

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - III EXAMINATION - WINTER 2025

Subject Code: 3132001

Date: 12-12-2025

Subject Name: Industrial Drafting

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

Instructions

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. Simple and non-programmable scientific calculators are allowed.**

	Marks
Q.1 (a) Differentiate between the aligned and unidirectional systems of dimensioning in drafting. Draw neat diagram for each.	03
(b) Differentiate Machine drawing and part drawing	04
(c) Draw the conventional representation of Steel, Petrol, Lead, Glass, Stoneware, Asbestos, Wood.	07
Q.2 (a) How is machine shop drawing different from machine drawing	03
(b) Draw conventional representation for indicating the internal screw threads, bearings, interrupted views, and spur gear?	04
(c) Draw different types of nuts with their applications.	07
OR	
(c) Draw two views of a hexagonal headed bolt, 35 mm diameter and 70 mm long, with a hexagonal nut and a washer.	07
Q.3 (a) What are studs? Explain with example of its application.	03
(b) List with neat diagram - Different types of internal and external threads	04
(c) Draw any 02 sectional views of cone i) Circle ii) Ellipse. Explain how and why this sectional views are developed.	07
OR	
(a) List different types of assembly drawings and how they are useful to an engineer?	03
(b) Explain first angle and third angle method of projection. Which method is most convenient for an engineer and why?	04
(c) A cylinder 50 mm diameter and 70 mm height is completely penetrated by a square prism of 25 mm sides and 70 mm axis, horizontally. Both axes, Intersect & bisect each other. All faces of prism are equally inclined to HP. Draw projections showing curves of intersections.	07
Q.4 (a) What is the importance of geometric tolerances in assembly drawings?	03

- (b)** Differentiate between V-Belt and Flat Belt **04**
- (c)** List and draw neat and well labelled diagrams of different types of keys and write their application. **07**

OR

- (a)** Draw neat diagram of different types of foundation bolts **03**
 - (b)** Explain Sectioning Convention with suitable example. **04**
 - (c)** Why hexagonal shape is preferred to square one for nuts? Explain with example **07**
- Q.5**
- (a)** Draw neat diagram of ACME threads **03**
 - (b)** With the help of sketches, show how the geometrical tolerances are indicated, as given in standard, for the following cases: (a) parallelism, (b) perpendicularity, (c) symmetry and (d) radial run out. **04**
 - (c)** List various commands in the modify tool box of AUTO CAD. **07**

OR

- (a)** Define the following terms in context of screw threads: Flank, Minor Diameter and Pitch. **03**
- (b)** What is surface roughness, and how it is shown in engineering drawings? **04**
- (c)** List various commands in the draw tool box of AUTO CAD. **07**
