

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

Term-End Examination

December, 2016

00062

BME-057 : CNC MACHINES

Time : 2 hours

Maximum Marks : 70

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

1. (a) Discuss in brief Programmable Automation and Numerical Control. 7
- (b) Explain different features of NC machine tools. 7
2. (a) Briefly describe the Part program with an example. 7
- (b) Explain Feedback Devices. 7
3. (a) Describe the Identification of Axes with reference to vertical machining centre (draw the skeleton diagram). 7
- (b) Explain APT (Automatically Programmed Tools) language structure. 7

4. (a) Discuss the concept of CNC machines and how they are different from NC machines. 7
- (b) Explain briefly about various elements of CNC machines. 7
5. (a) Describe the 'BLOCK' of Information with an example. 7
- (b) Explain Spindle function and Feed function with suitable examples. 7
6. (a) Discuss the Do Loop with suitable example. 7
- (b) Explain the classification of cutting tools used on CNC machines. 7
7. Write short notes on any *two* of the following : 7+7
- (a) Work Holding Devices for CNC Machines
- (b) Advantages of Numerical Control Manufacturing
- (c) Computer Languages for NC Machines
- (d) Automatic Tool Changer
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