

17305

16172

4 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. (A) Draw Conventional representation for any SIX of the following : 12

- (a) Offset section
- (b) Globe valve
- (c) Diamond Knurling
- (d) Leaf spring with eyes and central Band
- (e) Wood
- (f) Spur gears
- (g) Counter bored holes
- (h) Ball and Roller bearings

(B) Attempt any TWO : 8

- (a) Draw the symbol for the following
 - (i) Concave fillet weld
 - (ii) Seam Weld
 - (iii) Flat Single V butt Weld
 - (iv) Square butt weld

- (b) The shaft has size $\phi 27.470$ mm and $\phi 27.445$ mm and hole has size $\phi 27.500$ mm and $\phi 27.523$ mm. Determine type of fit between them.
- (c) State the meaning of symbol shown in fig. No.1.

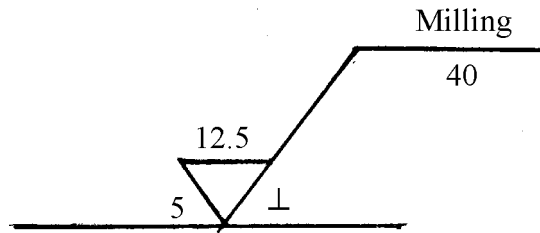


Fig. 1

2. (A) Fig. No. 2 shows front view partial Auxiliary view and Incomplete top view of the object. Draw the given views and complete the top view :

12

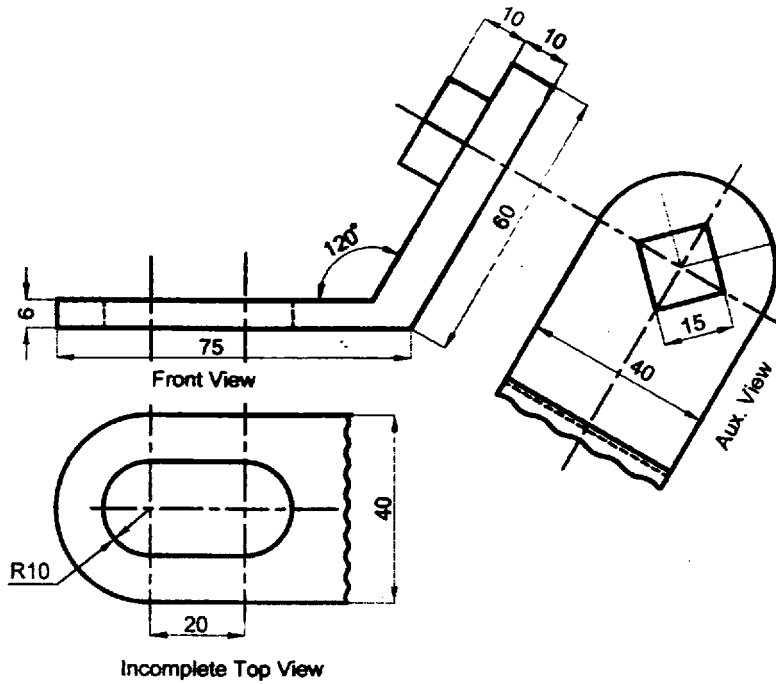


Fig. 2

- (B) Attempt any TWO of the following :

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- (a) Fig. No. 3 shows representation of basic size and it's deviations, identify the same.

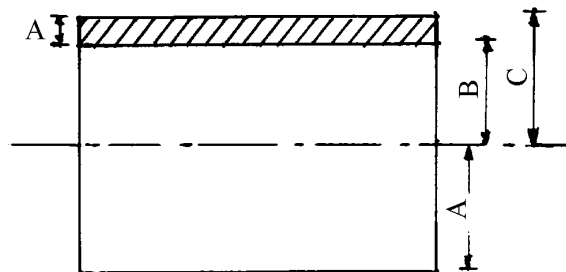


Fig. 3

- (b) Represent the welding drawing at two shafts with equal diameter welded end to end by means of square butt weld with convex counter on site.
- (c) Refer fig. No. 4(a) and (b) state the meaning of symbol at X and Y.

