Code No. : 5202/S

FACULTY OF ENGINEERING

B.E. 4/4 (M/P) I Semester (Suppl.) Examination, June 2012

PRODUCTION DRAWING

Time : 3 Hours] [Max. Marks : 75

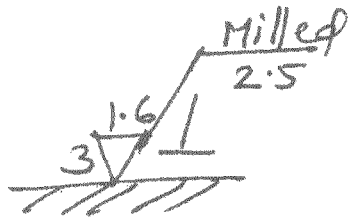
Note : *Answer **all** questions from Part – **A**, Answer **all** questions from Part – **B**.*

PART – A **(25 Marks)**

1. Sketch a typical industrial drawing sheet format and explain the relevance of each information.
2. Give conventional represention of cup spring and bearings.
3. What are elementary symbols used in welding ? Give any two types.
4. Give a graphical symbol used for "single-phase transformer with continuous voltage regulation".
5. Define upper limit and lower limit.
6. Give a suitable tolerance grade obtained for manufacturing process of (i) sand casting (ii) turning (iii) fine grinding (iv) lapping.
7. What is meant by interchangeability and selective assembly ?
8. Calculate the permissible tolerance grades of IT_8, IT_{12} and IT_{16} for a nominal size of 24 mm.

9. Indicate the roughness value (Ra) and roughness symbols used for roughness grades of (i) N_3 (ii) N_6 (iii) N_{10} (iv) N_{12}.

10. Explain the surface tenture in the symbol.



PART – B **(50 Marks)**

11. From the assembly drawing of a lathe tail stock shown in figure 1 answer the following :

a) Give the type of fits for the following :
   i) Body (1) and Barrel (3)
   ii) Barrel (3) and centre (6)
   iii) Hand wheel (2) and spindle (4). **10**

b) Draw the following component drawings and give necessary tolerances and surface finish values :
   i) Barrel (3)
   ii) Spindle (4)
   iii) Spindle bearing (5)
   iv) Centre (6) **25**

c) Prepare the process sheet for the body (1), indicate work tool orientations drawings. **15**

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Part list

Item No.	Part Name	Material	Qty.
1	Body	C.I	1
2	Hand wheel	C.I	1
3	Barrel	M.S	1
4	Spindle	M.S	1
5	Spindle bearing	C.I	1
6	Centre	C.S	1
7	Nut	M.S	1
8	Feather key	M.S	1
9	Screw	M.S	4
10	Key	M.S	1

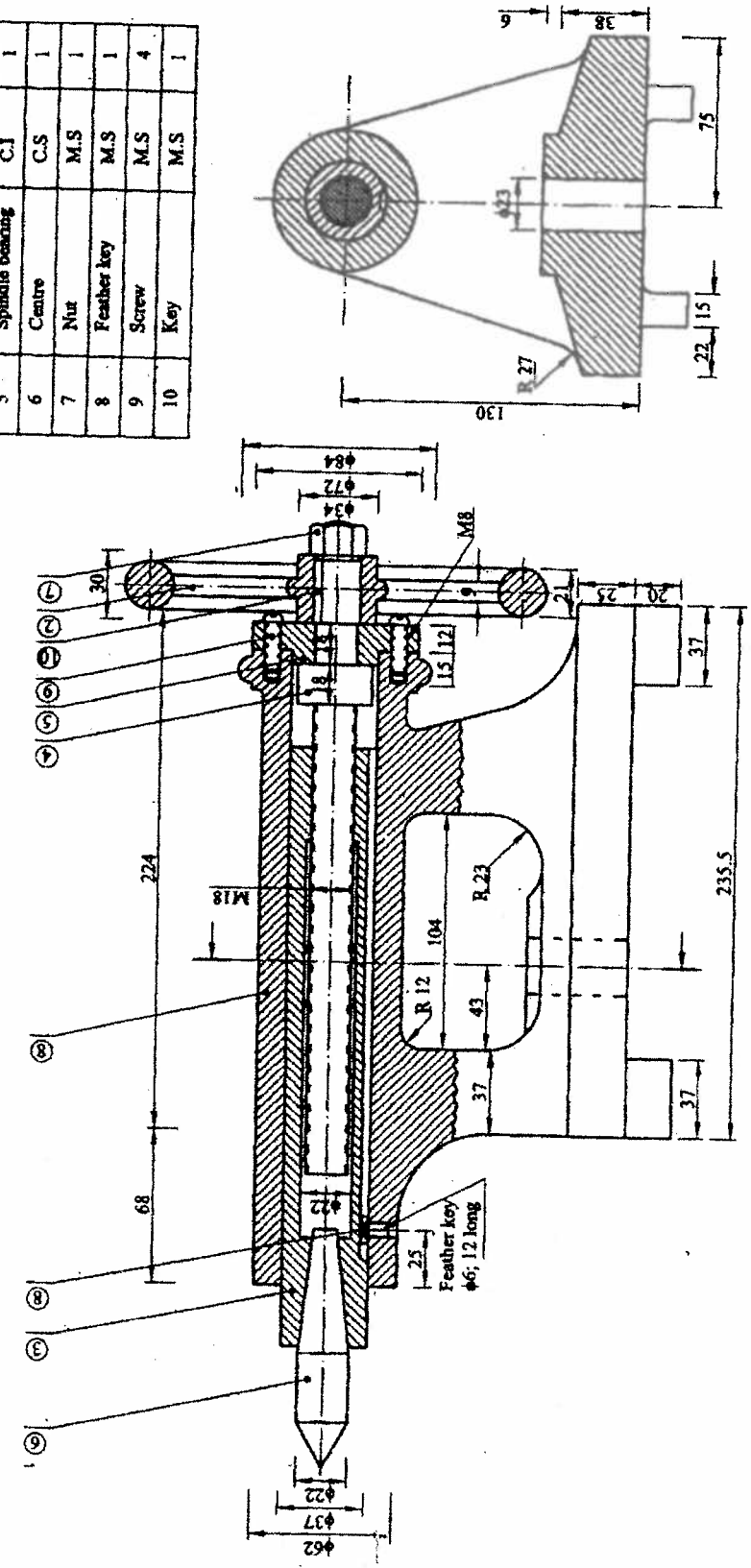

Fig. 1

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