# 03GMEST103122401

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# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

First Semester B.Tech Degree Regular Examination December 2024 (2024 Scheme)

### **Course Code: GMEST103**

Course Name: ENGINEERING GRAPHICS AND COMPUTER AIDED DRAWING Max. Marks: 60 Duration: 2 hours 30 minutes

# Instructions: Retain all Construction lines. Show necessary dimensions. Answer any ONE question from each module. Each question carries 15 marks

#### **MODULE 1**

The top and front views of a line AB are inclined at 35° and 45° respectively,	CO1	(15)
to the XY line. One end, is on both the HP and VP, while the other end is 50		
mm above the HP. Draw the projections of the line and determine its true		
length and inclinations and locate its traces. The line is in the first quadrant.		
A line PQ, 80 mm long, has one end 50 mm in front of the VP and 15 mm		
above the HP. The top view of the line measures 65 mm. The other end is 20	CO1	(15)
mm in front of the VP and above the HP. Draw the projections, measure the		
front view, determine the true inclinations, and show its traces.		

#### **MODULE 2**

A pentagonal prism with a base edge of 25 mm and axis length of 65 mm isplaced with one of its base edges on the HP. The axis is inclined at 30° to theCO2HP and 45° to the VP. Draw the projections of the prism.A cone of base diameter 40mm and axis length 60mm is resting on VP on oneof its generators with the front view of the axis is inclined at 35° to HP. DrawCO2(15)

#### **MODULE 3**

A right regular hexagonal pyramid with a base edge of 30 mm and axis length of 80mm is resting on its base, with one base edge parallel to the VP. It is cut **CO3** (15) by a plane passing through the centre of the axis and one corner of the base,

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its projections.

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which is at the extreme left. The cutting plane is perpendicular to the VP. Draw the front view and sectional top view and true shape of the section. A cylinder of 50cm diameter is cut by 30° auxiliary section plane passing through the extreme right point of the base. The height of the shortest portion of the cylinder is of 1m (extreme left generator). Draw to a suitable scale the development of the cut cylinder.

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# **MODULE 4**

A hemisphere with a radius of 50 mm rests centrally on the top of a Square prism with a base edge of 40 mm and height 60 mm. The circular face of the hemisphere is facing upwards. Draw the isometric projection of the solids. Draw the isometric view of a pentagonal pyramid side of base 30mm and height 60mm rests with base centrally on top of a cylinder of diameter 90mm and height 50mm in such a way that one of the base edges of the pentagonal pyramid is perpendicular to the VP.

**CO4** (15)

(15)

**CO4**