Chapter 15

Polymers

(Assertion and Reason Questions)

Directions: These questions consist of two statements, each printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses.

(a) If both Assertion and Reason are correct and the Reason is a correct explanation of the Assertion.

(b) If both Assertion and Reason are correct but Reason is not a correct explanation of the Assertion.

(c) If the Assertion is correct but Reason is incorrect.

(d) If both the Assertion and Reason are incorrect.

Q.1. Assertion: Olefinic monomers undergo addition polymerisation.
Reason: Polymerisation of vinylchloride is initiated by peroxides/ persulphates.

Q.2. Assertion: Teflon has high thermal stability and chemical inertness.
Reason: Teflon is a thermoplastic.

Q.3. Assertion: Bakelite is a thermosetting polymer.
Reason: Bakelite can be melted again and again without any change.

Q.4. Assertion: In vulcanisation of rubber, sulphur cross links are introduced.
Reason: Vulcanisation is a free radical initiated chain reaction.

Q.5. Assertion: The time of vulcanisation and temperature is increased by adding accelerators.
Reason: By vulcanising, a material of high tensile strength can be obtained.

Q.6. Assertion: Most of the Synthetic polymers are not biodegradable.
Reason: Polymerisation process induces toxic character in organic molecules.

-x-x-x-

ANSWER KEY

Q.1 : (a)

Q.2 : (b) Due to the presence of strong C–F bonds, teflon has high thermal stability and chemical inertness.

Q.3 : (c) Bakelite can be heated only once.

Q.4 : (b) Vulcanisation is a process of treating natural rubber with sulphur or some compounds of sulphur under heat so as to modify its properties. This cross-linking give mechanical strength to the rubber.

Q.5 : (d) The time of vulcanisation is reduced by adding accelerators and activators.

Q.6 : (d)