



# PRESIDENCY UNIVERSITY, BENGALURU

## SCHOOL OF ENGINEERING

Max. Marks: 80

Max Time: 90 Mins

Weightage: 20 %

### MID TERM EXAMINATION

I Semester AY 2017-18

Course: **MEC 152 Engineering Graphics**

28 OCT 2017

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#### Instructions:

- i. The A3 answer sheet has to be folded and used as an equivalent booklet of two A4 sheets.
  - ii. All drawing instruments are a must.
  - iii. Exchange of drawing instruments is not allowed.
  - iv. All solutions are to be drawn using pencil only.
  - v. All drawings have to be dimensioned and labeled appropriately.
  - vi. All dimensions are in mm.
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#### Part A

(5Q x 02 M= 10 Marks)

1. Draw the projection of the following points on the same reference line.
  - a) Point A is on HP and 30mm in front of VP.
  - b) Point B is situated 30mm below HP and 40mm behind VP.
  - c) Point C is situated 40mm above HP and on VP.
  - d) Point D is situated 50mm above HP and 50mm behind VP.
  - e) Point E is situated 40mm below HP and 30mm in front of VP.

#### Part B

(1Q x 15 M=15 Marks)

2. A line AB, 60mm long has its end A 30mm above HP and 20mm in front of VP. It is inclined at  $45^\circ$  to HP and  $30^\circ$  to VP. Draw the projections of the line and find the apparent lengths and inclinations. Line AB is in the 1<sup>st</sup> quadrant.

**OR**

A line AB, 60mm long has its end point A 20mm above HP and 30mm in front of VP. It is inclined  $40^\circ$  to HP. Draw the projections of the line if the top view of the line is inclined  $50^\circ$  to VP. Find the true inclination of the line w.r.t. VP, apparent inclination of the line w.r.t. HP and apparent lengths. Line AB is in the 1<sup>st</sup> quadrant.

### Part C

(1Q x 25M=25 Marks)

3. A Hexagonal lamina of side 30mm is resting on one of its corners on HP. Draw the projections of the lamina if it is inclined at  $45^\circ$  to HP and the diagonal passing through the resting corner is inclined at  $30^\circ$  to VP. Draw the projections of the lamina.

**OR**

A pentagonal lamina of side 30mm is resting on one of its edges on HP. The lamina is inclined at  $40^\circ$  to HP and the perpendicular bisector of the resting edge is inclined at  $40^\circ$  to VP. Draw the projections of the lamina.

### Part D

(1Q x 30M=30 Marks)

4. A square pyramid of base edge 30mm and axis (height) 60mm is resting on one of its corners on HP. Draw the projections of the pyramid if the axis (height) of the pyramid is inclined at  $40^\circ$  to HP and appears to be inclined at  $20^\circ$  to VP.

**OR**

A square pyramid of base edge 30mm and axis (height) 60mm is resting on one of its edge on HP. Draw the projections of the pyramid if the axis (height) of the pyramid is inclined at  $40^\circ$  to HP and the resting edge is inclined at  $40^\circ$  to VP.