

C 80668

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Name: .....  
Reg. No. ....

**COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING)  
DEGREE [14 SCHEME] EXAMINATION, APRIL 2015**

**EN 14 108 (B)—ENGINEERING GRAPHICS (B)**

Time : Three Hours

Maximum : 100 Marks

*Answer **three** questions from Part A  
and any **two** questions from Part B.  
All questions carry equal marks.*

**Part A**

1. (a) A line PQ is inclined at  $30^\circ$  to VP, and its ends are 15 mm. and 40 mm. above HP. Its front view measures 60 mm. and its VT is 10 mm. above HP. Determine the true length of the line and its inclination with HP. Also locate its traces.

*Or*

- (b) An equilateral triangular lamina of 40 mm. side is placed with one of its sides on HP such that the surface of the lamina is inclined at  $45^\circ$  to HP. The edge on which it rests is inclined at  $45^\circ$  to VP. Draw the projections.

(20 marks)

2. (a) A hexagonal pyramid side of base 30 mm. and axis 60 mm. long has one of its slant edges in HP. A plane containing that edge and the axis is perpendicular to the HP and inclined at  $40^\circ$  to the VP. Draw the projections of the pyramid when the base corner contained by the slant edge is 53 mm. from VP. Its vertex is nearer to VP.

*Or*

- (b) A tube of side 40 mm. is cut by a plane such that the true shape of the section is a regular hexagon. Indicate the section plane and draw the sectional plan and true shape of the section.

(20 marks)

3. (a) A right circular cone diameter of base 40 mm. and height 60 mm. rests on its base on the HP. A section plane perpendicular to VP and inclined at  $45^\circ$  to HP cuts the cone bisecting the axis. Draw the development of the truncated cone.

*Or*

- (b) A hexagonal prism of side of base 30 mm. and 70 mm. long has a square hole of sides 20 mm. at the centre. The axis of the square hole and hexagonal prism coincide and one of the faces of the square hole is parallel to one of the faces of the hexagon. Draw the isometric view of the prism with the hole.

(20 marks)

[3 × 20 = 60 marks]

**Turn over**

