PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B. Tech. Summer 2018 - 19 Examination

Semester: 1/2   **Date:14/05/2019**
Subject Code:03109101   **Time:02:00pm to 04:30pm**
Subject Name: ENGINEERING GRAPHICS   **Total Marks: 60**
_____

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1   Do as directed :

Multiple choice questions.

1.   Which of the following Curves is known as Conic Curves?   (1)

        (A) Involute (B) Spiral (C) Hyperbola (D) Cycloid

2.   Which of the following is TRUE for 1st angle Projection System?   (1)

        (A) Observer-Object-Plane (B) Observer- Plane - Object (C) A and B both (D) None of this

3.   Which of the following Angle can be measure by Set Square (Without Protector)?   (1)

        (A) 135^0 (B)10^0 (C) 50^0 (D) All of this

4.   The angle between each axis for an isometric drawing is   (1)

        (A) 30^0 (B) 45^0 (C) 60^0 (D) 120^0

5.   The size of Lead used in Engineering Graphics is   (1)

        (A) 0.5 mm (B) 0.7 mm (C) 0.9 mm (D) None of this

Fill in the blanks.

6.   The F.V. of the cone when it is resting on H.P. on its base is _____   (1)

7.   The eccentricity of Parabolic Curve is _____   (1)

8.   The command use for drawing the line in Auto CAD is _____   (1)

9.   In 2nd quadrant the F.V. is placed _____the XY line.   (1)

10.   The length of Isometric Scale is _____time Normal Scale.   (1)

Answer the following questions.

11.   Define Tetrahedron..   (1)

12.   Write down the application of cycloidal curve?   (1)

13.   Why we are not using 2nd and 4th angle projection System?   (1)

14.   Draw the symbol of 1st Angle Projection System.   (1)

15.   Define Orthographic Projection.   (1)

Q.2   Answer the following questions. (Attempt any three)   (15)

(A)   A straight line AB is 70 mm long. It is inclined to H.P. and V.P. by an angle of 30^0 and 45^0 respectively. Point A is 15 mm above H.P. and 15 mm in front V.P. Draw projections of straight line AB.

(B)   An isosceles triangular plane ABC having its base AB = 40 mm and altitude 50 mm is resting on HP on its base AB with its surface making an angle of 45^0 to HP. The base AB which is in HP makes an angle of 60^0 to VP. Draw projection of plane.

(C) Draw the Front view of the Fig.1

(D)   Draw the R.H.S.V. of the Fig.1

Q.3(A) Draw the Parabola by Rectangle method whose base is 120mm and axis is 70mm.   (07)

Q.3(B) A cylinder diameter of base 40 mm and height 70 mm is resting on HP on its base. It is cut by an AIP bisecting the axis and making an angle of 45^0 with HP. Draw the development of lateral surfaces.   (08)

OR

Q.3(B) A square pyramid, base 30 mm side and axis 60 mm long, has its base on the H.P. and all the edges of the base equally inclined to the V.P. It is cut by a section plane perpendicular to the V.P. inclined at 45° to the H.P. and bisecting the axis. Draw its sectional top view, and true shape of the section.   (08)

Q.4(A) A Hexagonal prism of side 25 mm & axis 60 mm is resting on one of the corner of its base on the H.P. The longer edge containing that corner is inclined at 45° to the H.P. The axis of the prism makes an angle of 30° to the V.P. Draw the projections of the solid.   (07)

OR

Q.4(A) Draw the isometric view of the Fig. 2   (07)

