

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER– III (New) EXAMINATION – WINTER 2019****Subject Code: 2133405****Date: 5/12/2019****Subject Name: Manufacturing and Assembly Drawing****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

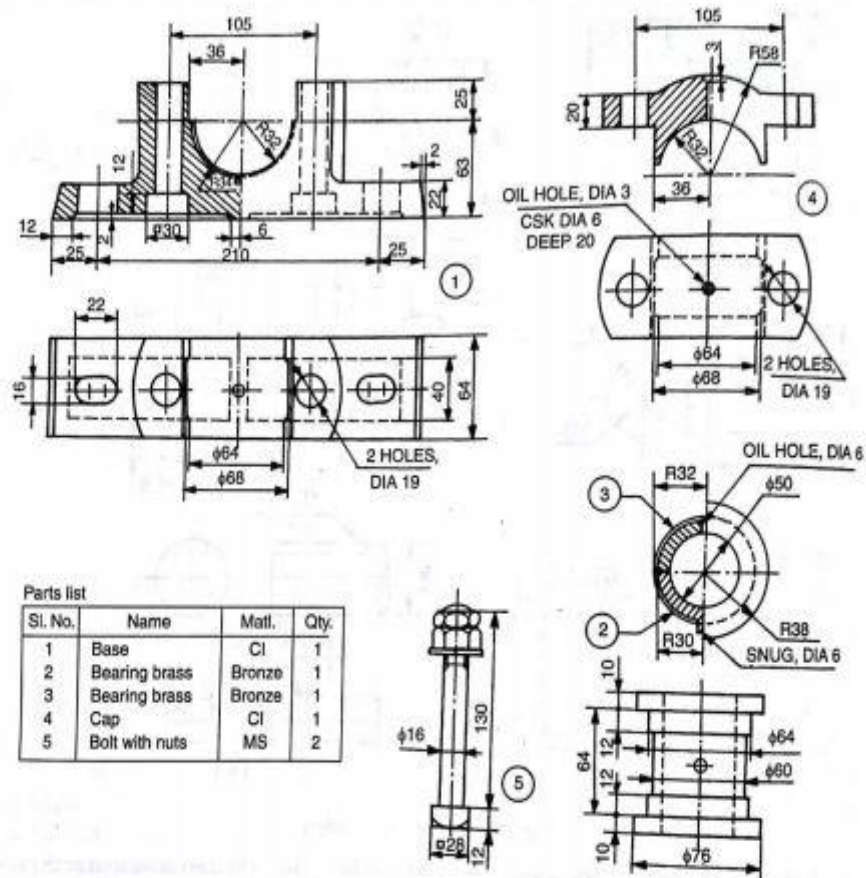
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
<b>Q.1</b>	(a) Differentiate between Lap Joint and Butt Joint	<b>03</b>
	(b) Differentiate between chain riveting and zig - zag riveting.	<b>04</b>
	(c) Draw the conventions for the following: i) Internal Thread ii) Chain Wheel iii) Conical Helical Spring with Rectangular section iv) Diamond Knurling v) Spiral Spring Unwound vi) Spur Gear vii) Leaf Spring with eye	<b>07</b>
<b>Q.2</b>	(a) What do you mean by Datum and Datum symbol.	<b>03</b>
	(b) Explain briefly about Geometrical tolerances.	<b>04</b>
	(c) Differentiate between Hole basis and Shaft basis system.	<b>07</b>
	<b>OR</b>	
	(c) Define fits and classify them with neat sketches.	<b>07</b>
<b>Q.3</b>	(a) Write short notes on Aluminum and its alloys.	<b>03</b>
	(b) Explain the types of tool steel grades.	<b>04</b>
	(c) Define Steel. Explain classification of steels	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Write short notes on copper and its alloys	<b>03</b>
	(b) List out the properties and applications of stainless steel.	<b>04</b>
	(c) Write the effects of adding alloying elements Cr, V, Mo & W to steels	<b>07</b>
<b>Q.4</b>	(a) What is the importance of surface roughness?	<b>03</b>
	(b) What are the different types of production drawing? Explain	<b>04</b>
	(c) Interpret the production drawing shown in fig1.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Define Production drawing of a component. What is the importance of Production drawing?	<b>03</b>
	(b) Sketch the symbols related to the common direction of lay.	<b>04</b>
	(c) Prepare the production drawing of the component 'Crank' from the fig 2	<b>07</b>
<b>Q.5</b>	(a) Explain Bill of Materials.	<b>03</b>
	(b) Figure out any eight GD & T symbols	<b>04</b>
	(c) Assemble the following parts of a given Plummer block of fig.3	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) What is an injection mould?	<b>03</b>
	(b) List out the standard parts of an Injection mould	<b>04</b>
	(c) Draw hand injection mould for a cup outside diameter 40 mm, overall height 5mm and wall thickness of 1.2 mm.	<b>07</b>



PART No	NAME	MATERIAL	QTY.
1	Crank	Forged steel	1
2	Crank pin	45C	1
3	Nut	MS	1
4	Washer	MS	1

Fig.3



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