

**FACULTY OF ENGINEERING**  
**B.E. 4/4 (M/P) First Semester (Suppl.) Examination, June/July 2011**  
**PRODUCTION DRAWING**

Time : Three Hours]

[Maximum Marks : 75

**Note :—** Answer ALL questions from Part A. Answer ALL questions from Part B.

**PART—A (Marks : 25)**

1. What is meant by the term Fit and how are Fits classified ?
2. Mention three uses of Geometrical tolerances.
3. Indicate the Roughness symbols and Roughness values for Roughness  $N_2$  and  $N_8$ .
4. What is meant by tolerance of Form and Position ?
5. Indicate the recommended tolerance grades for the following manufacturing processes :  
(a) Lapping (b) Grinding (c) Honing.
6. Calculate the maximum and minimum limits for both the Shaft and Hole for  $120 H_7/S_6$ .
7. Name the type of fit for the following with their application in industry  
(a)  $H_7/F_7$ , (b)  $H_8/C_{11}$ .
8. Differentiate between the Hole basis system and the Shaft basis system.
9. What are splines and where do they find application ?
10. What is a O-ring and how it is designated ?

**PART—B (Marks : 50)**

11. From the Assembly drawing of Revolving Centre of Lathe shown in Fig. 1 answer the following :
  - (a) Give the fits for the following :—
    - (i) Barrel (3) and Roller bearing (1)
    - (ii) Barrel (3) and Ball bearing (5)
    - (iii) Roller bearing (1) and Centre (4)
    - (iv) Ball bearing (5) and Centre (4).

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(b) Draw the following component drawings and give necessary tolerances and surface finish values for the following :—

(i) Barrel (3)

(ii) Roller bearing (1)

(iii) Ball bearing (5)

(iv) Centre (4)

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(c) Prepare the process sheet for the component Barrel (4), indicate work tool orientations drawing.

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