

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – SUMMER • 2014

Subject Code: 133405**Date: 04-06-2014****Subject Name: Manufacturing & Assembly Drawing****Time: 02.30 pm - 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.

- Q.1 (a)** Draw the conventions for following machine elements: **07**
 i) Ratchet and pinion. ii) Holes on a linear pitch.
 iii) Helical Torsion Spring. iv) Disc spring stacked in parallel.
- (b)** Draw the symbols for the following welded joints: **07**
 i) Single J butt weld. ii) Fillet Weld. iii) Single bevel butt weld.
 iv) Plug weld. v) Seam weld. vi) Backing weld.
 vii) Square butt weld
- Q.2 (a)** Draw to 1:1 scale, the top view and sectional front view of a single riveted butt joint with double cover plates. The thickness of plates is 9 mm. Show at least three rivets in each row. Indicate all dimensions. Use snap head rivets. **07**
- (b)** Write the abbreviation for following: **07**
 i) Medium carbon steel. ii) Chromium Steel. iii) Aluminium Bronze.
 iv) Quantity. v) Reference. vi) Typical.
 vii) External.
- OR**
- (b)** Define fit. Classify fits. Briefly explain about them. **07**
- Q.3 (a)** Sketch the symbol for the following characteristics used for form tolerances. **07**
 i) Symmetry. ii) Straightness. iii) Perpendicularity.
 iv) Circularity. v) Coaxiality. vi) Parallelism.
 vii) Flatness.
- (b)** How to indicate geometrical tolerances on drawing. Explain with suitable examples. **07**
- OR**
- Q.3** Details of a strap joint with gib and cotter are shown in fig.1. Draw the front view in section of the assembled joint to 1:1 scale. **14**
- Q.4** Detail drawings of Half lap muff coupling are shown in fig.2. Draw to 1:1 scale front view in section of the completely assembled coupling. **14**
- OR**
- Q.4** Prepare the working drawing of the components Shave Piece and strap of the Split sheave eccentric shown in fig.3. **14**
- Q.5** Fig.4 shows the different parts of a screw jack. Prepare the front view in half section of the assembly. **14**
- OR**
- Q.5** Fig.5 shows the detail drawing of the different parts of a Knuckle Joint. Assemble the parts and draw the front view in section. **14**