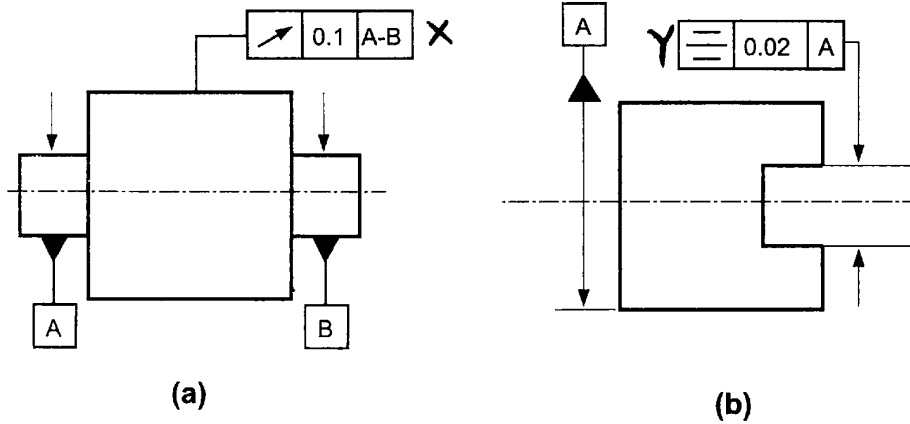


Fig. 4

3. Attempt any TWO of the following :

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- (a) A cone with base diameter 80 mm and axis height 75 mm is kept on the H.P. on its base. It is penetrated by a horizontal cylinder of diameter 40 mm with its axis parallel to V.P. and intersecting the axis of the cone at a distance of 25 mm above the base of the cone. Draw the projections of solid showing curves of intersection.
- (b) A vertical square prism side of base 35 mm and 80 mm long has its vertical faces equally inclined to V.P. It is penetrated by another square prism side of base 35 mm and axis length 80 mm so flat its axis parallel to both H.P. and V.P. and is 10 mm in front of the axis of the vertical prism. The faces of the penetrating prism are equally inclined to H.P. Draw the projections of the prisms showing lines of intersection.
- (c) A vertical square prism 50 mm side of base and 100 mm long having its faces equally inclined to the V.P. is completely penetrated by a horizontal cylinder 40 mm diameter and 100 mm long the axis of which is parallel to V.P. and 6 mm away from that of axis of prism. Draw the projections of the solids showing curves of intersection.

P.T.O.

(b) Figure No. 6 shows details of screw jack. Draw sectional F.V. and T.V. of the Assembly. Prepare bill of material.

