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4th Sem. / Plastic Engg.

Subject : Plastic Materials & Properties - II / Engg. & Spl. Polymer

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.1 Name two elastomers.

Q.2 Define Thermosets.

Q.3 Expand PPS.

Q.4 Write down the structure of methyl methacrylate.

Q.5 Name two binders used in reinforced plastics.

Q.6 Define Mica.

Q.7 Define nano particles.

Q.8 Write down formula of Silica.

Q.9 Expand ABS.

Q.10 Name two Biopolymers.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Explain the reaction for the preparation of PEEK and state its three properties and three uses.

Q.34 Explain the preparations of graphite fiber and state its four properties.

Q.35 Compare the properties and applications of PP-EPDM with individual PP polymer.

Q.36 Define conducting polymer and in detail explain its three properties.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Q.11 List four uses of polyacetals

Q.12 Expand PPO and LCP.

Q.13 Write down the structure of polysulphones.

Q.14 List two uses of Poly Phenylene sulphide.

Q.15 Explain principle of composite reinforcement.

Q.16 Define Talc.

Q.17 Define Clay.

Q.18 State the role of coupling agents in reinforced plastics.

Q.19 With two examples, define alloys.

Q.20 With one example, define polymer blend.

Q.21 State two applications of Biopolymers.

Q.22 Name two nano polymeric materials.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 Expand PTFE and state its three properties and one application.

Q.24 Define polyacrylates and state its four uses.

Q.25 Write structure of polyether sulphones and state its two properties.

Q.26 Explain preparation of 'Boron Fibers'.

Q.27 List two properties and three uses of fiber reinforced polyesters.

Q.28 Explain the effect of reinforcement on the strength of plastics.

Q.29 Explain compatability of polymer blends and its two properties.

Q.30 Explain interpenetrating polymer network.

Q.31 Define 'Polymer concrete' and its significance.

Q.32 Define opto-electronic plastics with three applications.