SUBJECT : CHEMISTRY

CLASS : XII

WORKSHEET: III

CHAPTER - POLYMERS

1. Write the names of monomers of the following polymers:

(i)
$$- \begin{bmatrix} H & H & O & O \\ | & | & | & | \\ N - (CH_2)_6 - N - C - (CH_2)_4 - C \end{bmatrix}_n$$
 (ii)
$$- \begin{bmatrix} C & H \\ | & | \\ C - (CH_2)_5 - N \end{bmatrix}_n$$
 (iii)
$$- \begin{bmatrix} CF_2 - CF_2 \end{bmatrix}_n$$

- 2. Arrange the following polymers in increasing order of their intermolecular forces.
 - a) Nylon 6, 6, Buna-S, Polythene
 - b) Nylon 6, Neoprene, Polyvinyl chloride
- **3.** Define the term polymerization.
- **4.** Is @ NH –CHR-CO@ a homopolymer or a copolymer?
- **5.** How can you differentiate between addition and condensation polymerization?
- **6.** Define thermoplastics and thermosetting polymers.
- 7. Write the monomers used for getting the following polymers.
 - (a) Polyvinyl chloride
- (b) Teflon
- (c) Bakelite
- **8.** Discuss the main purpose of vulcanization of rubber.
- **9.** Write the names and structures of the monomers of the following polymers:
 - (a) Buna-S
- (b) Buna-N
- (c) Bacron
- (d) Neoprene
- **10.** How is decron obtained from ethylene glycol and terephthalic acid?
- 11. What is a biodegradable polymer? Give an example of a biodegradable aliphatic polyester.
- **12.** What does '6, 6' indicate in the name nylon -6,6?
- **13.** What is the function of sulphur in vulcanization of rubber?
- **14.** Mention which of the following are addition polymers:
 - (a) Terylene
- (b) Nylon-6, 6
- (c) Neoprene
- (d) Teflon

- **15.** Differentiate the following pair of polymers based on the property mentioned against each.
 - a) Novolac and bakelite (structure)
 - b) Buna-S and terylene (intermolecular forces of attraction)
- **16.** a) What is the role of benzoyl peroxide in polymerization of ethane?
 - b) What are LDPE and HDPE? How are they prepared?
- **17.** Give one example each of
 - (a) Addition polymers
- (b) Condensation polymers
- (c) Copolymers
- **18.** Classify the following as addition and condensation polymers:

Terylene, Bakelite, Polyvinyl chloride, Polythene

XII / Chemistry Page 2 of 2