

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – WINTER 2013

Subject Code: 133405**Date: 07-12-2013****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)** Mention the abbreviations for the following: **07**
 i) Sketch, ii) Round, iii) Dimension, iv) Gun Metal,
 v) Cast Iron, vi) Low Carbon Steel, vii) Tolerance.
- (b)** Draw the Conventions for the following: **07**
 i) Radial Ribs ii) Diamond Knurling iii) Bearing
 iv) Helical Torsion Spring.
- Q.2 (a)** Define the following: **07**
 i) Basic Size, ii) Actual Size, iii) Tolerance, iv) Deviation.
- (b)** Write a short note on Basic Hole System and Basic Shaft System. **07**
- OR**
- (b)** Draw the sectional front view and top view of a double riveted lap joint **07**
 using rivets in chain arrangement. Thickness of plates is 9 mm. Show all
 the dimensions on drawing .Use snap head rivets.
- Q.3** Fig.1 shows the detail drawing of the different parts of a Cotter Joint **14**
 with Sleeve. Assemble all the parts and draw the front view in Section.
- OR**
- Q.3** Details of a flanged coupling (Unprotected type) are shown in Fig. 2. **14**
 Draw to 1:1 scale the front view with top half in section, showing all the
 parts assembled, with one of the shaft being projected by a distance of 5
 mm into the bore of the other flange.
- Q.4 (a)** Draw the symbols of the following: **07**
 i) Concentricity ii) Profile of any surface iii) Perpendicularity
 iv) Parallelism v) Angularity vi) Symmetry vii) Circularity.
- (b)** Draw the rivet heads of diameter 15 mm for the following: **07**
 i) Snap head for general work. ii) Flat counter sunk for general work.
 iii) Flat Head for general work.
- OR**
- Q.4** Fig. 3 shows the assembly drawing of a petrol engine connecting rod. **14**
 Prepare working drawings of CAP & Bearing Brass.
- Q.5** The details of the Lathe tail stock are shown in Fig.4. Draw the front **14**
 view in half section of the assembly.
- OR**
- Q.5** Draw the assembly drawing of a two plate injection mould (Two cavity) **14**
 for a cup (PP material) of outside diameter 40 mm, total height of 20
 mm and wall thickness 1.5 mm. Mention the BOM.



