

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

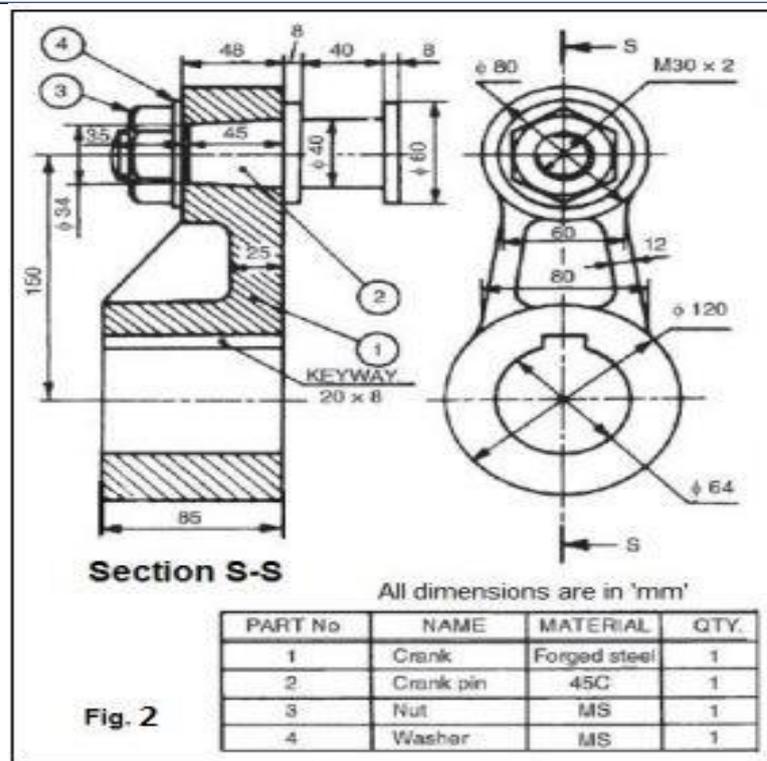
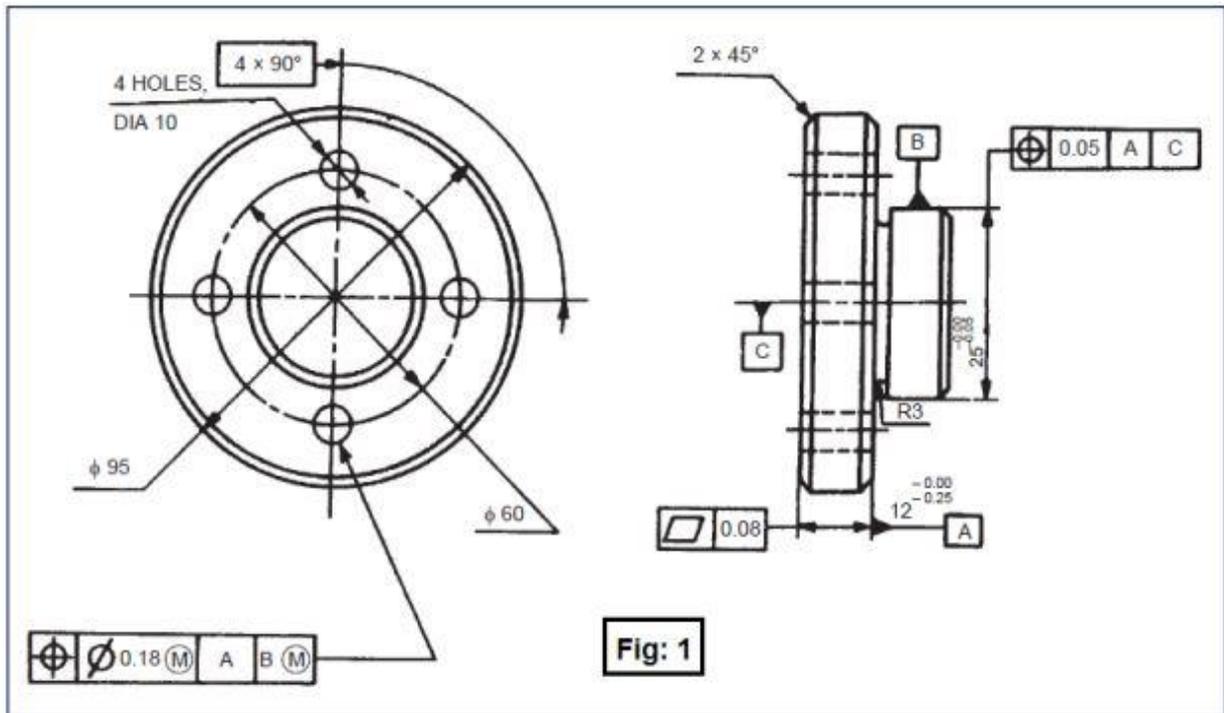


Fig.3

