

Roll No. ....

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**B.Tech. (Sem. - 1<sup>st</sup>/2<sup>nd</sup>)****ENGINEERING DRAWING & COMPUTER GRAPHICS****SUBJECT CODE : ME - 102 (2K4 & Onwards) (New)****Paper ID : [A0116]**

[Note : Please fill subject code and paper ID on OMR]

**Time : 03 Hours****Maximum Marks : 60****Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Five** questions from Section - B & C.
- 3) Select at least **Two** questions from Section - B & C.

**Section - A****Q1)****(Marks : 2 Each)**

- a) Define refraction fraction (R.F.).
- b) Draw the centre line.
- c) What is single stroke and double stroke letters?
- d) Draw a symbol of first angle projections.
- e) What is the necessity of dimensioning the drawing of an object?
- f) What is the full name of 'HP' and 'VP'?
- g) What is the trace of a straight line?
- h) What is a plane?
- i) How many numbers of equal faces are in tetrahedron?
- j) Why the projections of an object are not drawn in 2<sup>nd</sup> and 4<sup>th</sup> quadrants?

**Section - B****(Marks : 8 Each)**

**Q2)** Draw the projections of a cube of 50 mm side resting on the ground with one of its vertical faces inclined at 30° to VP. Its nearer vertical edge is 15 mm behind the VP and nearer horizontal face is 20 mm below HP?

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- Q3)** A point Q is 25 mm above the HP and 30 mm behind VP. Draw its projections.
- Q4)** A pentagon pyramid of 30 mm base edges and axis 70 mm long, resting on its base on the HP having a side of base parallel to VP and away from it. It is cut by a section plane parallel to HP and passes through the centre of its axis. Draw its sectional plane and elevation.
- Q5)** Write in double stroke vertical and inclined style, the following statements using ratio 7 : 4.

### Section - C

(Marks : 8 Each)

- Q6)** A vertical square prism of 60 mm base and axis length of 110 mm is resting on one of its square base on ground and having its two rectangular faces equally inclined to VP. A horizontal square hole of side 40 mm is drilled through it such that the axes of both the prism and the hole bisect each other at right angle. The faces of the hole are equally inclined to HP. Draw the projection of the combination and show the lines of intersection.
- Q7)** Construct a scale having R.F. =  $1/50,000$  to read kilometers and hectometers and long enough to measure up to 8 kilometers. Measure a length of 6 km and 3 hm on the scale.
- Q8)** A right regular pentagon prism of side 30 mm and 60 mm height is resting on its base on HP having one of its base edges perpendicular to the VP. An A.I.P. inclined to HP at  $30^\circ$  and perpendicular to the VP cuts its axis at a distance of 36 mm from the base. Develop the lateral surface of the truncated prism.
- Q9)** Incomplete the orthographic projection of an object as shown in Figure. Draw the missing lines in these views.

