Register Number:……..

KUMARAGURU
college of technology
character is life

B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Fourth Semester

AUTOMOBILE ENGINEERING

U18AUI4204 : Machine Drawing

COURSE OUTCOMES

CO1: Interpret the conventional representation of components
CO2: Construct part drawings with required views and dimensions
CO3: Apply the knowledge of Limits, Fits and Tolerances in the drawings
CO4: Build part and assembly drawings according to BIS with Bill of Materials
CO5: Identify and draw the different types of Screwed Fastenings

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	What is machine drawing and why is it important in engineering design?	CO1	[K_2]
2.	What is the purpose of dimensioning in machine drawing?	CO1	[K_2]
3.	What is the purpose of a section view in machine drawing?	CO2	[K_2]
4.	Explain the difference between a revolved section and a removed section in machine drawing.	CO2	[K_3]
5.	What is a bill of materials and how is it represented in machine drawing?	CO3	[K_2]
6.	What are the different types of screw threads and how are they represented in machine drawing?	CO3	[K_2]
7.	What is the purpose of tolerancing in engineering design?	CO4	[K_1]
8.	Difference between hole basis system and shaft basis system?	CO4	[K_2]
9.	What is a surface finish symbol and how is it represented in machine drawing?	CO5	[K_1]
10.	What is a bearing and how is it represented in machine drawing?	CO5	[K_2]

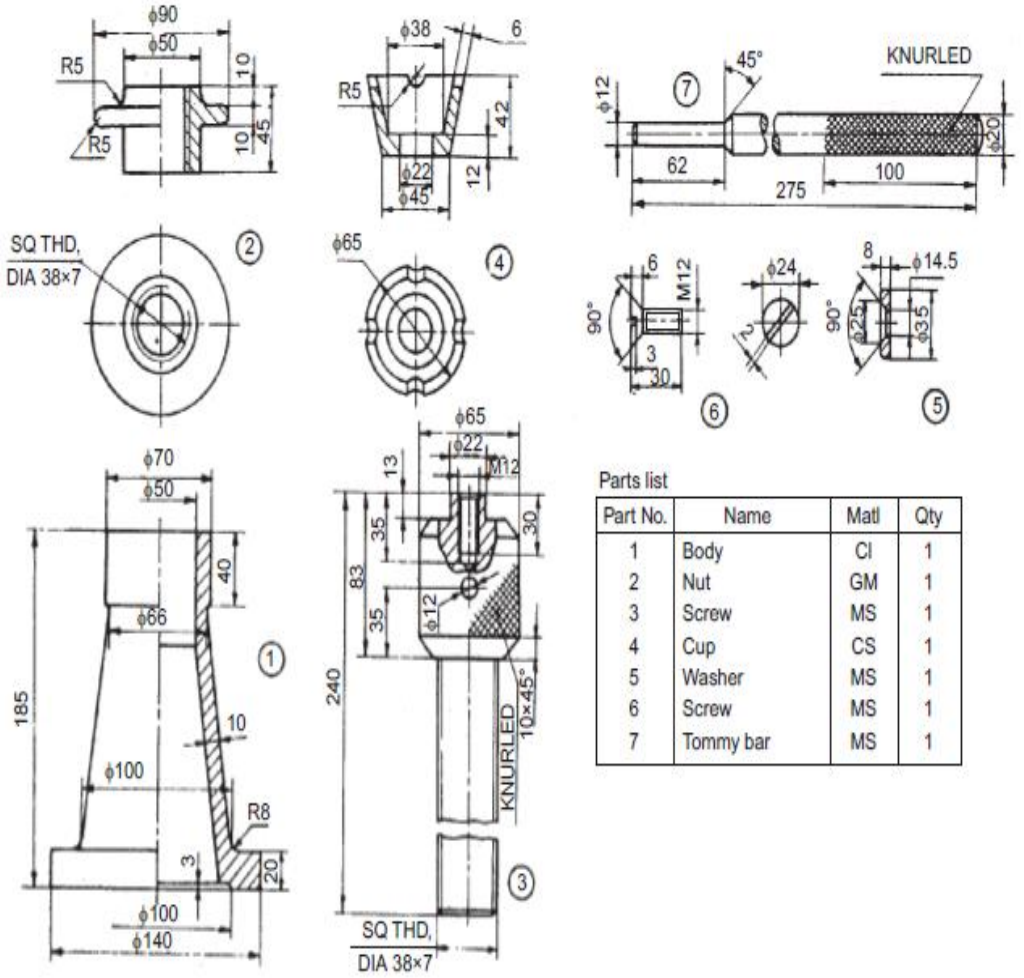
Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	Draw the sectional front view of a given figure 1. (Connecting rod)	CO2	[K_3]
12.	Draw the sectional top view of a given figure 1. (Connecting rod)	CO2	[K_3]
13.	Figure 2 shows the isometric view of a shaft support. Draw the sectional view from the front.	CO5	[K_3]

14. Figure 2 shows the isometric view of a shaft support. Draw the sectional view top view and RHS view. CO5 [K3]

15. A journal bearing consists of a bronze bush of diameter 100 mm fitted into a housing and a steel shaft of 50 mm diameter, running in the bush, with oil as lubricant. Determine the working dimensions of (a) bore of the housing, (b) bush and (c) shaft. Calculate the maximum and minimum interference or clearance. CO4 [K4]

