4-hydroxybutanoic acid is :-



5. The polymer obtained from the following reactions is :



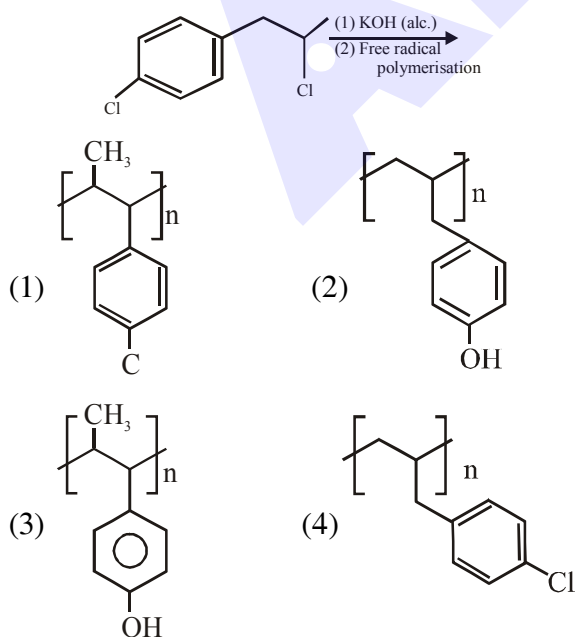
6. Poly- β -hydroxybutyrate-co- β -hydroxyvalerate(PHBV) is a copolymer of ____.

- (1) 3-hydroxybutanoic acid and 4-hydroxypentanoic acid
- (2) 2-hydroxybutanoic acid and 3-hydroxypentanoic acid
- (3) 3-hydroxybutanoic acid and 2-hydroxypentanoic acid
- (4) 3-hydroxybutanoic acid and 3-hydroxypentanoic acid

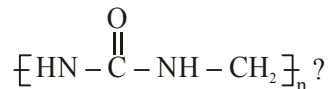
7. The structure of Nylon-6 is :

- (1) $\left[(\text{CH}_2)_6 - \text{C} \begin{array}{l} \text{O} \\ \parallel \\ \text{H} \\ | \\ \text{N} \end{array} \right]_n$
- (2) $\left[(\text{CH}_2)_4 - \text{C} \begin{array}{l} \text{O} \\ \parallel \\ \text{H} \\ | \\ \text{N} \end{array} \right]_n$
- (3) $\left[\text{C} \begin{array}{l} \text{O} \\ \parallel \\ \text{H} \\ | \\ \text{N} \end{array} - (\text{CH}_2)_5 - \right]_n$
- (4) $\left[\text{C} \begin{array}{l} \text{O} \\ \parallel \\ \text{H} \\ | \\ \text{N} \end{array} - (\text{CH}_2)_6 - \right]_n$

8. The major product of the following reaction is :



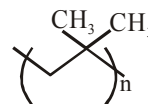
9. Which of the following compounds is a constituent of the polymer



- (1) Formaldehyde (2) Ammonia
 - (3) Methylamine (4) N-Methyl urea
10. Which of the following is a condensation polymer ?
- (1) Buna - S (2) Nylon 6, 6
 - (3) Teflon (4) Neoprene
11. The correct match between Item-I and Item-II is:

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

- (1) (a)→(III), (b)→(I), (c)→(II), (d)→(IV)
 - (2) (a)→(IV), (b)→(II), (c)→(I), (d)→(III)
 - (3) (a)→(II), (b)→(IV), (c)→(I), (d)→(III)
 - (4) (a)→(III), (b)→(I), (c)→(IV), (d)→(II)
12. Which of the following is a thermosetting polymer?
- (1) Buna-N (2) PVC
 - (3) Bakelite (4) Nylon 6
13. The correct name of the following polymer is:



