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BME-057

DIPLOMA IN MECHANICAL ENGINEERING (DME)

12300

Term-End Examination

June, 2013

BME-057 : CNC MACHINES

Time : 2 hours *Maximum Marks : 70*

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

1. (a) Explain the types of NC systems. 4
   (b) Describe the NC-coordinate system for milling and drilling with neat sketch. 6

2. (a) List down the various parts that are suitable for manufacturing on CNC machines ? 5
   (b) Explain briefly the parts of a CNC machine. 5

3. (a) Explain Driving System of a NC machine. 4
   (b) What is encoder ? Explain Rotary encoder with neat sketch. 6

4. (a) Discuss briefly the types of Part - Programming. 5
   (b) List down the Advantages and Disadvantages of CNC machines. 5

5. (a) Describe with diagram about Tool-offset determination in CNC machines. 5

(b) Explain Semi-Qualified Tooling for CNC machines. 5

6. (a) Write different codes used in programming CNC machines and Explain functions of G - codes. 6

(b) Explain Do-loops with example. 4

7. (a) Explain the features of work holding - devices for CNC mcahines. 5

(b) Briefly explain the following : 5

(i) Fixed cycle/canned cycle

(ii) Deep Drilling

8. (a) Discuss different programming formats. 5

(b) Explain Part Programming with suitable example. 5

9. (a) Explain worksetting and offset with examples. 4

(b) Explain how Cutting Tools are classified ? 6

10. Write short notes on *any two* of the following : 5+5

(a) Rapid Positioning

(b) Spindle function and Tool function

(c) Programmable logic controller