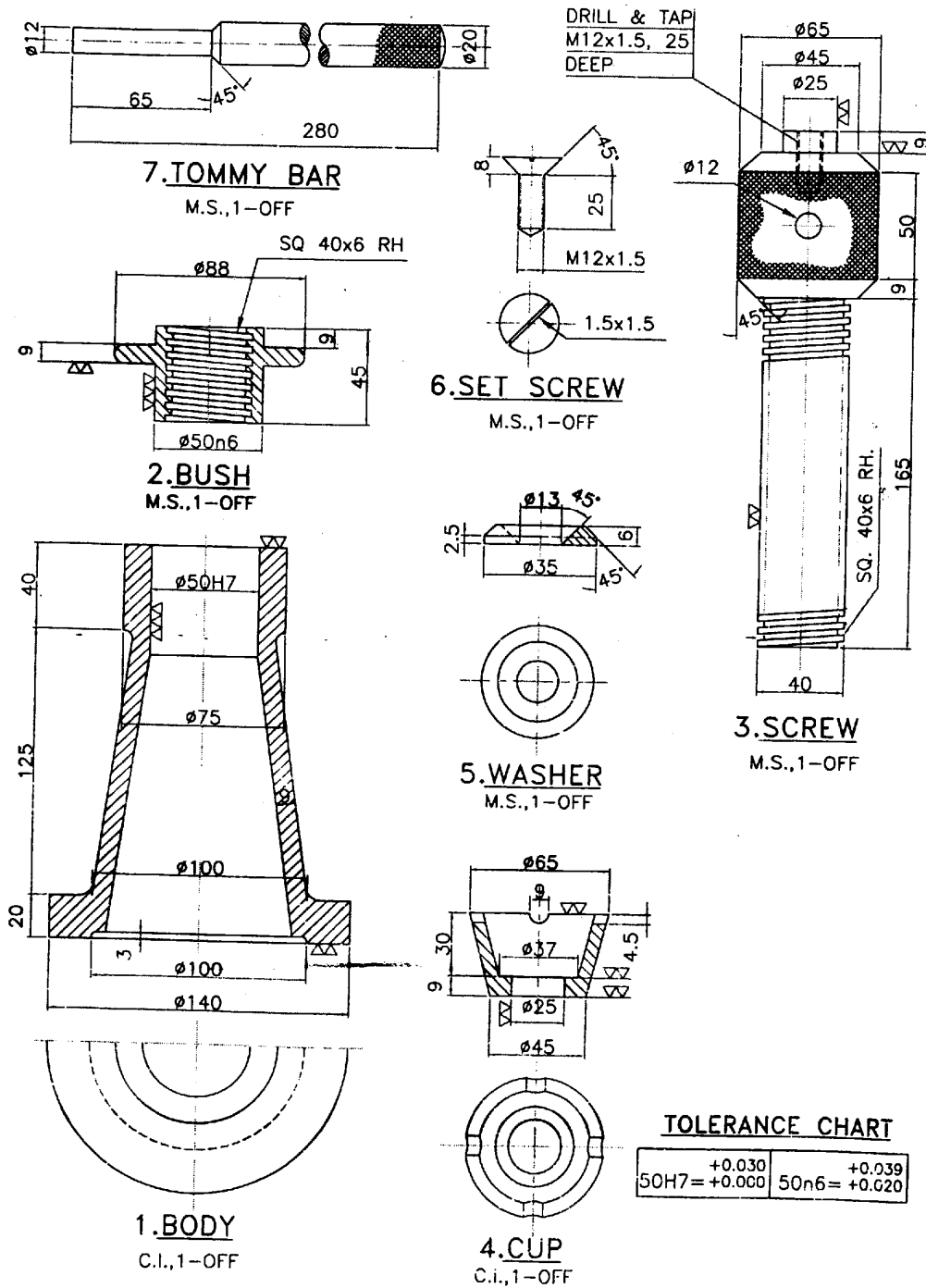


Fig. 6

5. Attempt any ONE of the following :

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(a) Figure No.-7 shows Assembly of drill Jig Draw detail drawing of the following parts.

- (1) Base Plate sect F.V. & T.V.
- (2) Stem sect F.V. and T.V.
- (3) Jig Plate Sect F.V. and T.V.

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7
7

Show dimension, fit, tolerances.

