AU – 2474

First Semester B. E./B. Tech./B. Text. (Common For All) Examination

ENGINEERING DRAWING

Paper – 1 A 4/2 SCT 4

(USC – 10085)

P. Pages : 4

Time : Three Hours] [Max. Marks : 80

Note : (1) Separate answer book must be used for each section in the subject Geology, Engineering material of civil branch and Separate answer book must be used for Section A and B in Pharmacy and Cosmetic Tech.
(2) Answer **Three** questions from Section A and **Three** questions from Section B.
(3) Due credit will be given to neatness and adequate dimensions.
(4) Assume suitable data wherever necessary.
(5) Retain the construction lines.
(6) Use of slide rule, logarithmic tables, Steam tables, Mollier's Chart, Drawing instrument, Thermodynamic table for moist air, Psychrometric Charts and Refrigeration charts is permitted.
(7) Use pen of Blue/Black ink/refill only for writing the answer book.

SECTION A

1. (a) A ball thrown up in air reaches a maximum height of 45 metres and travels a horizontal distance of 75 metres. Trace the path of ball assuming it to be parabolic. 6

   (b) A circle of 50 mm diametre rolls along a straight line without slipping. Draw the curve traced out by a point P on the circumference for one complete revolution of circle. Name the curve. Draw a tangent to a curve at a point on it 40 mm from the line. 7

OR

2. (a) Draw on involute of a circle of 40 mm diameter. Also draw normal and tangent to it at a point 100 mm from centre of circle. 6

   (b) In a slider crank mechanism crank OA is 45 cm long and the connecting rod AB is 105 cm long. Draw the locus of :

   (i) Mid Point of connecting rod.

(ii) A point 60 cm from A on BA extended; for one revolution of the crank. 7

3. (a) A line PQ 40 mm long is parallel to V.P. and inclined at an angle of 30^0 to H.P. The end P is 15 mm above H.P. and 20 mm infront of V.P. Draw the projections of line. 6

(b) A pentagonal plate of 45 mm side has a circular hole of 40 mm diameter in its centre. The plane stands on one of its side on H.P. with its plane perpandicular to V.P. and inclined at 45^0 to H.P. Draw the projections. 7

OR

4. (a) A line AB 70 mm long has its end A 30 mm below H.P. and 25 mm behind V.P. Draw it's projections when it is parallel to H.P. and inclined at 30^0 to V.P. 6

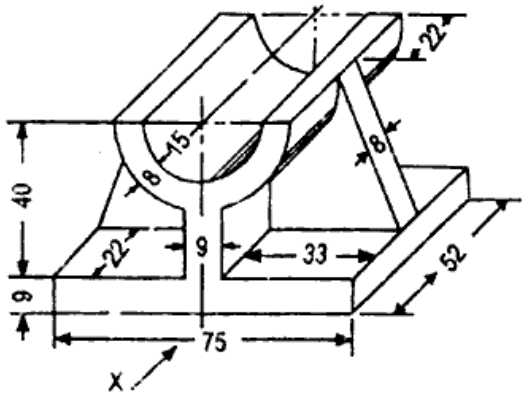
(b) Draw the projections of reguler hexagon of 25 mm side, having one of its side in H.P. and inclined at 60^0 to V.P. and its surface making an angle of 45^0 with the H.P. 7

5. (a) Using third angle method of projection draw :

(i) Front view.

(ii) Top view.

(iii) Side view.



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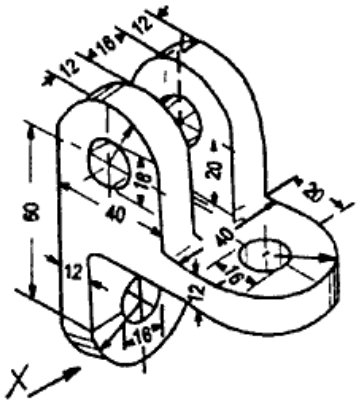
OR

6. Using first angle method of projection, Draw :

   (i) Front view.

