

**B.Tech. – VIEP – MECHANICAL ENGINEERING  
(BTMEVI)**

**Term-End Examination**

**00994 June, 2017**

**BIME-014 : PRODUCTION TECHNOLOGY – II**

*Time : 3 hours*

*Maximum Marks : 70*

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**Note :** Attempt any **five** questions. All questions carry equal marks. Use of scientific calculator is permitted.

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1. (a) Compare the merits and demerits of Turret and Capstan lathe. 7
- (b) List out the various methods of work holding devices used in a lathe machine. Explain any one method. 7
2. (a) What do you mean by continuous and discontinuous chips ? Under what conditions can you expect
  - (i) continuous chips ?
  - (ii) discontinuous chips ? 7
- (b) How can shapers be classified ? Explain the table feed mechanism with a simple sketch. 7

3. (a) What are the differences between a plain and a universal milling machine ? Name the common work holding devices used in milling machines. 7
- (b) Find the time required for one complete cut on a piece of work 350 mm long and of 50 mm diameter in a lathe machine. The cutting speed is 35 m per minute and the feed is 0.5 mm per revolution. 7
4. (a) Describe the three types of milling cutters according to the method of mounting the cutters. 7
- (b) Discuss the advantages and limitations of the broaching process. 7
5. (a) Explain the working of an external grinding machine with a neat sketch. 7
- (b) How is a grinding wheel selected for a particular job ? What do you mean by dressing and truing of grinding wheels ? 7
6. (a) What is NC part programming ? Describe the sequence of using NC words in a part program. 7
- (b) Briefly describe the various components of an NC machine. 7

7. (a) What do you mean by APT programming ?  
Describe the main features of APT programming. 7
- (b) Discuss the advantages of CNC machines over corresponding NC machines. 7
8. Write short notes on any **four** of the following :  $4 \times 3 \frac{1}{2} = 14$
- (a) Slab Milling
  - (b) Taper Turning
  - (c) Broaching Tools
  - (d) Gear Hobbing
  - (e) Milling Machine Indexing
  - (f) Slotted Line Quick Return Mechanism
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