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10NT56

Fifth Semester B.E. Degree Examination, Dec.2015/Jan.2016
Materials and Surface Coatings

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. What are the types of polyethylene? Explain properties of any two. (12 Marks)
 b. Discuss different applications of poly-propylene in industries. (08 Marks)
- 2 a. Explain different physical properties of i) Polyvinyl chloride and ii) Polyvinyl alcohol. (10 Marks)
 b. What are Platisols? Explain. (05 Marks)
 c. Mention different applications of polystyrene. (05 Marks)
- 3 a. Discuss properties and applications of following
 i) Poly acrylonitrile ii) Polyethylene terephthalate. (12 Marks)
 b. What are Copolymers? Write a note on polycarbonates. (08 Marks)
- 4 a. Discuss in detail the role of polytetrafluoroethylene in different field. (08 Marks)
 b. What are Biodegradable polymers? Explain in brief properties and applications of thermoplastic polyurethane. (12 Marks)

PART – B

- 5 a. What is Thermoplastic? Discuss the synthesis and applications of following :
 i) PPS ii) Polysulphone. (12 Marks)
 b. Define Biopolymer. Write a note on collagen. (08 Marks)
- 6 a. Explain in brief the functions of adhesives. (06 Marks)
 b. What are the advantages and disadvantages of adhesive bonding? (08 Marks)
 c. Write a note on mechanical theory of adhesion. (06 Marks)
- 7 a. Mention different types of adhesives. Explain any two with example. (10 Marks)
 b. Discuss the role of adhesives in following industries :
 i) Automobile industry ii) Electrical industry. (10 Marks)
- 8 a. Explain the following :
 i) Extenders ii) Driers iii) Lacquers. (06 Marks)
 b. Write a note on :
 i) Crylic paints ii) Epoxy coatings. (10 Marks)
 c. Discuss the role of vinyl resin as a coating material. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.