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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E.

Branch: Industrial Engineering and Management

Course Code: 19IM4DCCIM

Course: Computers in Manufacturing

Semester: IV

Duration: 3 hrs.

Max Marks: 100

Date: 20.09.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a) With a help of a block diagram explain the application of Computers in design process.	10
	b) List out the advantages and disadvantages of CAD/CAM	10

UNIT - II

2	a) State the difference between wire frame and solid modeling	10
	b) Discuss the importance of 2D transformations Computer graphics in CAD system	10

UNIT - III

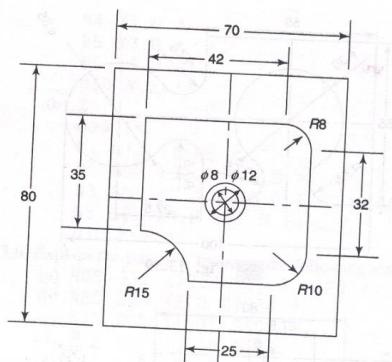
3	a) Explain the two types of Adaptive Control Systems in CNC Machines.	10
	b) Explain the working and benefits of an automatic tool changer?	10

OR

4	a) Explain open loop and closed loop control system in CNC machines with neat sketches.	10
	b) List the advantages and disadvantages of servo motors in CNC System	10

UNIT - IV

5	a) Write a manual part program for the component shown below(except drilling)	12
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Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

b) Explain differences between:

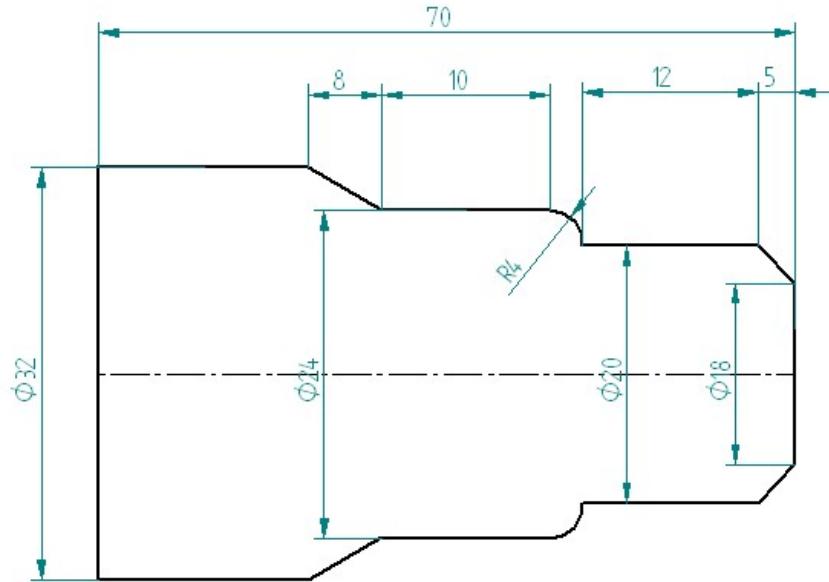
08

- i. Absolute and Incremental CNC systems
- ii. Tool radius and Tool length compensation

OR

6 a) Generate program for turning operation for the profile given below. Cutting tool: LH turning tool

12



b) Briefly explain different NC words required for NC part program.

08

UNIT - V

7 a) What is an End Effector? Explain the types of end effectors used in robots.

10

b) Differentiate between contact and noncontact sensors in robots with the help of examples

10
