Roll No											

PRESIDENCY UNIVERSITY
BENGALURU
SCHOOL OF ENGINEERING
END TERM EXAMINATION – AUGUST 2024

Semester : II SEM	**Date :14.08.2024**
Course Code :MEC 5011	**Time :9.30am -12.30pm**
Course Name : Design for Manufacture, Assembly and Environments	**Max Marks :100**
Program : M.tech PDD	**Weightage :50%**

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

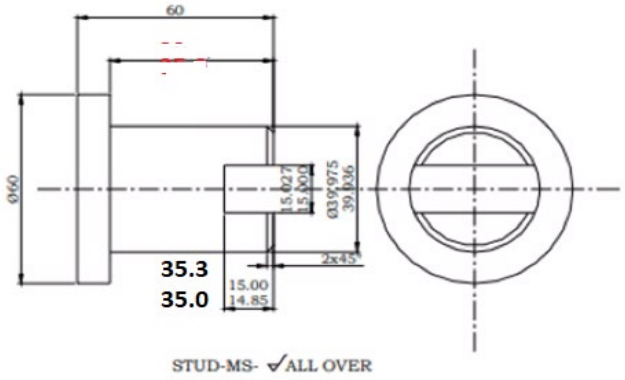
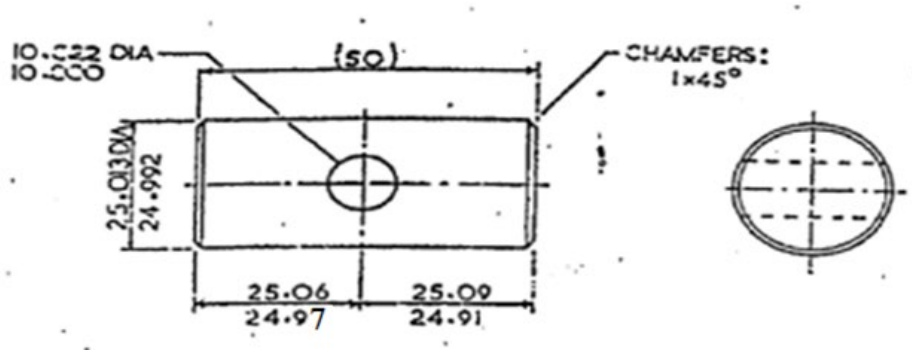
PART A			
	ANSWER ANY 4 QUESTIONS		**4Q X 5M=20M**
1	List steps of engineering design process. Explain any one design process	(CO 1)	[Knowledge]
2	Write changing datum procedure.	(CO1)	[Knowledge]
3	Write a note on standard twist drills.	(CO1)	[Knowledge]
4	Write a note on reduction of machined areas	CO 2)	[Knowledge]
5	Write a note on in-housing component	(CO 2)	[Knowledge]
6	Advantages & disadvantages of FSW process	(CO 3)	[Knowledge]

PART B			
	ANSWER ANY 5 QUESTIONS		**5Q X 10M=50M**
7	Write a note on chamfers and bevels and countersinks	(CO 3)	[Comprehension]
8	Design consideration in powder metallurgy	(CO 3)	[Comprehension]
9	Explain concurrent engineering?	CO 3)	[Comprehension]
10	Define parting line and identify the parting line for lever	(CO 3)	[Comprehension]
11	With a neat sketch explain parting line design in casting	(CO 3)	[Comprehension]

12	List the design guidelines for milling	(CO 3)	[Comprehension]
13	With a neat sketch explain any 2 design consideration in casting	(CO 3)	[Comprehension]

PART C

ANSWER ANY 2 QUESTIONS **2Q X 15M=30M**

14	The anchor Stud shown in **fig** is to be manufactured in batches of 100. 1. Prepare a suitable operation sequence layout for the stud. 2. Show the three possible datum faces for machining the 15mm wide groove and appropriate dimensional layout for each. 3. State the most desirable datum face and why  	(CO 4)	[Application]
15	For the following pin component two machining processes are involved a) Turning i.e. turn, face and chamfer b) Drilling i.e. drill and ream.  	(CO 4)	[Application]
16	Write a note on chamfers and bevels and countersinks	(CO 4)	[Application]