

Hall Ticket Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Code No. : 11018

**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**  
**B.E. (CBCS) I-Semester Main Examinations, December-2017**

**Engineering Graphics – I**  
(Common to Civil, EEE & Mech.)

Time: 3 hours

Max. Marks: 60

*Note: Answer ALL questions in Part-A and any FIVE from Part-B*

**Part-A (10 × 2=20 Marks)**

1. List the order of priority when two or more lines of the following coincide: cutting plane, axis, visible line and invisible line.
2. The RF of the scale is 1/30000, construct a plain scale to read 4.7 km. Mark a distance of 2.5 km on it.
3. Draw a line 110mm long. Divide it into nine equal parts.
4. Construct a Heptagon of side 40 mm using circumscribing circle method.
5. Draw the symbolic representations for first angle and third angle projection methods.
6. Draw the projections of a line AB, 70 mm long, is perpendicular to the HP and behind the VP. The nearest point from the HP is B, which is 20 mm from the VP and 15 mm below the HP.
7. Draw the projections of a square plate of 35 mm sides when it has its surface vertical while its one edge is inclined at  $30^{\circ}$  to the HP.
8. The surface of a square of 30 mm sides is parallel to HP with one of the edges perpendicular to VP. Draw the projections when its centre is 40 mm in front of VP and 20 mm above HP.
9. A cube having its side 40 mm long has one of its faces on the HP with one of the vertical faces inclined at  $30^{\circ}$  to the VP. Draw its projections.
10. A square pyramid, base 25 mm and axis 50 mm, rests on its base on HP with an edge of the base inclined at  $30^{\circ}$  to the VP. The axis of the pyramid is 40 mm in front of VP.

**Part-B (5 × 8 = 40 Marks)**

11. a) Draw a Vernier scale of RF = 1/25 and capable of reading meters, decimetres and centimetres. Show a length of 3 m, 6 decimetres and 7 cm on it. [5]  
b) Construct a plain scale to read centimetre and millimetre to measure 5 cm with RF is equal to 2. Show on it a distance of 3.6 cm. [3]
12. a) A fixed point F is 50 mm from a fixed vertical straight line. A point X moves in the same plane in such a way that its distance from the fixed straight line is 1.5 times the distance from the fixed point. Draw the locus of the point. Name the curve traced by the moving point. [5]  
b) A bullet, fired in the air, reaches a maximum height of 75 m and travels a horizontal distance of 110 m. Trace the path of the bullet, assuming it to be parabolic. Use 1 : 1000 scale. [3]

Contd...2