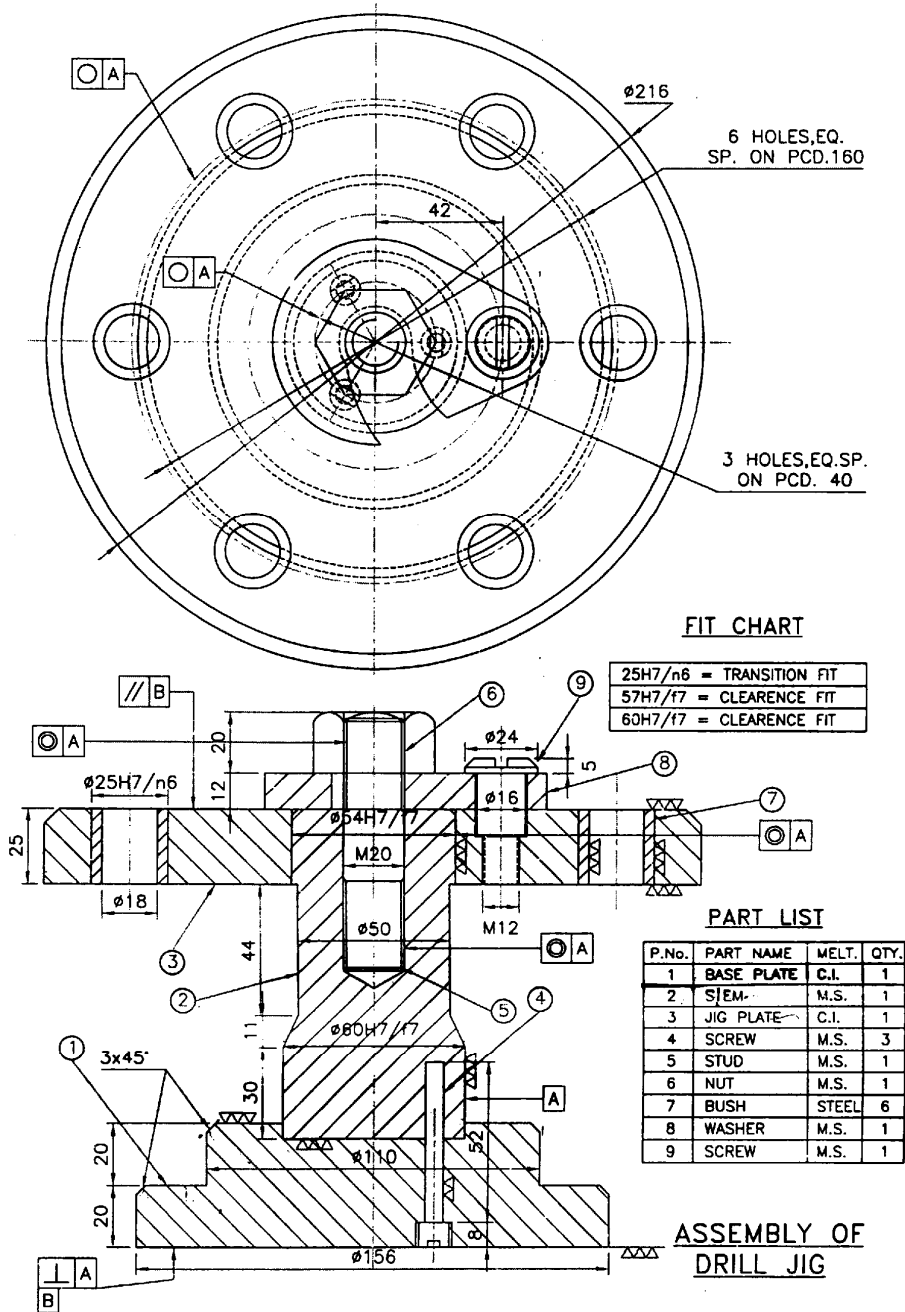


Fig. 7

- (b) Figure No.8 shows Assembly of Lathe tail stock
 Draw detail drawing of the following parts :
- (1) Body sect F.V. & S.V.
 - (2) Barrel sect F.V. & S.V.
 - (3) Spindle Bearing sect F.V. & S.V.

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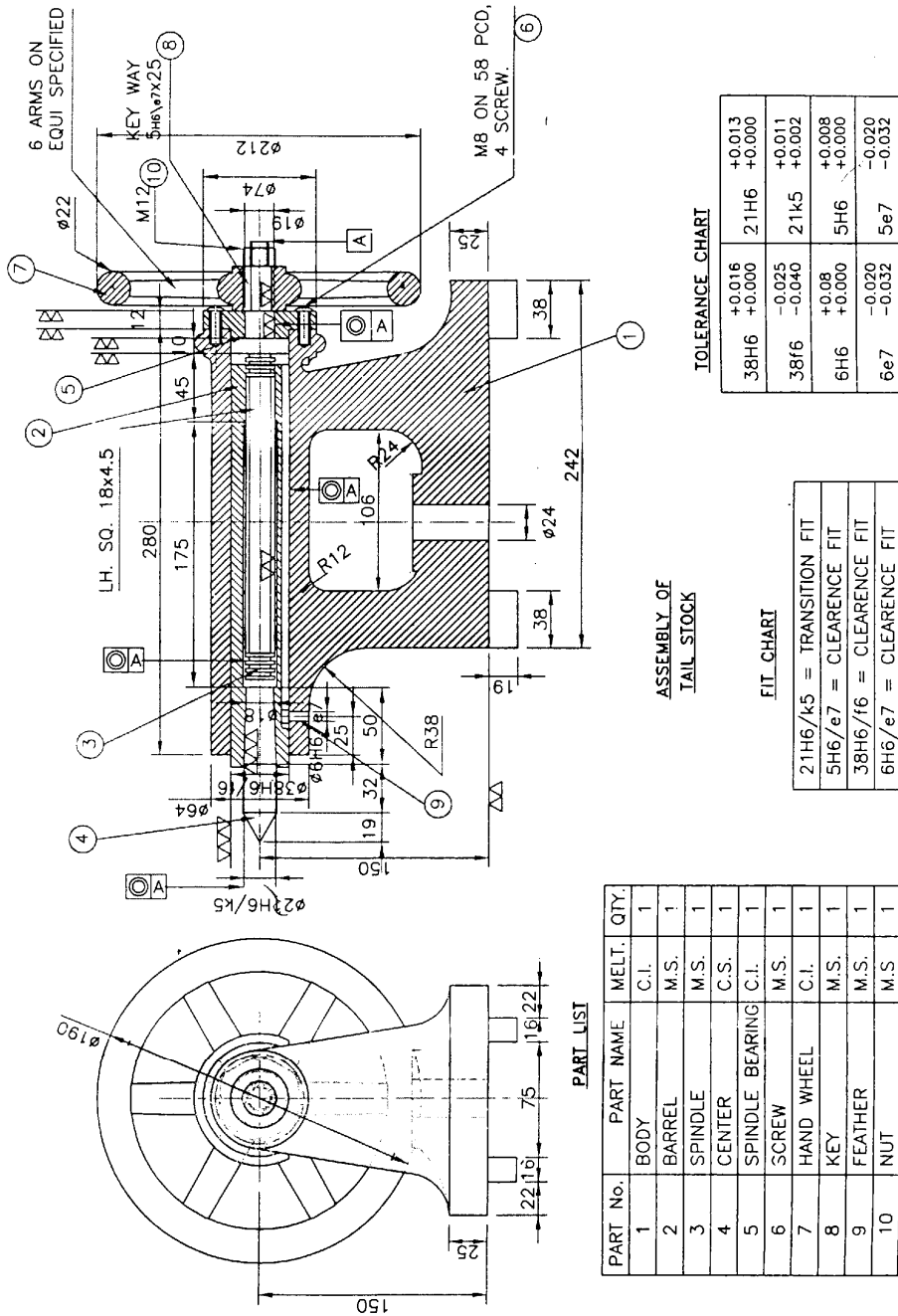


Fig. 8

