

**DIPLOMA – VIEP – MECHANICAL
ENGINEERING (DMEVI)**

Term-End Examination

00334

June, 2016

BIME-033 : MACHINE TOOLS

Time : 2 hours

Maximum Marks : 70

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

1. (a) Explain briefly, with the help of a sketch, how Taper Turning is done using swivelling of compound rest method. 10
(b) Distinguish between single point and multi-point cutting tools. Give the names of different tools that are used on a lathe machine. 4
2. (a) Explain briefly the following lathe accessories : 10
(i) Driving Plate
(ii) Rests
(b) Briefly explain the commonly used lathe attachments. 4

3. (a) What is the fundamental difference between a planer and a shaper ? 7
- (b) Explain briefly with a neat sketch the principal parts of a 'Planer'. 7
4. (a) How is the size of a drilling machine specified ? Differentiate between drilling, boring and reaming. 4
- (b) Explain briefly, with sketches, the following drilling machine operations : 10
- (i) Reaming
- (ii) Tapping
- (iii) Boring
- (iv) Trepanning
5. Explain briefly, with neat sketches, the following milling operations : 14
- (a) Face milling
- (b) Gang milling
- (c) Form milling
- (d) Straddle milling
- (e) Saw milling
6. How are milling machines broadly classified ? Draw a block diagram of a horizontal milling machine and explain briefly its various parts. 14

7. (a) Explain with a neat sketch a plane cylindrical grinder. 7
- (b) What are the advantages of grinding process over other cutting processes ? Enumerate the special features of grinding process. 7
8. (a) Explain briefly the 'Lapping process'. Give the examples of lapping work. 7
- (b) Discuss the advantages of CNC machine over conventional machines. 7
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