CBCS SCHEME

USN | | | | | | | | | | |

20MCM13

First Semester M.Tech. Degree Examination, Jan./Feb. 2021
Computer Integrated Manufacturing System

Time: 3 hrs. Max. Marks: 100

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

Module-1

1 a. Explain the types of manufacturing system. **(10 Marks)**

b. List and explain CIMS data file and system report. **(10 Marks)**

OR

2 Explain the concept of :

a. Point to point control

b. Contouring control

c. Incremental system

d. Absolute system. **(20 Marks)**

Module-2

3 a. Explain the following feedback devices : i) Encoder ii) Resolver. **(10 Marks)**

b. Explain the following feed drives. i) Servomotors ii) Steppermotor. **(10 Marks)**

OR

4 a. Explain briefly the components of CNC system. **(12 Marks)**

b. With a block diagram, explain the architecture of a CNC machine. **(08 Marks)**

Module-3

5 a. Explain the concept of automatic tool charges. **(10 Marks)**

b. Explain the concept of work holding devices. **(10 Marks)**

OR

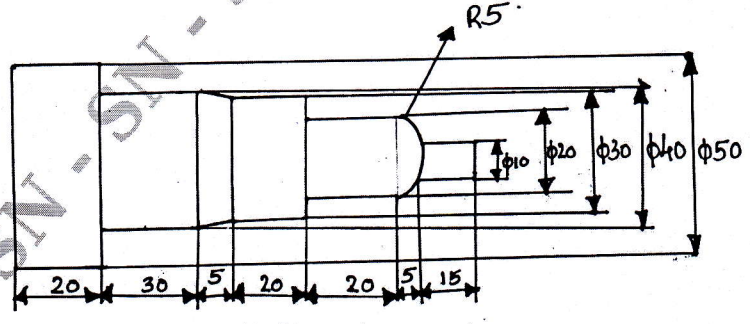
6 a. Explain the concept of recirculating ball screw and mention its advantages. **(12 Marks)**

b. Explain the concept of slide ways. **(08 Marks)**

Module-4

7 a. List out and explain some of the important NC part programming languages. **(12 Marks)**

b. Write a part program for machining the profile shown in the Fig.Q7(b).



All dimensions are in mm

Fig.Q7(b) **(08 Marks)**

OR

8 a. List out and explain the function of CNC. (10 Marks)
b. List out and explain the function of DNC. (10 Marks)

Module-5

9 a. List out and explain the benefit of adaptive control machining. (10 Marks)
b. List out and explain the types of adaptive control. (10 Marks)

OR

10 a. Explain the approaches to Computer Aided Process Planning (CAPP). (10 Marks)
b. Explain the concept of : i) Capacity planning ii) Shop floor control. (10 Marks)

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