JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year II Semester Examinations, September/October - 2021
ENGINEERING GRAPHICS
(Common to EEE, IT, CSIT, ITE, CE(SE), CSE(CS), CSE(DS), CSE(Networks))

Time: 3 Hours   **Max Marks: 75**

Answer any three questions
All questions carry equal marks
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1.a) A circle of 60 mm diameter rolls along a straight line. Trace the path of a point on the periphery of the circle. Name the curve.

  b) Construct a scale of 1/60 to read meters and decimeters and long enough to measure up to 6 meters. Mark on it a distance of 5.4 m.   [13+12]

2.a) Draw the projections of the following points on a common reference line keeping the distance between their projectors 30 mm apart.
    i) Point A is 20 mm below the H.P. and 50 mm in front of the V.P.
    ii) Point B is in the H.P. and 40 mm behind the V.P.
    iii) Point C is 30 mm in front of the V.P. and in the H.P.
    iv) Point D is 50 mm above the H.P. and 30 mm behind the V.P.
    v) Point E is 20 mm below the H.P. and 50 mm behind the V.P.

  b) Line AB is 75 mm long and it is 30^0 & 40^0 Inclined to HP & VP respectively. End A is 12 mm above HP and 10 mm in front of VP. Draw projections. Line is in 1st quadrant.
                                                               [10+15]

3. A cone base 50 mm diameter and axis 60 mm long rests with its base on HP. It is cut by a section plane perpendicular to HP and inclined at 60^0 to VP and at a distance of 10 mm from its axis. Draw the sectional front view and the true shape of the section.   [25]

4. A pentagonal prism having a base with 30 mm side and 65 mm long axis, is resting on its base in the H.P. with a rectangular face parallel to the V.P. It is cut by a section plane perpendicular to the V.P., inclined at 30^0 with the H.P., and passing through a point on the axis, 25 mm from one of the bases. Draw the development of lateral surface of bottom part.   [25]

5. Draw the Isometric view of the machine parts shown in figure 1. All dimensions are in mm. [25]
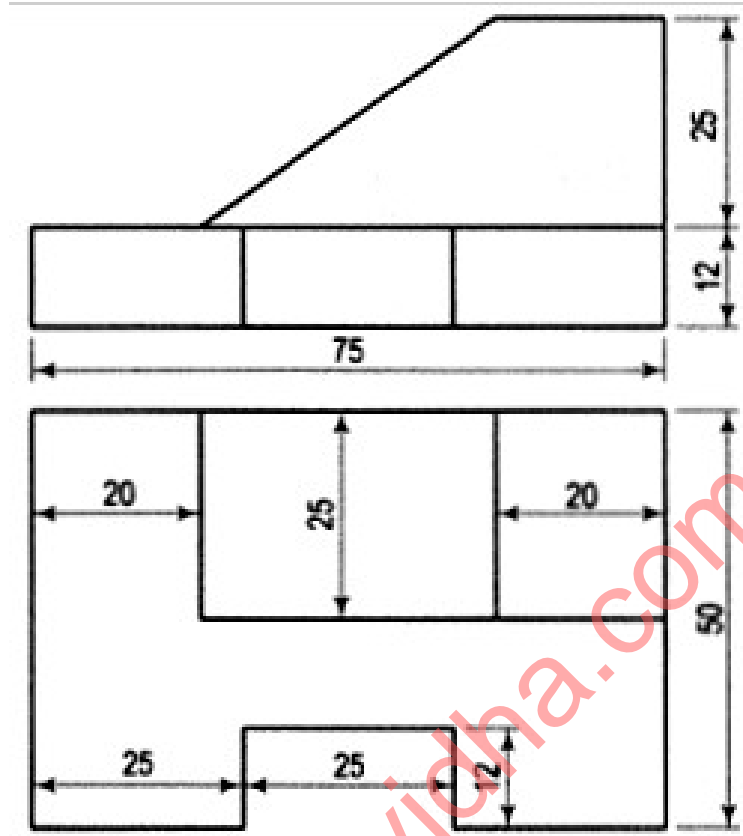

Figure: 1

6. Draw the orthographic projections of the machine part shown in figure 2. a) Front view b) Top view c) Side view. All dimensions are in mm. [25]
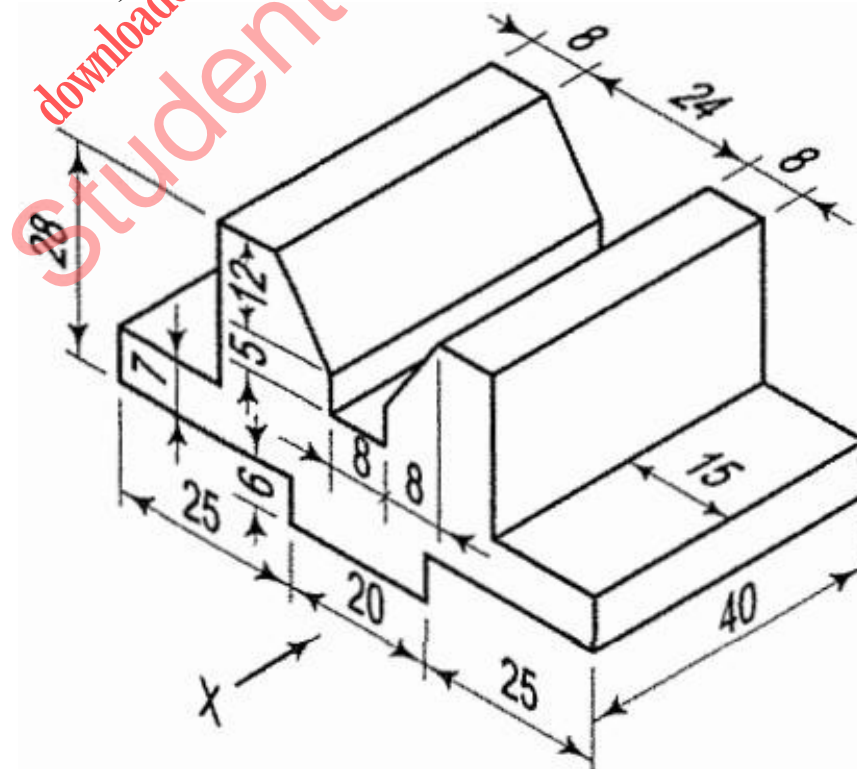

Figure: 2

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