CBCS Scheme

USN ☐☐☐☐☐☐☐☐☐☐ 16MAR/IAR23

Second Semester M.Tech. Degree Examination, June/July 2017
Computer Control of Manufacturing System

Time: 3 hrs. Max. Marks: 80

Note: *Answer FIVE full questions, choosing*
ONE full question from each module.

Module-1

1 a. Explain briefly types of management systems. (08 Marks)
  b. Define CIM. List out benefits of CIM systems. (08 Marks)

OR

2 a. What is NC system? Classify and explain briefly types of NC system. (08 Marks)
  b. Explain with figure incremental and absolute system. (08 Marks)

Module-2

3 a. Explain with block diagram open loop and closed loop system, (08 Marks)
  b. What is driving system? Explain DC and AC servo motor. (08 Marks)

OR

4 a. Explain design considerations of CNC machines for improving machining accuracy.
   (08 Marks)
  b. Classify and explain slideways. List out the properties for a good slideways. (08 Marks)

Module-3

5 a. Explain the methods of manual and computer aided part programming. (08 Marks)
  b. What is the function of G and M codes? Write the functions associated with the following
   G .. and M code cost FANUC controllers :
   i) G21 ii) G32 iii) G01 iv) M05 v) M08 vi) M99. (08 Marks)

OR

6 a. Define DNC. With schematic diagram explain components of DNC. (08 Marks)
  b. List out advantages and disadvantages of CNC machines. (08 Marks)

Module-4

7 a. What is adaptive control system? explain the two types of adaptive control system of
   machine tool. (08 Marks)
  b. Explain benefits of adaptive control machinery. (08 Marks)

OR

8 a. What is robot drive system? Classify and explain robot drive system. (08 Marks)
  b. What is robotic sensors? Explain briefly different types of sensors used in robotics.
   (08 Marks)

Module-5

9 a. What is computer aided process planning? Explain briefly any two basic approaches to
   CAPP. (08 Marks)
  b. Explain with schematic diagram shop floor control. (08 Marks)

OR

10 a. What is the automatic data collection system? List out and explain basic elements in data
    collection system. (08 Marks)
  b. Explain with schematic diagram production planning and control system. (08 Marks)

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