

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-1/2 EXAMINATION – WINTER 2021****Subject Code:2110013****Date:28/03/2022****Subject Name:Engineering Graphics****Time:10:30 AM TO 01:30 PM****Total Marks:70****Instructions:**

1. Question No. 1 is compulsory. Attempt any four out of remaining Six questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Don't rub construction/ projection lines after completion of drawing.
5. All dimensions are in mm.
6. Figure in the question paper is not to the scale.
7. Take suitable scale whenever required and mention in clearly.
8. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) Attempt all questions **07**
1. When the plane cuts the cone parallel to base , the curve trace out by section is \_\_\_\_\_
  2. What is the methods of construction of Isometric
  3. In first angle projection what is the position of object, observer and plane.
  4. With help of F.V and T.V how many methods are using for drawing a S.V.
  5. If a point on ground or floor projection goes to \_\_\_\_\_ angle of projection method
  6. When a rectangle revolving create a \_\_\_\_\_
  7. Sphere will be drawn in Isometric View \_\_\_\_\_ times larger than Isometric Projection
- (b) Attempt all questions **07**
1. Give types of scale ( drawing purpose)
  2. In diagonal scale \_\_\_\_\_ yard = 3 feet = \_\_\_\_\_ inches
  3. if point on HP & VP projection on \_\_\_\_\_ lines
  4. View of the cut object is known as \_\_\_\_\_ view
  5. Eccentricity ratio of focus to directrix is one for \_\_\_\_\_ curve
  6. Tetrahedron covered with \_\_\_\_\_ no. of faces.
  7. First is \_\_\_\_\_ projection , second is oblique projection and third is \_\_\_\_\_ projection
- Q.2** (a) Draw an ellipse having major axis 130 mm and minor axis 70 mm by using half ellipse by rectangle method and other half by concentric circle method. **07**
- (b) A line VH, 70 mm long, has its end V in V.P. and end H in H.P. Line is inclined to H.P. by  $60^\circ$  and V.P. by  $30^\circ$ . Draw the projections of a line VH. **07**
- Q.3** (a) Construct an Archimedian Spiral of one convolution, given the maximum and minimum radii as 55 mm and 31 mm respectively. Draw tangent and normal to the curve at any point. **07**
- (b) A fan is hanging in the centre of the room of 4m x 3m x 3m height. The centre of the fan is 0.75 m below the ceiling. The switch of this fan is on 3m x 3m size wall at the centre height and 0.5 from the adjacent wall. Find the distance between the fan centre and the switch. **07**



**Fig.-2**

