NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

Engineering Graphics Sessional (XES 51), 2018-19

SECTION OF SOLIDS (using perpendicular planes)

Class Assignment: Prob. # 2, 10, 15

Home Study: Rest of the problems (with special attention to Prob. # 3, 4, 8, 16)

1

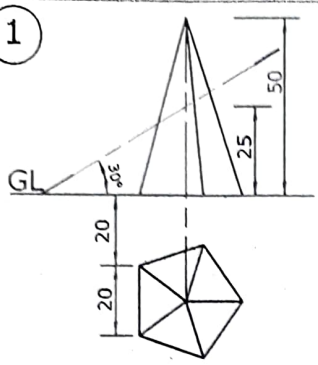

FIG. 1

Plan and elevation of a pyramid, whose base is a regular pentagon of side 20 mm, is given in FIG.1. Draw sectional plan, sectional view from left and true shape of section.

2

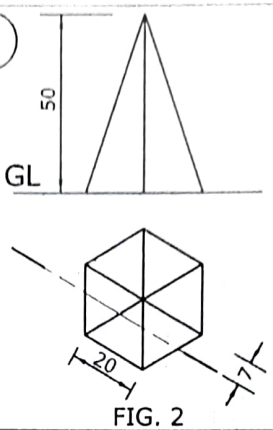

FIG. 2

FIG. 2 shows the plan and elevation of a pyramid of regular hexagonal base of side 20 mm. Draw the sectional elevation, sectional view from left and true shape of section.

3

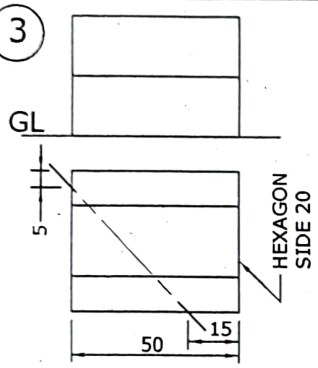

FIG. 3

FIG. 3 shows the plan and elevation of a regular hexagonal prism lying on HP with one of its rectangular faces on HP, axis being parallel to both HP and VP. Draw the sectional view from left, sectional elevation, true shape of section.

4

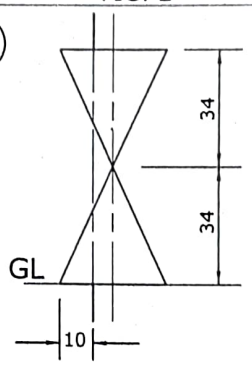

FIG. 4

Elevation of a double cone of base dia 32 mm is given in FIG. 4. Draw the plan and sectional view from left.

5

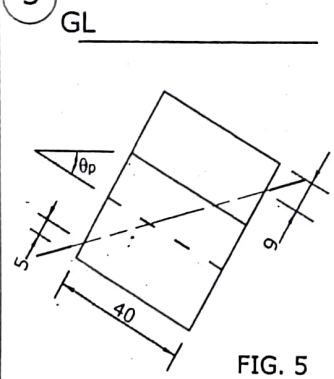

FIG. 5

FIG. 5 shows the plan of a cube of side 40 mm, placed on HP with one edge on HP. The edge is at an angle θp with the VP and one of the faces containing that edge makes 30° with HP. Draw sectional elevation, sectional view from right and true shape of section for (a) θp = 90°, (b) θp = 30°, (c) θp = 0°

6

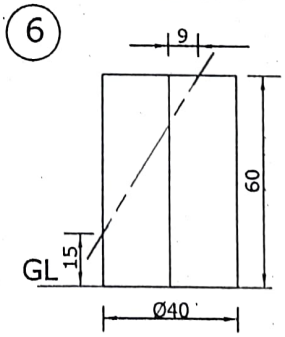

FIG. 6

FIG. 6 shows the elevation of a cylinder with base on HP. Draw sectional plan, sectional view from left and true shape of section.

7

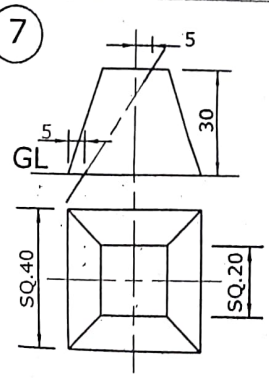

FIG. 7

Views of a truncated pyramid of square base are given in FIG.7. Draw the sectional plan, sectional view from left and true shape of section.

8

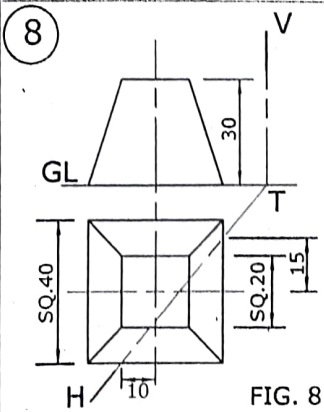

FIG. 8

FIG. 8 shows the plan and elevation of a truncated pyramid of square base. Draw the sectional elevation, sectional view from right and true shape of section.

