

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

Term-End Examination

December, 2017

00762

BME-059 : MANUFACTURING PROCESS – III

Time : 2 hours

Maximum Marks : 70

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

1. (a) Give a machining operation that can be performed on a centre lathe. 7
- (b) What are the differences between a capstan lathe and a turret lathe ? 7
2. (a) Explain the working of a Vertical Milling Machine and give suitable sketches. 7
- (b) What are the criteria for selecting cutting fluids ? Explain briefly. 7
3. (a) Explain the working of the hydraulic quick return mechanism of a shaper. 7
- (b) What are the similarities and dissimilarities between a planer and a shaper ? 7

4. (a) What is a Twist Drill ? Explain with a neat diagram, the various parts and angles of a twist drill. 7
- (b) Describe with a neat and labelled diagram, the working of a horizontal boring machine. 7
5. (a) Why are fixtures necessary in broaching ? Explain with example. 7
- (b) What is the difference between Jig and Fixture ? 7
6. (a) Explain the working principle of an injection moulding machine with a labelled diagram. 7
- (b) What are the advantages of the injection moulding process over the compression moulding process ? 7

7. Write short notes on any **two** of the following :

$2 \times 7 = 14$

- (a) Thermoplastic and Thermosetting Plastic
- (b) Laser Beam Machining
- (c) Gear Cutter
- (d) Diamond Grinding Wheel
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