

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter Exam 2022-23 Examination

Semester: 1
Subject Code: 303109101
Subject Name: Engineering Graphics

Date: 30/01/2023
Time: 2.00pm to 4.30pm
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 a new question on a new page.

Q.1 Objective Type Questions - (All are compulsory) (15)

1. In a unidirectional system the dimensions are _____
 - (a) Placed above the dimension lines
 - (b) Placed below the dimension lines
 - (c) Placed by breaking the dimension line in the middle
 - (d) Placed left side of the dimension line
2. Which of the following represents full scale?
 - (a) 10:1 (b) 20:1 (c) 1:1 (d) 1:10
3. The sections cut by a plane on a right circular cone are called _____
 - (a) Parabolic sections (b) Conic sections (c) Elliptical sections (d) Hyperbolic sections
4. A Point behind V.P. and Below H.P. is in which quadrant?
 - (a) 1st Quadrant (b) 2nd Quadrant (c) 3rd Quadrant (d) 4th Quadrant
5. The shape of a vertical face of the right regular pentagonal prism is always _____
 - (a) Rectangle (b) Pentagon (c) Triangle (d) Rhombus
6. Define Representative Fraction (R.F.).
7. Write down the application of the cycloidal curve.
8. A plane is held parallel to a horizontal plane in which view we can watch drawing on that plane?
9. Give the Full Form of H.C.P.
10. Give the Full Form of A.I.P.
11. The lateral surface of the hexagonal prism, 30 mm on each side of the base and 60 mm height is to be developed, what is the length and height of the surface development in mm
12. Why Fourth angle projection is not used?
13. What is the basic difference between Isometric drawing and Isometric projection?
14. The command used for drawing the line in AutoCAD is _____
15. Dashed line is used to draw _____

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

- A) Difference between 1st angle and 3rd angle projection in brief.
- B) Draw bisection of 120-degree angle
- C) Explain Conic Curves in brief
- D) List out the classification of Solids

Q.3 A) The major axis and the minor axis of the Ellipse are 120 mm and 80 mm respectively. Construct an ellipse by the concentric circles' method. (07)

B) A square plate ABCD of side 35 mm is resting on corner A with diagonal AC making 45° with H.P. and Diagonal BD inclined to V.P. by 45° . Draw the projection of a square plate. (08)

OR

B) A thin rectangular plate of sides 60 mm x 30 mm has its shorter side in the H.P. and is inclined at 30° to the V.P. Project its front view if its top view is a square of 30 mm long sides. (08)

Q.4 A) A cone of base diameter 50 mm and altitude 60 mm rests on its base on the H.P. It is cut by a plane Perpendicular to the V.P. and inclined at 40° to the H.P... The cutting plane meets the axis at 30 mm from the apex. Draw a True shape. (07)

OR

A) Draw the development of the lateral surface of the lower portion of a cylinder of diameter 50 mm and axis 70 mm. the solid is cut by a sectional plane inclined at 40° to H.P. and perpendicular to V.P. and passing through the midpoint of the axis. (07)

B) Draw the following views using the first angle projection method (a) ELEVATION or front view and (b) PLAN or top view for figure 1. (08)

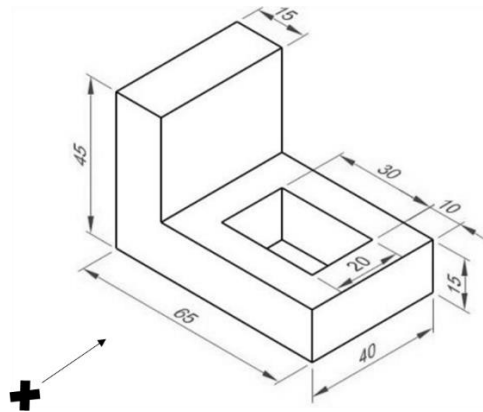


Figure 1