Q.4(B) Construct a plain scale of R.F. = 1:50 to show meters and decimetres. Maximum measurement required is 8 metres. Indicate 5 m 7 dm on the scale.   (08)
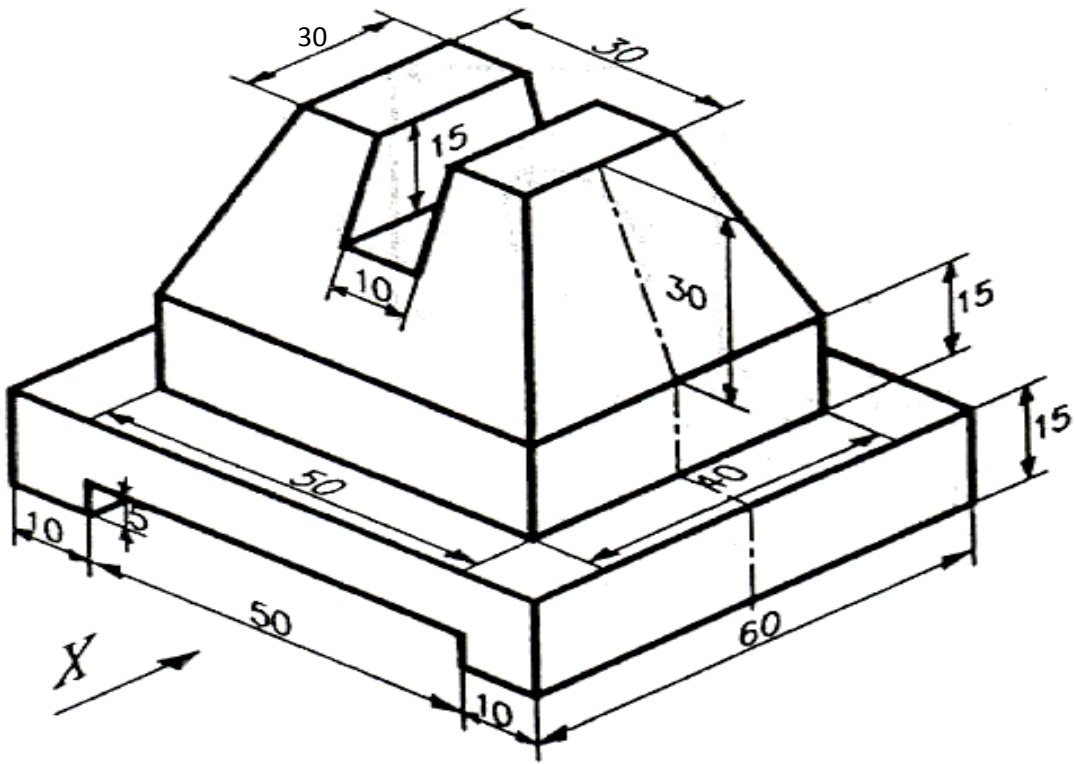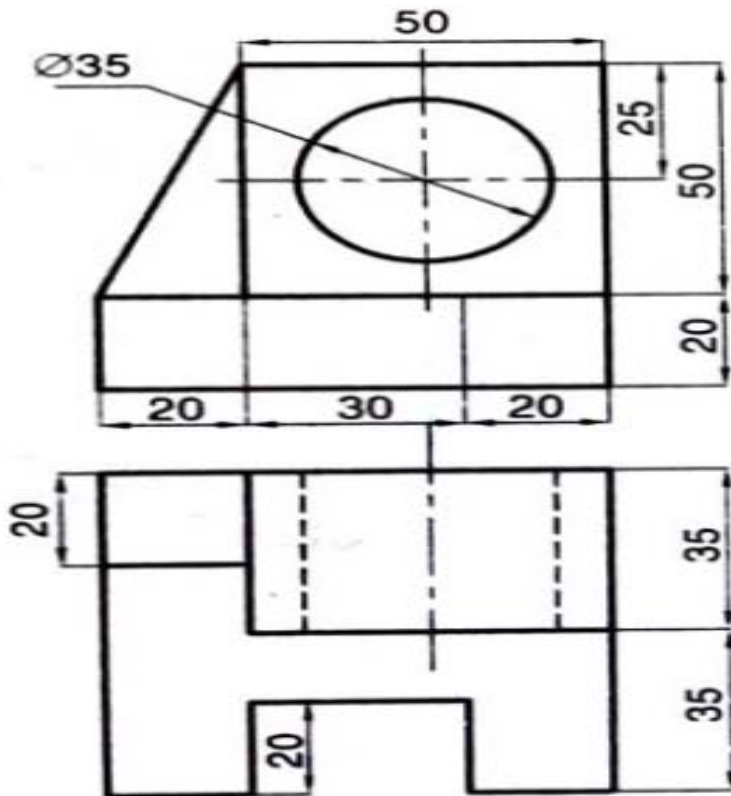
FIGURE 1

FIGURE 2