Code No: R201224 **R20** SET - 1

I B. Tech II Semester Supplementary Examinations, March- 2022

ENGINEERING DRAWING

(Com. to Mining, Agri. E, Phar E)

Time: 3 hours Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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UNIT-I

1. a) A fixed point is 65mm from a fixed straight line. Draw the locus of a point P moving such a way that its distance from the fixed straight line is twice its distance from the fixed point. (7M)

   b) Construct a diagonal scale to read up to 0.1 mm, and mark on it a distance of 6.63 cm. Take the scale as 3**:**1. (7M)

Or

2. A circle of 50 mm diameter rolls along a line. A point on the circumference of the circle is in contact with the line in the beginning and after one complete revolution. Draw the cycloidal path of the point. Draw a tangent and normal at any point on the curve. (14M)

UNIT-II

3. A line AB measures 100 mm. The projectors through its VT and the end A are 40 mm apart. The point A is 30 mm below the HP and 20 mm behind the VP. The VT is 10mm above the HP. Draw the projections of the line and determine its HT, inclinations with the HP and VP. (14M)

Or

4. a) The FVs of two points P and Q coincide at 30 mm above XY. Their TVs are 30 mm below and10 mm above XY respectively. Draw the three views of each point and determine the distance between them. (7M)

   b) A line AC 90 mm long makes 30^0 with HP and 50^0 with VP, such that its midpoint B lies 50 mm above HP and 55 mm in front of VP. Draw the projections if the end A is nearer to HP, while the end C is nearer to VP. (7M)

UNIT-III

5. A regular pentagon ABCDE, of 30 mm sides, has its side AB in the V.P. and inclined at an angle of 30^0 to the H.P. The corner A is 15mm above H.P. and the corner D is 20 mm in front of V.P. Draw the projections of the plane and find its inclination with the V.P. (14M)

Or

6. A rectangular plane of sides 50 mm and 25 mm has shorter side on the HP. The surface of the plane is inclined at 60^0 to the HP and perpendicular to VP. Draw its projections. If the shorter edge also makes an angle of 45^0 with the VP, draw the projections. (14M)

UNIT-IV

7. A pentagonal prism of base side 30 mm and axis 60 mm has one of its rectangular faces on the H.P and the axis inclined at 60^0 to the V.P. Draw the projections. (14M)

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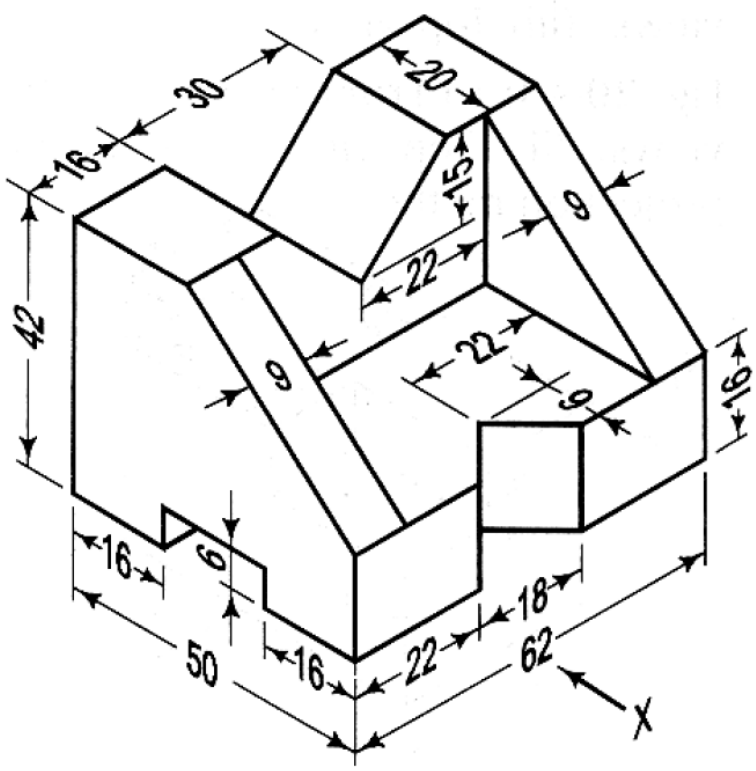
Or

8. Draw the projections of a cylinder, base 30 mm diameter and axis 40 mm long, lying on the ground with its axis inclined at 30^0 to the V.P and parallel to the ground. (14M)

UNIT-V

9. Draw Front view, Top view and Side view of the given isometric view given in figure below according to first angle projection method. All dimensions are in mm. (14M)



Or

10. A sphere of radius 20 mm is kept on the top face of a square prism of side of base 40 mm and height 20 mm. The latter is placed on the top face of a cylinder of 65 mm diameter and 25 mm height. All the three solids have the common axis. Draw the isometric projection of combination of solids. (14M)