

01853

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

**Term-End Examination**

**December, 2012**

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

*Time : 3 hours*

*Maximum Marks : 70*

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**Note:** Answer *any five* questions only. Assume suitable missing data, if any.

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1. (a) What type of work holding devices are generally used in a lathe ? Give the typical applications. 7
- (b) With the help of a suitable diagram, explain the working of Turret indexing mechanism used on Turrent and Capstan Lathe. 7
2. (a) Explain briefly the construction details of a radial drilling machine with figure. 7
- (b) What are boring tools ? Describe the solid forged boring tools. 7
3. (a) Explain the working and construction of a Crank's Quick return mechanism of shaper. 7
- (b) How does a 'Planer' differ from a 'shaper'. Explain. 7

4. (a) Sketch and describe the following milling operations. 7  
(i) Gear milling  
(ii) Straddle milling  
(b) Draw a schematic diagram of centre-less grinding machine and explain its parts. 7
5. (a) How do you classify the different types of Broaching machines ? Describe. 7  
(b) What are the advantages and disadvantages of 'Hobbing Process' as compared to other 'Generating Process'. 7
6. (a) List the various principle parts of a machining centre. Sketch any one of them and explain its working. 7  
(b) What are the advantages and disadvantages of using CNC machines ? Explain. 7
7. (a) What is 'NC Part Programming' ? Explain. 7  
(b) What are the common positioning control systems ? Briefly explain them. 7
8. Write short notes on *any four* of the following :  
(a) Eccentric turning 3½x4=14  
(b) Feed mechanism in planer  
(c) Sharpening of Broaches  
(d) Work holding devices in milling machine  
(e) Adaptive control system  
(f) Counter Boring and counter sinking
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