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BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

January 2017 Semester End Make Up Examinations

Course: Elements of Engineering Drawing — Duration: **3 hrs**
Course Code: **14ME1ICEED** — Max Marks: **100**

Date: 11.01.2017

Instructions: **Answer FIVE FULL questions, Selecting one from each unit .**

UNIT 1

1 a) Draw the three principal views of a point P lying 40mm behind VP. 60mm below HP and 30mm behind the right profile plane. **06**

b) The end A of the line is in H.P and 25mm in front V.P. The end B is in V.P and 50mm above H.P. The distance between the end projectors is 75mm. Draw projections of AB and determine its true length and true inclinations. **14**

OR

2 a) A point P is 40mm in front of VP, 50mm above HP and 30mm infront of left PP, Draw the three principal views of the point. **06**

b) Three vertical poles AB, CD, EF are respectively 2.5m, 4m and 6m long. Their ends B,D, and F are on the ground and form the corners of an equilateral triangles of 5m long side. Determine graphically the distance between the top ends of the poles namely AC, CE and AE. Also find their inclination with ground. **14**

UNIT 2

3 A hexagonal lamina of sides 30mm is resting on HP with one of its corners in such a way that two of its parallel sides appear shorter by 30 percent in top view and are perpendicular to XY in both views. Draw its projections. **20**

UNIT 3

A pentagonal pyramid of 30mm side of base and axis 80mm long has an edge of the base in VP and inclined at 30^0 to HP. The triangular face containing that edge makes an angle of 45^0 with VP. Draw the projections. **20**

OR

5 A cylinder of base diameter 60mm and axis 60mm is suspended freely from a point on its circular rim. The projection of the axis on HP is inclined at 45^0 to XY line. Draw the projections. **20**

UNIT 4

6 A Pentagonal pyramid of 30mm edge of base and 55mm high vertically rests with one of its base edges parallel to VP and nearer to it. It is cut by two section planes, both being perpendicular to VP. One of the section planes is horizontal and cuts the portion of the pyramid on the left of the axis at a height of 20mm above the base of the pyramid. The other section plane inclined at 45^0 to HP cuts the portion of the pyramid to the right of the axis passing through a point on it 20mm above the base and leans upwards. Draw the development of the lateral surfaces of the lower portion of the pyramid. **20**

UNIT 5

7	A cylindrical slab of 75mm diameter, 50mm thick is surmounted by a cube of 40mm side. On the top of cube rests a pentagonal pyramid of 40 mm height and base width 25mm. The axes of all the solids are in the same straight line. Draw the isometric projection of the combined solids.	**20**

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