



R20 Regulation

Subject code: 3P7CB

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

## B.Tech VII Semester Regular/Supplementary Examinations, December 2024

### CAD/CAM (MECHANICAL ENGINEERING)

Maximum Marks: 70

Date: 30.12.2024

Duration: 3 hours

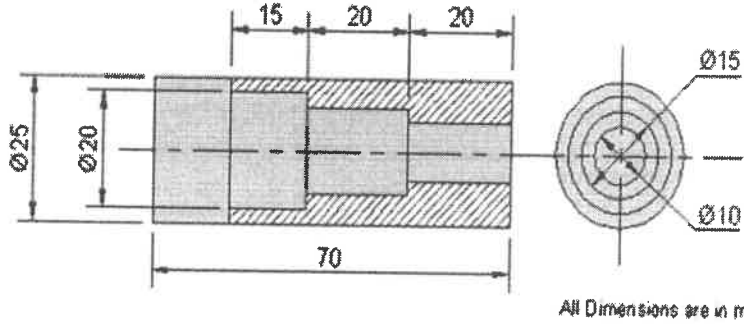
- Note:
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

#### Part-A

All the following questions carry equal marks		(10X2M=20 Marks)	CO	Bloom Tx
1	Define automation with suitable examples.		1	1
2	Write a short note on wire frame entities.		1	2
3	What is surface modeling?		2	1
4	What is B-spline surface?		2	1
5	What are the elements of NC system?		3	1
6	Give the importance of adaptive control system.		3	2
7	Write the merits of CAPP?		4	1
8	Discuss the benefits of MRP.		4	2
9	List out the types of FMS layouts.		5	2
10	State the advantages of CMM in manufacturing industry.		5	1

#### Part-B

Answer All the following questions.(5X10M=50Marks)			CO	Bloom Tx
11	Explain the storage of the computer system for CAD [10M]		1	2
OR				
12	A. Explain briefly on 3D wire frame modeling with suitable examples. [5M]		1	2
	B. Brief out on curve fitting techniques and their importance in detail. [5M]			3
13	A. Write a short note on blending functions with suitable examples. [5M]		2	3
	B. Explain parameterization of surface patch in detail with suitable examples. [5M]			4
OR				
14	Brief out on Bezier surface & B Spline and their importance in detail. [10M]		2	3
15	A. Explain NC part programming in detail with relevant examples. [5M]		3	4

	B.Summarize the merits and demerits of computer assisted part programming. [5M]		3
	OR		
16	A. Write a CNC Program for the given component with following dimensions. All dimensions are in mm. [10M]		
	 <p>All Dimensions are in mm</p>	3	5
17	A. Explain parts classification and coding in GT in detail. [5M] B. What are the details required for an effective process planning? Brief out in detail. [5M]	4	4 2
	OR		
18	A. Elaborate material resource planning in detail with suitable examples. [5M] B. Give the difference between CRP and ERP. [5M]	4	3 3
19	A. Explain the concept of automated inspection in detail with suitable examples. [5M] B. Discuss MRP in detail, and give its merits and demerits. [5M]	5	4 3
	OR		
20	A. Explain any 1 non contact type inspection in detail with a neat sketch. [5M] B. Discuss CIM system in detail with its merits and demerits. [5M]	5	2 3