

**FOURTH SEMESTER B.Tech. DEGREE EXAMINATION  
NOVEMBER/DECEMBER 2004**

**PRODUCTION DRAWING (P)**

(1998 Scheme)

Time : Three Hours

Maximum : 100 Marks

- Note :— (1) *Only First Angle Projections to be used.*  
 (2) *Standard conventions must be used.*  
 (3) *Any missing dimensions may be suitably assumed.*  
 (4) *Credit will be given for neatness and accuracy.*

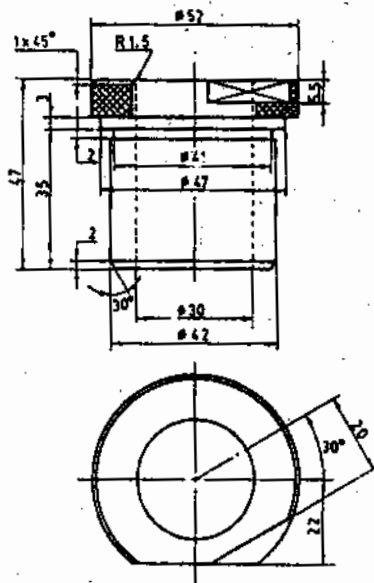
**Part A**

1. Determine fundamental deviation, tolerances and limits of size for Hole and Shaft in 60 mm. H8 f7 fit. Draw a neat sketch and show the details.

Or

2. A slip bush shown in the figure is to be manufactured. Prepare a production drawing incorporating the following requirements :—

- Finish the inside ( $\phi 30$ ) and outside ( $\phi 42$ ) cylindrical surfaces to a roughness value of  $0.8 \mu\text{m}$ . All the remaining surfaces are supposed to be a roughness value of  $6.3 \mu\text{m}$ .
- Outside diameter of the bush should have a concentricity tolerances of  $0.02 \text{ mm}$  with the axis of the cylindrical hole of  $\phi 30$ .
- Inside diameter of the bush should have an upper and lower deviations of  $+0.028 \text{ mm}$  and  $+0.015 \text{ mm}$  respectively while the outside diameter has a tolerance of  $h 6$ . Redraw the given figure and indicate all the above informations on the drawing symbolically as per B.I.S.



Slip bush

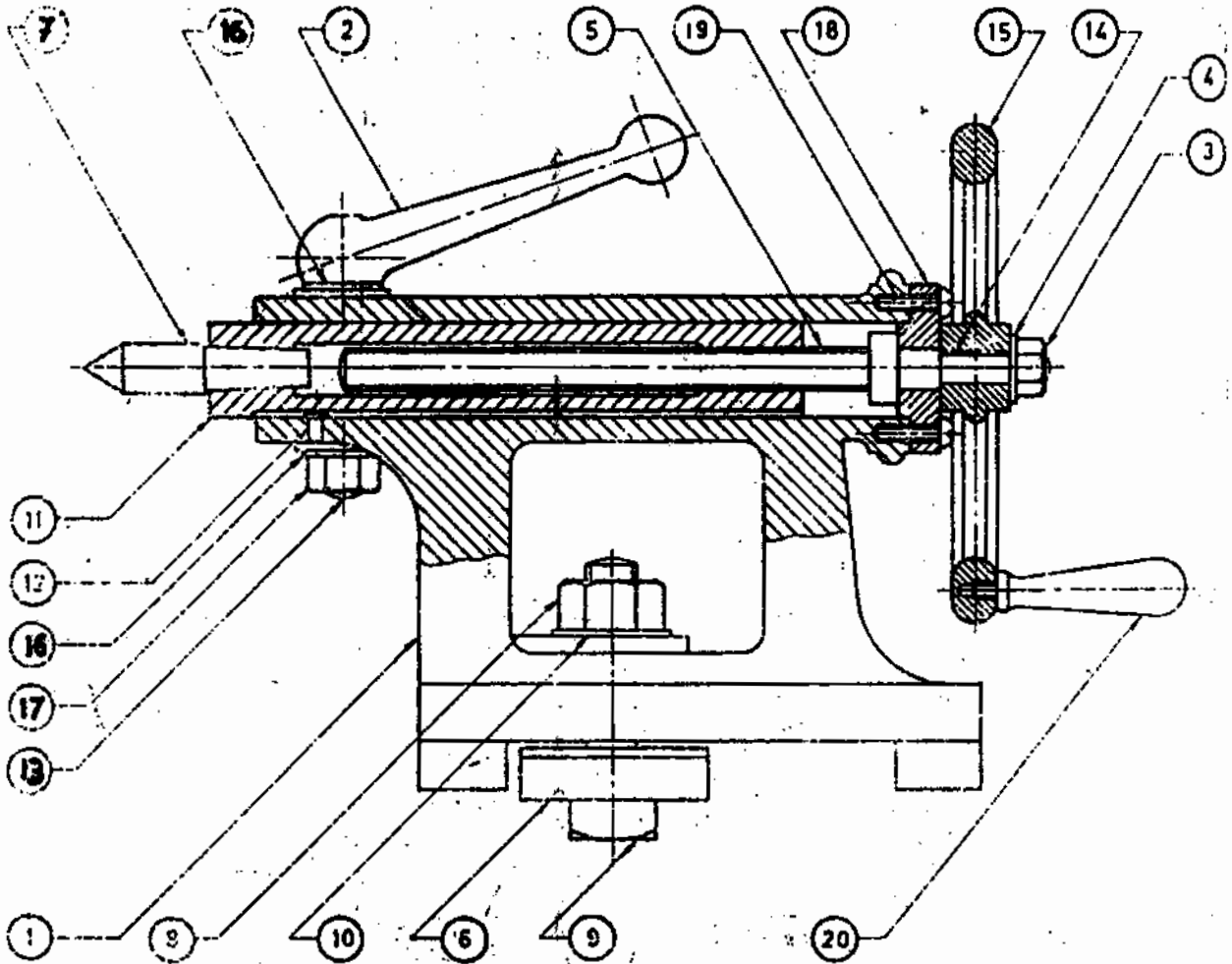
(20 marks)

Turn over

## Part B

3. Details of a Lathe-Tail stock are shown in the accompanying figures. Assemble the parts and draw the sectional elevation marking the dimensions.

(80 marks)



## ITEM LIST

Item	Description	Qty.	Material
1	Body	1	C. I.
2	Handle ( Lock )	1	C. I.
3	Nut ( M 12 )	1	M. S.
4	Washer ( M 12 )	1	M. S.
5	Screw spindle	1	M. S.
6	Clamping plate	1	Steel
7	Quad centre	1	Steel
9	Nut ( M22 )	1	M. S.
9	Sq. bolt ( M22 )	1	M. S.
10	Washer ( M22 )	1	M. S.

Item	Description	Qty.	Material
11	Barrel	1	C. I.
12	Key ( Barrel )	1	M. S.
13	Stud	1	M. S.
14	Key ( Wheel )	1	M. S.
15	Hand Wheel	1	C. I.
16	Washer ( M16 )	1	M. S.
17	Nut ( M 16 )	1	M. S.
18	Flange	1	C. I.
19	Screw ( M8 )	4	M. S.
20	Handle ( Wheel )	1	M. S.

LATHE TAIL STOCK