16. Figure 3 shows the details of a Screw Jack. Assemble the parts and draw to a suitable scale of sectional view from the front. CO5 [K3]



Parts list

Part No.	Name	Matl	Qty
1	Body	CI	1
2	Nut	GM	1
3	Screw	MS	1
4	Cup	CS	1
5	Washer	MS	1
6	Screw	MS	1
7	Tommy bar	MS	1

Figure 3. **(Screw Jack)**

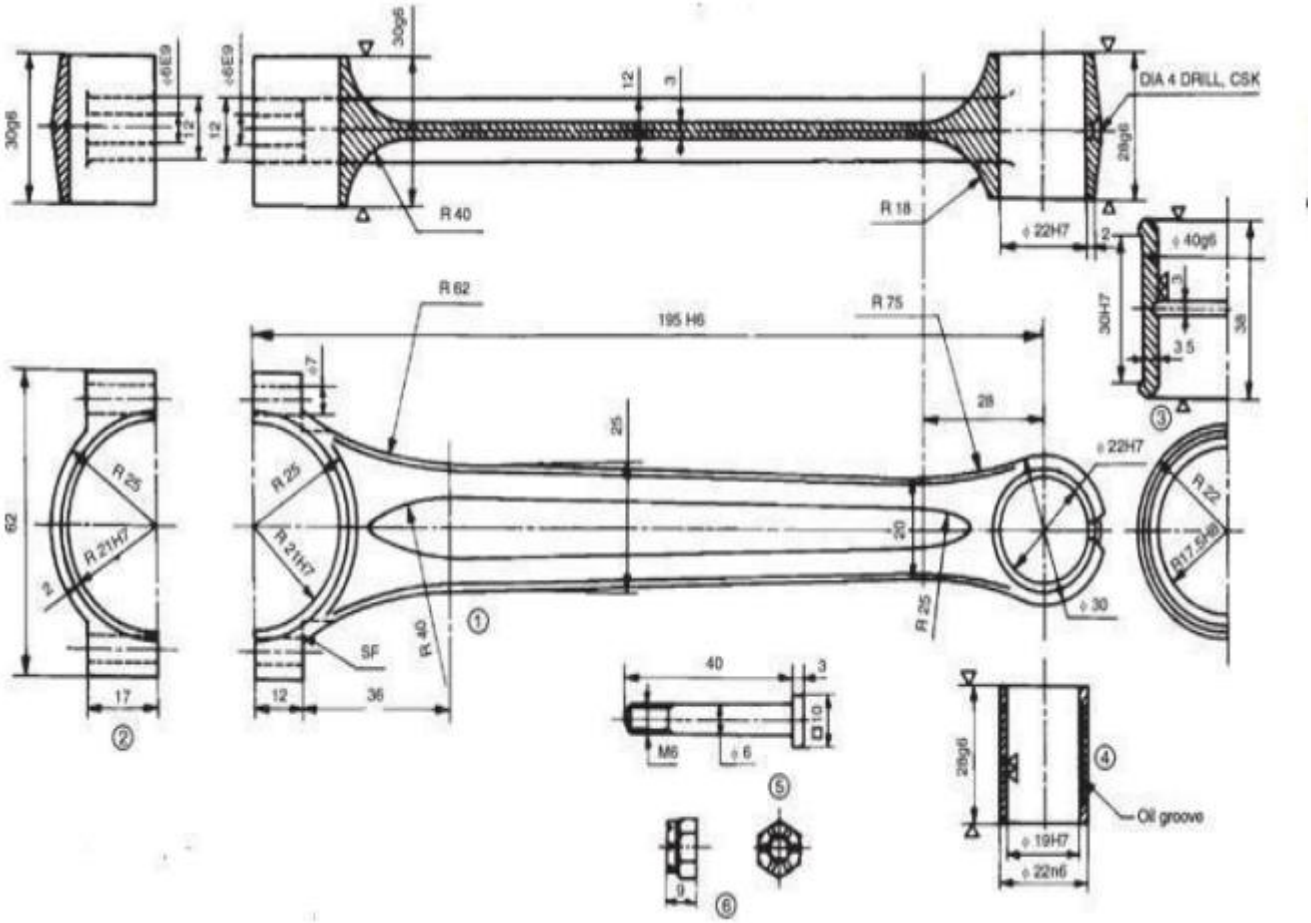


Figure 1. Connecting Rod

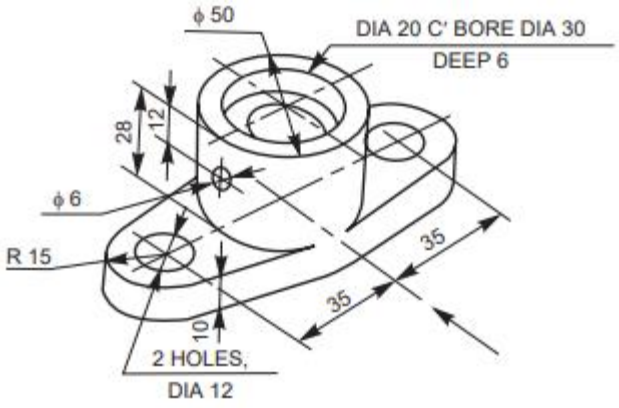


Figure 2. Shaft support

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