

**DIPLOMA IN MECHANICAL ENGINEERING  
(DME)**

00572

**Term-End Examination**

**June, 2019**

**BME-057 : CNC MACHINES**

*Time : 2 hours*

*Maximum Marks : 70*

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

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1. (a) (i) Write the need of programmable automation.  
(ii) What are the basic components of NC system ? 5
- (b) What are the features of NC system ? 5
2. (a) Describe the part program with an example. 5
- (b) Explain different control systems for NC-machines. 5

3. (a) Explain Automatically Programmed Tools (APT) language structure. 5
- (b) What are the environmental controls for CNC machines? 5
4. (a) Describe Rapid Positioning with a suitable diagram. 5
- (b) Write the differences between NC and CNC machines. 5
5. (a) Explain the working of DNC machines with a neat sketch. 5
- (b) Describe the 'BLOCK' of information with suitable example. 5
6. (a) Write a part program for 3-stepped round bar with suitable dimensions, to be machined on CNC lathe. 5
- (b) Brief about 'Do Loop' with an example. 5
7. (a) Explain Preset tools with neat diagram. 5
- (b) Brief about work holding devices for CNC machines. 5

8. (a) Write about tape programming format in CNC machines. 5
- (b) Explain the design features of cutting tools for CNC machines. 5
9. Write short notes on the following :  $2 \times 5 = 10$
- (a) Feedback Devices
- (b) Cutting Tools for NC Machines
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