   (ii) Top view.

   (iii) Both side views.



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SECTION B

7. (a) A hexagonal pyramid ; base 25 mm side and axis 50 mm long has an edge of its base on ground. Its axis is inclined at 30^0 to the ground and parallel to V.P. Draw its projections. 6

   (b) A square prism base 40 mm side and height 65 mm has its axis inclined at 45^0 to H.P. and has an edge of its base on H.P. and inclined at 30^0 to V.P. Draw its projections. 7

OR

8. (a) A core diameter of base 50 mm and height 60 mm is resting on H.P. on a point of its periphery of base with axis making on angle of 30^0 to H.P. and 40^0 with V.P. Draw the projections. 6

   (b) A cylinder of base 40 mm diameter and axis 58 mm long rests with a point of its base circle on H.P. and its axis inclined at 45^0 to the H.P. and 30^0 to V.P. Draw its projections. 7

9. (a) A square prism base 40 mm side and axis 80 mm long has its base on H.P. and its faces are equally inclined to V.P. It is cut by a plane perpandiculer to V.P. inclinded at 60^0 to H.P. and passing through a point on axis 55 mm above H.P. Draw its front view, sectional top view and another top view on an A.I.P. parallel to section plane. 6

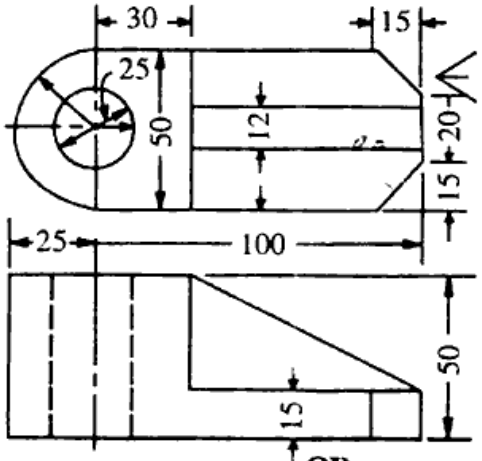
(b) Hexagonal pyramid base 30 mm side and axis 65 mm long resting on its base on H.P. with two edges parallel to V.P. It is cut by a section plane perpendiculer to V.P. inclined at 45^0 to H.P. and intersecting the axis at a point 25 mm above the base. Draw the front view, sectional top view, sectional side view and true shape of section. 7

OR

10. (a) Square pyramid base 40 mm side and axis 65 mm long has its base on H.P. and all the edges of base equally inclined to V.P. It is cut by a section plane perpandicular to V.P. inclined at 45^0 to H.P. and bisecting this axis. Draw sectional top view and sectional side view. 7

(b) A triangluar pyramid having base 40 mm and axis 50 mm long is lying on H.P. on one of its faces with the axis parallel to V.P. A section plane parallel to V.P. cuts a pyramid at a distance of 6 mm from the axis. Draw its sectional front view and top view. 6

11. Two views of an object are given. Draw an isometric view.



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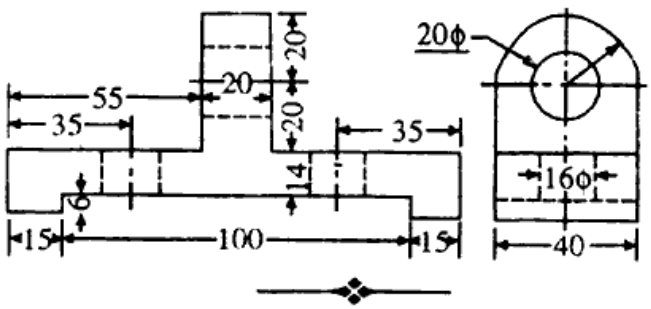
OR

12. Two views of an object are given. Draw an isometric view with labelled dimensions.



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