

B.Tech II Year II Semester (R13) Regular &amp; Supplementary Examinations May/June 2016

**ENGINEERING GRAPHICS**

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 70

(Answer all five units, 5 X 14 = 70 Marks)

All questions carry equal marks

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**UNIT – I**

- 1 Construct a Parabola when the distance between the focus and directrix is 30 mm. Draw the tangent and normal at any point on the curve.

**OR**

- 2 Draw a Hypocycloid of a circle of 40 mm diameter which rolls inside another circle of 200 mm diameter for one revolution. Draw a tangent and normal at any point on it.

**UNIT – II**

- 3 Draw the projection of points, the position of as per data given below:

- (i) A point 'P' 25 mm above H.P. and 20 mm behind V.P.
- (ii) A point 'Q' 20 mm below H.P. and 25 mm behind V.P.
- (iii) A point 'R' 25 mm below H.P. and 20 mm in front of V.P.
- (iv) A point 'S' 20 mm above H.P. and 25 mm in front of V.P.
- (v) A point 'T' on H.P. and 25 mm in front of V.P.
- (vi) A point 'U' on H.P. and 25 mm behind V.P.
- (vii) A point 'V' on V.P. and 20 mm above H.P.

**OR**

- 4 The end P of a line PQ, 70 mm long is 15 mm above the HP and 20 mm in front of the VP. Q is 40 mm above the HP. Its top view is inclined at 45° to the VP. Draw the projections of the line and find its true inclination with the VP and the HP.

**UNIT – III**

- 5 A Pentagonal plate of side 30 mm is placed with one side on HP and the surface inclined at 50° to HP and perpendicular to VP. Draw its projections.

**OR**

- 6 A Hexagonal prism of base side 30 mm axis length 60 mm rests on the HP on one of its base sides with its axis inclined at 60° to the HP parallel to the VP. Draw its projections.

**UNIT – IV**

- 7 A Cube of side 40 mm is placed and cut by plane in such a way that the true shape of the section is a rectangular Hexagon. Draw the front and top views of the Cube and determine the inclination of the plane with the HP.

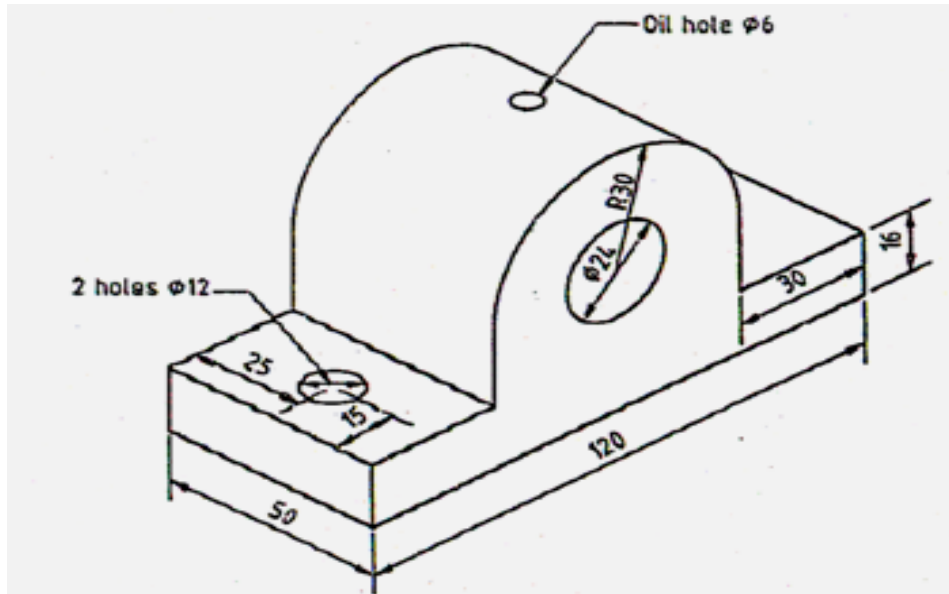
**OR**

- 8 A right circular Cone of base diameter 60 mm and height 70 mm is resting on its base on the ground. It is cut by a plane perpendicular to the VP and inclined 30° to the HP. The cutting plane bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone.

Contd. in page 2

UNIT - V

9 Draw the front view, top view and side view of the object given below.



OR

10 A Pentagonal prism of base side of 25 mm and axis length of 55 mm is resting on its face with its axis parallel to both H.P and V.P. Draw its isometric projection.

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