

**DIPLOMA VIEP MECHANICAL ENGINEERING
(DMEVI)**

Term-End Examination

June, 2013

BIME-033 : MACHINES TOOLS

Time : 2 hours

Maximum Marks : 70

*Note : Answer **any five** questions. All the questions are to be answered in English language only.*

1. (a) Draw a block diagram of an engine Lathe. 7
Briefly explain its parts.
- (b) What are mandrels and why are they 7
used ? Explain their use with suitable
example.
2. (a) Write the difference between Turret and 7
Capstan Lathe.
- (b) How do you classify the different types of 7
drills ?
3. (a) Explain the thread cutting operation on 7
lathe.
- (b) Describe the different types of reamers in 7
brief.

4. (a) Discuss the different types of Milling operations in brief. 7
- (b) Discuss the problems faced in drilling operation, with their causes and possible remedies. 7
5. (a) Sketch and describe the indexing head used for gear cutting in milling machine. 7
- (b) How is milling machine specified ? Briefly explain. 7
6. (a) Distinguish between Buffing and Burnishing. 7
- (b) How is the performance of grinding wheel affected by the following ? 7
- (i) Grinding wheel speed
- (ii) Transverse speed
7. (a) Explain with a neat sketch the operation and need for a Clapper Box in a mechanical shaper. 7
- (b) Explain the advantages and limitations of numerical control of machine tools. 7

8. Write short notes on **any four** of the following :

3½x4=14

- (a) Lathe tools
 - (b) Quick Return Mechanism
 - (c) Gang milling
 - (d) Compare the shaper with planer in terms of the operation
 - (e) Advantages of Broaching
 - (f) FMS
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