

USN

--	--	--	--	--	--	--	--	--	--

10NT56

Fifth Semester B.E. Degree Examination, Dec.2016/Jan.2017
Materials and Surface Coating

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer FIVE full questions, selecting at least TWO questions from each part.
2. Draw the diagram wherever necessary.

PART – A

- 1 a. Describe the synthesis process, properties and applications of low density polyethylene. (10 Marks)
b. Write a short note on cross linked polyethylene. (05 Marks)
c. Explain briefly about poly propylene polymer. (05 Marks)
- 2 a. How the classification of poly ethylene will be made and explain any two classification briefly. (10 Marks)
b. Discuss properties and applications of ultra-high molecular weight high density polyethylene and chlorinated poly ethylene. (10 Marks)
- 3 a. Write short notes on poly carbonates and thermoplastic polyurethane. (10 Marks)
b. Explain the properties and applications of polymethyl methacrylate and polyacrylonitrile. (10 Marks)
- 4 a. Explain polytetrafluoro ethylene and poly chloro fluoro ethylene with their properties and applications. (10 Marks)
b. Write a short note on co-polymers and biodegradable polymers. (10 Marks)

PART – B

- 5 a. Explain the properties and applications of high performance thermoplastic material polysulphone. (10 Marks)
b. Explain briefly about polyimide and bio polymer cotton wool. (10 Marks)
- 6 a. What are adhesives? Explain the functions of adhesives. Mention the advantages and disadvantages of adhesive bonding. (10 Marks)
b. Explain adsorption theory and weak boundary layer theory. (10 Marks)
- 7 a. Explain cyanoacrylate adhesives. Mention the advantages and applications of cyanoacrylate adhesive. (10 Marks)
b. Write a short note on pressure-sensitive adhesives and RTV silicone adhesives. (10 Marks)
- 8 a. What is can coating? Mention different types of can coating and requirements for good can coating. (10 Marks)
b. Explain the preparation of pigment dispersion process with neat diagram. (10 Marks)

* * * * *

1. Do not write your answers on the blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.