9

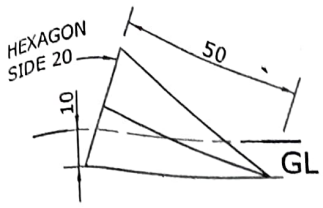

FIG. 9

FIG. 9 shows the elevation of a hexagonal pyramid of 20 mm base sides with one triangular face on HP. Draw the sectional plan.

10

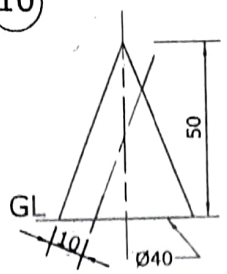

FIG. 10

FIG. 10 shows the elevation of a cone of base dia 40 mm, standing with its base on HP. Draw the sectional plan, sectional view from left and true shape of section.

11

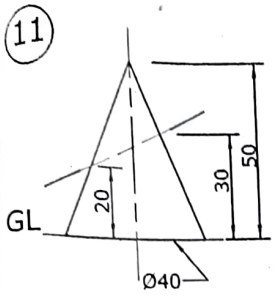

FIG. 11

A cone is resting with its base on HP. FIG. 11 shows the elevation of the cone. Draw the sectional plan, sectional view from left and true shape of section.

12

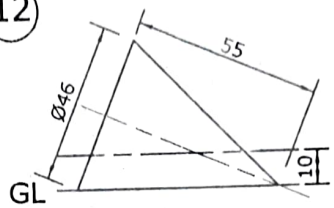

FIG. 12

FIG. 12 shows the elevation of a cone with its curved surface on HP. Draw the sectional plan.

13

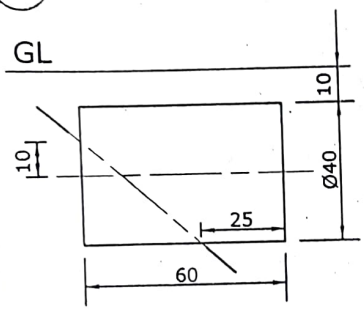

FIG. 13

FIG. 13 shows the plan of a cylinder (curved surface on HP). Draw the sectional view from left, sectional elevation, and true shape of section.

14

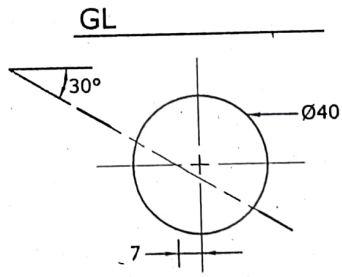

FIG. 14

FIG. 14 shows the plan of a cone, height 50 mm, base on HP. Draw sectional elevation, sectional view from left and true shape of section.

15

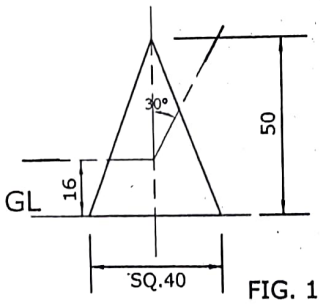

FIG. 15

FIG. 15 shows the elevation of a square pyramid. Draw the sectional plan and sectional view from left.

16

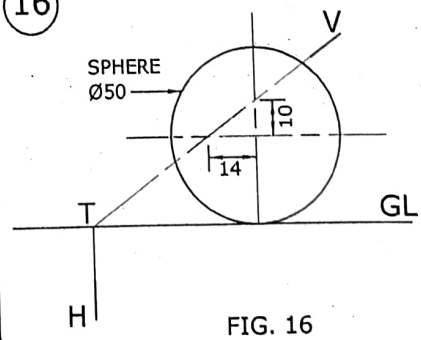

FIG. 16

Elevation of a sphere of diameter 50 mm is shown in FIG. 16. Draw the sectional plan, sectional view from left and true shape of section.

17

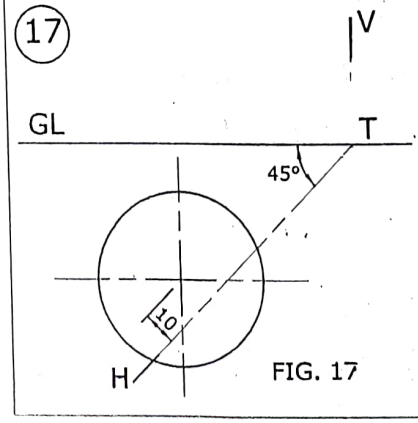

FIG. 17

FIG.17 shows the plan of a sphere of diameter 56 mm resting on HP. Draw sectional elevation, sectional view from right and true shape of section.

18

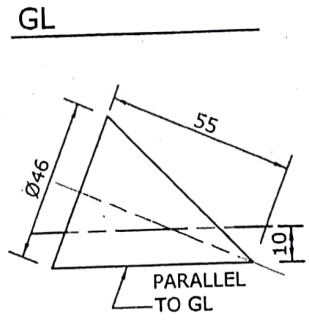

FIG. 18

FIG. 18 shows the plan of a cone with its axis parallel to and 23 mm above HP. Draw the sectional elevation.