

Code No: 152AG

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  $30^\circ$  &  $40^\circ$  Inclined to HP & VP respectively. End A is 12 mm above HP and 10 mm in front of VP. Draw projections. Line is in 1<sup>st</sup> 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  $60^\circ$  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  $30^\circ$  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]

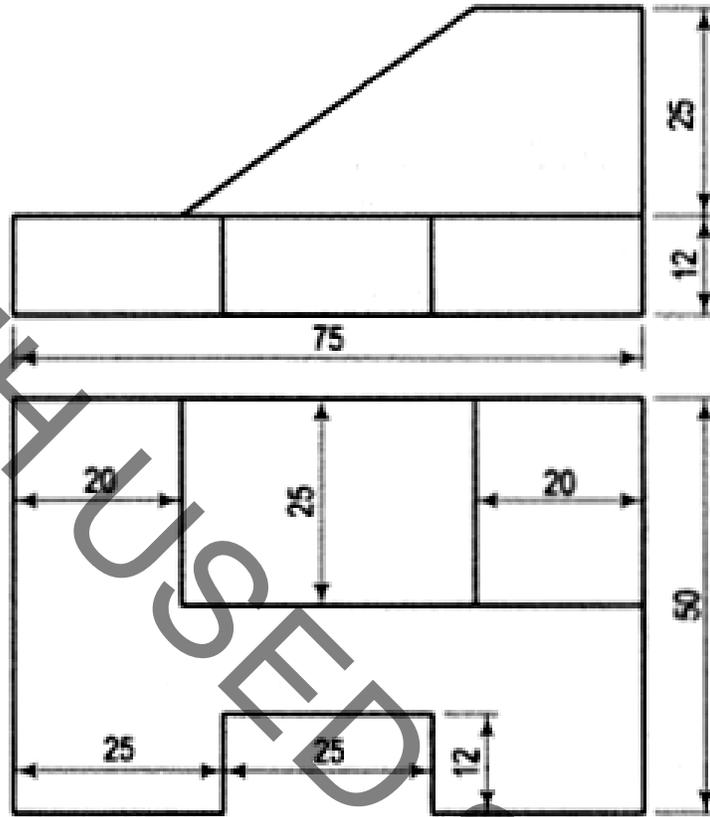


Figure: 1

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]

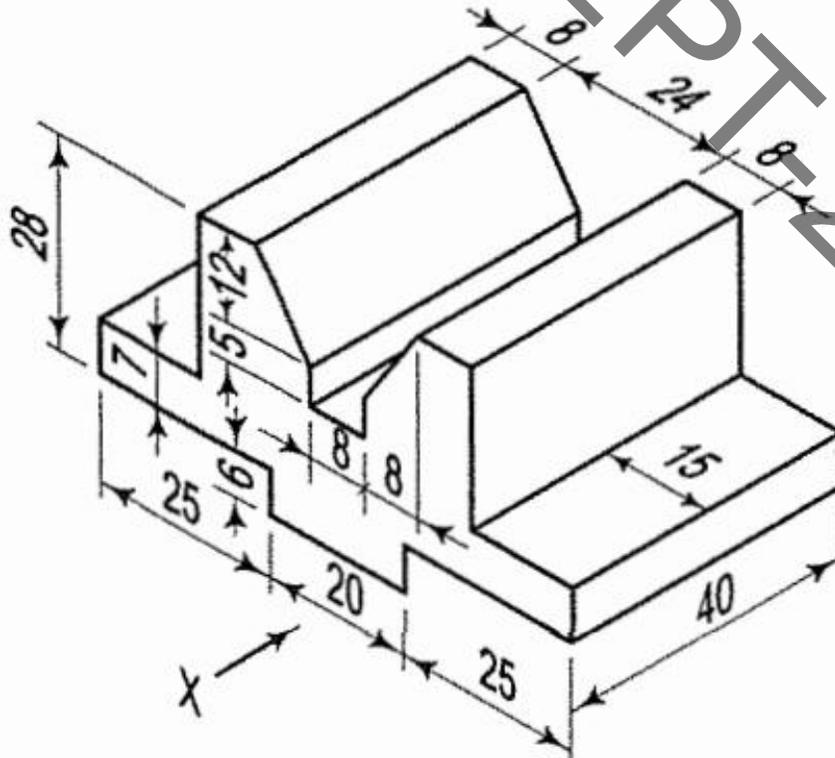


Figure: 2