

# CBCS SCHEME

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18EGDL15/25

First/Second Semester B.E. Degree Examination, Dec.2023/Jan.2024

## ENGINEERING GRAPHICS

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

### Note:

1. Answer three full questions.
2. Use A4 sheets supplied.
3. Draw to actual scale.
4. Missing data, if any, may be assumed suitably.

1. Draw the projections of a line PQ and find its true length and inclinations when the line is inclined at  $30^\circ$  to HP and  $45^\circ$  to VP. The line is having one of its ends 15 mm above HP and 20 mm in front of VP. The distance between the end projectors on the XY line is 60 mm. **25 Marks**

OR

1. A hexagonal lamina of sides 25 mm rests on one of its corners on HP. The corner opposite to the corner on which it rests is 35 mm above HP and the diagonal passing through the corner on which it rests is inclined at  $30^\circ$  to VP. Draw its projections. Find the inclination of the surface with HP. **25 Marks**
2. A pentagonal prism 25 mm sides of base and 60 mm axis length rests on HP on one of its edges of the base which is inclined to VP at  $30^\circ$ . Draw the projections of the prism when the axis is inclined to HP at  $40^\circ$ . **45 Marks**
3. A square prism of base side 30 mm and axis length 50 mm is resting on HP on one of its base with all the vertical faces being equally inclined to VP. It is cut by an inclined plane  $60^\circ$  to HP and perpendicular to VP and is passing through a point on the axis at a distance 45 mm from the base. Draw the development of the lower portion of the prism. **30 Marks**

OR

3. A hemisphere diameter 70 mm is placed on the ground on its curved surface. A cone base diameter 70 mm and height 70 mm is placed centrally on it. Draw the isometric projection of the combination. **30 Marks**

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