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10NT844

Eighth Semester B.E. Degree Examination, June/July 2018
Polymer Technology

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Explain melt processing of thermoplastics as well as any one type of classified processes in detail. (10 Marks)
b. Write a note on compounding of polymer for engineering applications and stress-strain behavior. (10 Marks)
- 2 a. Explain single screw and double screw plasticizing extruder zones in extrusion in detail. (10 Marks)
b. Explain polymer characteristics for injection moulding and reciprocating screw injection moulding. (10 Marks)
- 3 a. Write short notes on single impression mould and multi impression moulds. (08 Marks)
b. Write a short notes on sandwich moulding, injection blow moulding and reaction injection moulding. (12 Marks)
- 4 a. With a neat schematic diagram explain principles and working of transfer moulding in detail. (10 Marks)
b. Explain the principles and working of compression moulding with neat scheme. (10 Marks)

PART – B

- 5 a. Explain the principles and operations of calendaring process. (10 Marks)
b. Derive the equation for pressure and film thickness required for rollers. (10 Marks)
- 6 a. Mention the different steps involved in thermoforming process and explain in detail. (10 Marks)
b. Explain advantages and disadvantages of thermoforming in detail. (10 Marks)
- 7 a. Explain the molding criteria, advantages and disadvantages of rotational moulding. (10 Marks)
b. Explain the principles and operations involved in rotational moulding with schematic diagram. (10 Marks)
- 8 a. Define dielectric strength. Explain briefly about dielectric strength measurements and also mention the factors affecting the test results. (10 Marks)
b. Define thermal conductivity. Explain the guarded hot plate method for finding thermal conductivity of a plastic. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.