

articles, (ix) Telecommunication and (x) Photography etc.

### QUESTIONS

1. Write down the names and structural formula for the monomers from which the following polymers are made of :  
(a) Terylene                      (b) Teflon                      (c) PVC                      (d) Nylon 66  
(e) Bunarubber                      (f) Polystyrene                      (g) Saran
2. What are plastics ? How are they classified ? Describe the applications of plastics in daily life.
3. Write short notes on the following :  
(1) Vulcanisation of rubber  
(2) Thermoplastics and thermosetting plastics  
(3) Ziegler-Natta polymerisation
4. How will you differentiate between :  
(1) Polymer and plastic                      (2) Polymerisation and vulcanisation  
(3) Rubber and Gutta parcha                      (4) Polythene  
(5) Orlon
5. Write down the names and structure of the polymers which are prepared from the following monomers :  
(1) Methyl methacrylate                      (2) Caprolactum  
(3) Styrene                      (4) Isoprene  
(5) Vinyl chloride                      (6) Adipic acid + Hexamethylenediamine  
(7) Ethylene glycol + Tere phthalic acid
6. Write down the names and structure of the monomers from which the following are made :  
(1) Buns-s Rubber                      (2) Perpex                      (3) PVC                      (4) Teflon

(5) Bakelite (6) Nylon 66 and (7) Terylene

7. What is polymerisation ? Explain step growth polymerisation with examples.  
8. Name the two types of ionic addition polymerisation. Give their mechanism also.  
9. What are Ziegler-Natta Catalysts ? Give their importance in the formation of addition polymer.  
10. What is natural rubber ? How does it differ from Gutta Parcha.  
11. Write the correct answer from the given alternatives with reason :

1. Orlon is prepared by the polymerisation of :

- (i) Vinyl cyanide (ii) Allyl alcohol  
(iii) Vinyl chloride (iv) Allyl chloride

Ans. (i) It is a addition polymer of vinyl cyanide.

2. Teflon is prepared by the polymerization of :

- (i) Butadiene (ii) Vinyl cyanide  
(iii) Vinyl chloride (iv) Tetrafluoroethylene

Ans. (iv) Tetrafluoroethylene

3. Bakelite is obtained from :

- (i) Phenol and formaldehyde  
(ii) Adipic acid and hexamethylene diamine  
(iii) Dimethyl terephthalate and ethylene glycol  
(iv) Neoprene

Ans. (i) It is prepared by condensation polymerisation of phenol and formaldehyde.

4. Nylon - 6, 6 is obtained from :

- (i) Adipic acid and hexamethylene diamine  
(ii) Tetrafluoroethylene  
(iii) Vinyl cyanide  
(iv) Vinylbenzene

Ans. (i) Both the constituents have 6 carbon atoms each.

5. Neoprene is a polymer of the following monomer :

- (i) Chloroprene (ii) Isoprene  
(iii) Isobutane (iv) Isopentene

Ans. (i) Polymerization of chloroprene gives Neoprene.

6. Which of the following is a thermosetting polymer ?

- (i) Bakelite (ii) Nylon-6,6  
(iii) Polyethylene (iv) Teflon

Ans. (i) Bakelite once set can not be reshaped.

7. Which of the following is an example of a condensation polymer ?

- (i) Nylon-6,6 (ii) Teflon  
(iii) Polypropylene (iv) Orlon

Ans. (i) Because it is formed by condensation polymerization of two monomers.

## *Synthetic Polymers*

**8. Which of the following polymer contain nitrogen :**

- (i) PVC
- (ii) Teflon
- (iii) Nylon
- (iv) Terylene

**Ans. (iii)** It is an amide polymer.

**9. Adipic acid reacts with hexamethylene diamine to form :**

- (i) Bakelite
- (ii) Nylon-6,6
- (iii) Terylene
- (iv) Nylon-6,8

**Ans. (ii)** This is found experimentally.

**10. Ethylene glycol reacts with dimethyl terephthalate to form :**

- (i) Nylon-6,6
- (ii) Teflon
- (iii) Dacron
- (iv) Orlon

**Ans. (iii)** Experimentally seen.

