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GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING - SEMESTER - III • EXAMINATION - WINTER 2015

Subject Code: 332305 Date: 11 -12 -2015 Subject Name: INJECTION MOULDING TECHNOLOGY Time: 10:30 AM TO 01:00 PM Total Marks: 70 **Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 4. Each question carry equal marks (14 marks) Compare hydraulic and toggle clamping mechanisms. 07 0.1 (a) Explain methods of screw and barrel heating. (b) 07 07 **Q.2** (a) Draw line diagram of an injection molding machine and label different part. List various materials use for injection molding process. Which are the factors 07 (b) to be considered for material selection? Write down various applications of injection molding in construction and (b) 07 electrical applications. **Q.3** (a) Explain injection molding process steps. 07 List out various post molding operations and explain any one with neat sketch. 07 (b) 0.3 (a) List various injection molding process variables and explain their effect on 07 moldings. (b) Explain maintenance procedure of an injection molding machine. 07 **Q.4** Explain working of cooling tower with neat sketch. 07 (a) Explain the working of heat exchanger with neat sketch. (b) 07 State various types of hopper loader. Explain vacuum feed hopper loader. **Q.4** 07 (a) Explain start-up and shut-down procedure of an injection machine. (b) 07 **Q.5** Explain Gas Injection molding process and state advantages of it. 07 (a) Explain metal injection molding process and state applications of it. (b) 07 OR 0.5 List various blowing agents. Explain foam molding process steps. **07** (a)

Explain various steps involved in Reaction Injection Molding process.

(b)

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