

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

Term-End Examination

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December, 2016

BME-059 : MANUFACTURING PROCESS – III

Time : 2 hours

Maximum Marks : 70

Note : Answer any five questions. All questions carry equal marks.

1. (a) Write about the commonly used Milling cutters with neat sketches. 7
- (b) Write about Horizontal Milling machine and Universal Milling machine. Write the differences between them. 7
2. (a) Briefly describe the various types of work holding devices used on Milling machines. 7
- (b) Explain with neat sketch of Vertical Push Type Broaching machine. 7

3. (a) Describe in brief the Drop forging process. 7
- (b) Explain the process of Cupping and Bending. 7
4. (a) Describe six degrees of freedom and principle of location. 7
- (b) Explain different elements of Jigs and Fixtures. 7
5. (a) Describe the advantages and disadvantages of EDM. 7
- (b) Discuss in detail about the Tool materials used in EDM. 7
6. (a) Briefly explain the different types of Gear Finishing processes. 7
- (b) Describe different methods of manufacturing gears. 7
7. (a) Explain how plastic components are manufactured by Injection Moulding process. 7
- (b) Write about Thermoplastics and their application. 7

8. Write short notes on the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Milling Cutters
 - (b) Types of Broaching Tools
 - (c) Drill Bushes in Drill Jigs
 - (d) Bending Tools for Press Brakes
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