

01122

**DIPLOMA - VIEP - MECHANICAL  
ENGINEERING  
III SEM**

**Term-End Examination  
December, 2011**

**BME-059 : MANUFACTURING PROCESS - III**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** Answer *any seven* questions.

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1. (a) Explain the working of column and knee type milling machine with neat sketch. 5
- (b) What are the types of indexing methods ? 5  
Explain any one with neat sketch.
2. (a) Explain the following : 5
  - (i) Cutting speed
  - (ii) Feed
  - (iii) Depth of cut
  - (iv) Width of cut
- (b) Explain the working of horizontal Broaching machine with neat sketch. List out its advantages. 5

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|----|-----|---|---|
| 3. | (a) | Enumerate the various factors that need to be considered while selecting the cutting speed of broaching tool. | 5 |
|    | (b) | Explain the working of mechanical press with neat sketch.   | 5 |
| 4. | (a) | What is punch ? What are its uses ? Describe with a sketch the working of commonly used punches.              | 5 |
|    | (b) | What is purpose of clamping ? Explain the various methods of clamping.  | 5 |
| 5. | (a) | What are the types of drilling jigs ? Explain any one with neat sketch.                                       | 5 |
|    | (b) | What are the types of the milling fixtures ? Explain with neat sketch.  | 5 |
| 6. | (a) | Explain the process of Electro Chemical Machining (ECM) with neat sketch and state its application.           | 5 |
|    | (b) | Explain the working principle of Laser beam machining. What are its advantages and disadvantages ?            | 5 |
| 7. | (a) | Explain the working principle of ultrasonic machining with neat sketch and state its applications.            | 5 |
|    | (b) | Describe the process of gear generation on a milling machine.   | 5 |

8. (a) Explain the working of gear hobbing machine with neat sketch. 5
- (b) Explain the working principle of injection moulding machine with neat sketch. 5
9. (a) Compare the injection moulding process with compression moulding process. 5
- (b) What are the Industrial application of plastics ? Explain with suitable examples. 5
10. Write short notes on *any two* of the following : 5+5
- (a) Index plate
- (b) Die clearance
- (c) High speed press
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