SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E/B.Tech - EIE/E&C/CSE/IT/ECE/EEE/ETCE/BME
Title of the paper: Engineering Graphics
Semester : I — Max. Marks: 80
Sub.Code: 5ET116/6C0005 — Time: 3 Hours
Date: 15-05-2007 — Session: FN

PART – A (10 x 2 = 20)

Answer ALL the Questions

1. What is the size of the drawing board as per IS?
2. What is a oblique line?
3. How is the position of solid described with reference to HP and VP?
4. When the axis of solid is inclined to HP parallel to VP what view should be drawn first?
5. What is meant by true section?
6. Why the development of objects drawn to true lengths?
7. Define isometric scale.
8. Mention any four uses of perspective drawings.
9. Define vanishing point.
10. Give any four kinds of views normally used.

PART – B (5 x 12 = 60)

Answer All the Questions

11. a) A point is 30mm below HP and 40mm behind the VP. Draw the projections. (4)

    b) A line PQ 40mm long is perpendicular to HP and 20mm in front of VP. The end nearer to the HP is 15mm above it. Draw the projections of the line. (8)

(or)

12. A line AB has its ends 15mm and 50 mm above the HP and the length of its front view is 65mm. The line is 25° to the HP. The H.T of the line is 20mm in front of the VP. Draw the projections of the line and find its true length and true inclination with the VP. Also show its V.T.

13. Draw the projection of a pentagonal prism, base 25mm side axis 70mm long, resting on one of its rectangle faces on the ground, with its axis parallel to both the planes.

(or)

14. A cone base 40mm diameter and 70mm height has its axis parallel to VP and inclined at 35° to HP. Draw its projections.

15. A hexagonal pyramid side of base 25mm and axis 55mm long rests with its base on HP such that one of the edges of its base is perpendicular to VP. It is cut by a section plane perpendicular to HP, inclined at 45° to VP and passing through the pyramid at a distance of 10 mm from the axis. Draw the sectional front the view and the true shape of section.

(or)

16. A cone of base 50mm diameter and height 65mm rests with its base on HP. A section plane perpendicular to VP and inclined at 30° to HP bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone.

17. Four square rods of 20 x 20mm cross section and lengths 100mm, 40mm, 40mm and 30mm are so fixed together that they form the letter E. 100mm rod forms the vertical leg of the letter. Draw the isometric view of the letter E.

(or)

18. A rectangular prism 40 x 30 x 15mm rests on the ground on one of its ends with one of the longest edges touching the PP and the shortest edges receding to the left at an angle of 40° to

the PP. The nearest vertical edge is 15mm to the left of the station point which is at a distance of 55 mm in front of the PP and 30mm above the ground. Draw the perspective view of the prism.

19. Draw the top view, front view, right side view and left side view of the objects shown in fig.1

DRAW DIAGRAM

(or)

20. Draw the top view, front view, right side view of the objects shown in fig.2

DRAW DIAGRAM