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

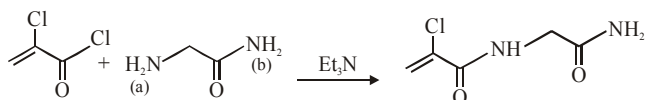
SOLUTION

1. Ans. (4)

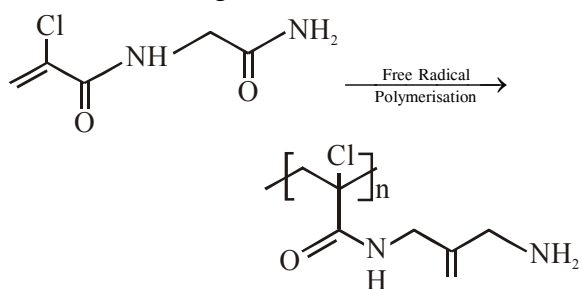
Nylon-6,6 is polymer of Hexamethylene diamine & Adipic acid



2. Ans. (4)

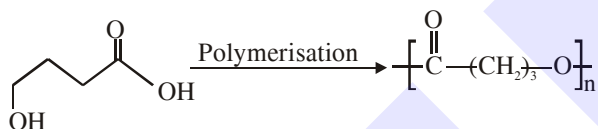


NH₂(a) will wact as nucleophile as (b) is having delocalised lonepair.

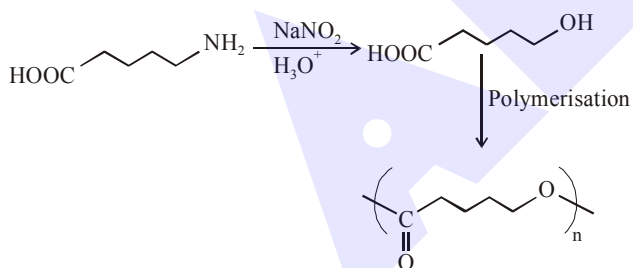


3. Ans.(2)

4. Ans. (1)



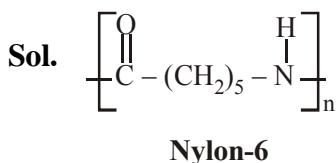
5. Ans. (2)



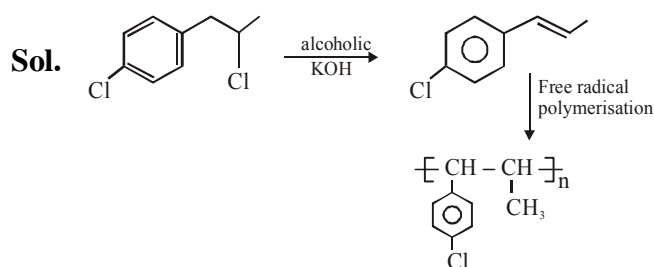
6. Ans. (4)

PHBV is a polymer of 3-hydroxybutanoic acid and 3-Hydroxy pentanoic acid.

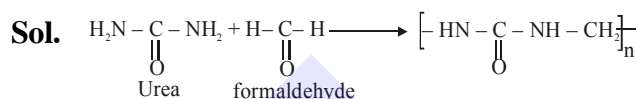
7. Ans. (3)



8. Ans. (1)



9. Ans. (1)



10. Ans. (2)

Sol. Nylon-6,6 is a condensation polymer of hexamethylene diamine and adipic acid. Buna-S, Teflon and Neoprene are addition polymer.

11. Ans. (4)

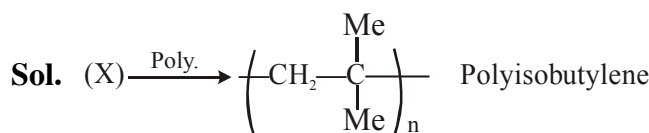
Sol.

(a)	High density polythene	(III)	Ziegler-Natta Catalyst
(b)	Polyacrylonitrile	(I)	Peroxide catalyst
(c)	Novolac	(IV)	Acid or base catalyst
(d)	Nylon 6	(II)	Condensation at high temperature & pressure

12. Ans. (3)

Sol. Bakelite is thermoselting polymer

13. Ans. (4)



As per the given structure of the polymer the

