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**B. TECH**  
**(SEM-V) THEORY EXAMINATION 2020-21**  
**PLASTIC MATERIALS-II**

**Time: 3 Hours****Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 10 = 20**

a.	Name two polyamides used in textile industries.
b.	Write two examples of copolymers of styrene-based polymers.
c.	Write two trade names of PET and PC.
d.	Define curing with examples.
e.	Write down differences between Thermoplastic polyester and unsaturated polyester.
f.	By which specialty plastics are O rings & valves / un sintered tape and seals made of?
g.	Polyester with PVC and Ethylene copolymer with PVC were used as ----- and -----.
h.	Write down the difference between saturated and unsaturated polyesters.
i.	What is the maximum and minimum working temperature for silicon polymer?
j.	Generally, in Suspension and Emulsion polymerization manufacturing methods the final products are in the form of ----- and -----.

**SECTION B****2. Attempt any three of the following:****10 x 3 = 30**

a.	Write five important properties of POM with five important applications.
b.	Write the differences between types of PF resins (at least five).
c.	Draw the chemical structures for PEEK, PEI, PES, PPO.
d.	Discuss styrene elastomers or Polyamine elastomers with special reference to properties and applications point wise.
e.	Write about reinforcement of UHMWPE.

**SECTION C****3. Attempt any one part of the following:****10 x 1 = 10**

a.	What is terylene? Describe its manufacturing process.
b.	Discuss the manufacturing of PC by Ester exchange method.

**4. Attempt any one part of the following:****10 x 1 = 10**

a.	Briefly write the manufacturing process of unsaturated polyesters.
b.	Describe with suitable flow diagram, the industrial manufacturing of MF resin.

**5. Attempt any one part of the following:****10 x 1 = 10**

a.	Name some fluorine containing polymers and give their molecular structures. Also describe their specific characteristics related to their molecular structures.
b.	Describe briefly with the help of flow diagram the manufacturing of PTFE.

**6. Attempt any one part of the following:****10 x 1 = 10**

a.	What are the important copolymers of styrene? Write their important properties and applications.
b.	Write short note on TPU

**7. Attempt any one part of the following:****10 x 1 = 10**

a.	Define foam and also discuss different types of polymeric foams.
b.	Discuss metallocene polymers and their significant properties.