

Previous HSE Questions from the chapter "POLYMERS"

1. Polymers are of different types.
 - a) Identify the thermoplastic polymer from the following:
 - i) Bakelite ii) Nylon-6,6 iii) Neoprene iv) PVC (1)
 - b) What are biodegradable polymers? Write an example. (2) [SAY 2016]
2. Polymers can be classified based on molecular forces.
 - a) Classify the following polymers into elastomers and fibres:
 - Rubber, Nylon 6,6, Buna-S, Terylene (1)
 - b) What do you mean by thermosetting polymers? Give one example. (2) [March 2016]
3. Polymers are classified into elastomers, fibres, thermoplastics and thermosetting plastics depending on the intermolecular forces. Fill in the vacant places given below:

Types of Polymer	Polymer	Monomer
Thermosetting Plastic	(i)	Phenol and formaldehyde
(ii)	Natural Rubber	(iii)
(iv)	(v)	Caprolactum
(vi)	Polystyrene	Styrene

(3) [SAY 2015]

4. Polymers are macromolecules formed by union of monomers.
 - a) Name one natural polymer and synthetic polymer. (1)
 - b) Distinguish between thermoplastic and thermosetting plastic with example. (2) [March 2015]
5. a) Write any two differences between step growth and chain growth polymerisation. (2)
- b) what are the monomers of the following:
 - i) Neoprene
 - ii) Nylon – 6 (1) [March 2014]
6. a) Name two thermoplastics. (1)
- b) Nylon 6,6 and Dacron are two synthetic fibres. Suggest the monomers of each. (1 x 2 = 2) [SAY 2014]
7. Natural rubber obtained from rubber latex is soft and sticky.
 - a) Suggest a method to improve the stiffness of rubber. (½)
 - b) Explain the above method. (1½)
 - c) Classify the following into natural and synthetic polymers: Nylon, Starch, Cellulose, PVC (1) [SAY 2013]
8. a) Synthetic rubber is a Vulcanisable rubber like polymer.
 - i) Write one example for synthetic rubber. (½)
 - ii) Write the method of preparation of the above synthetic rubber. (1)
- b) Which are the monomers of Nylon-6 and Nylon-6,6 ? (1½) [March 2013]
9. PVC, Bakelite and polythene are plastics.
 - a) Classify the above plastics into thermoplastics and thermo-setting plastics. (1½)
 - b) Name the monomer units of PVC and Bakelite. (1½) [SAY 2012 & SAY 2008]
10. a) Rubber is natural polymer obtained from the bark of rubber trees.
 - i) Name the monomer of natural rubber. (1)
 - ii) Vulcanisation improves elasticity of rubber. What is vulcanisation? (1)
 - iii) Write two examples for synthetic rubber. (1) [March 2012 & 2010]
11. Monomers polymerise to form polymers. Polymers can be classified in many ways.
 - a) Distinguish between homopolymer and co-polymer. (1)
 - b) Give the name or formula of the monomers in the following polymers:
 - i) Nylon-6,6 ii) Dacron (2) [SAY 2011]
12. a) LDPE is a homopolymer, while Nylon-6,6 is a co-polymer. Explain? (2)
- b) Classify the following into homopolymer and co-polymer: Nylon-6, HDPE (1) [March 2011]
13. Based on the mode of polymerisation, we can classify polymers into addition and condensation polymers.
 - a) Classify the polymers given below into addition polymers and condensation polymers.
 - Terylene, PVC, Bakelite, polythene (2)
 - b) How will you prepare Nylon-6,6? (1) [March 2010]
14. Teflon is commonly used addition polymer.
 - a) What is Teflon? (1)

- b) Mention any two uses of it. (1)
 - c) Name two other addition polymers. (1) [March 2009]
 - 15. The rubber gets stiffened during the treatment of rubber with one solid element.
 - a) Name the process. (1)
 - b) Which element is used in the above process? (1)
 - c) What is the mechanism of stiffness? (1) [SAY 08]
 - 16. Nylon-6 and Nylon-6,6 are polymers. What is the difference between the two notations? (3) [SAY 08]
 - 17. Addition polymerisation is used for the production of important polymers.
 - a) Give one example for the addition polymer. (1)
 - b) What is the mechanism in addition polymerisation? (2) [March 2008]
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