Code No.: 1207S

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. I Year II-Semester (Supplementary) Examinations, Dec./Jan.: 2015-16

Engineering Graphics - II

Time: 3 hours

Max. Marks: 70

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

Part-A (10 X 2=20 Marks)

1. Define sectional view with a suitable example.
2. Describe the method to obtain the true shape of the section that can be obtained when a solid is cut by an auxiliary inclined plane.
3. Explain the method to draw the development of regular cone.
4. Draw the development of a hexagonal pyramid with axis 50mm and base side 20mm.
5. Explain in brief the method of determining the curve of intersection using line or generator method.
6. Briefly discuss the process of deciding the visibility of the curve of intersection.
7. Define isometric axis and isometric planes and isometric scale.
8. Draw isometric projection of a hexagonal prism resting on ground on one of its lateral surface. Side: 30mm and axis: 60mm.
9. Draw all the views possible for a simple circular cone.
10. When do you need hidden lines to be highlighted during the process of converting isometric views to orthographic views?

Part-B (5 X 10=50 Marks)

11. A tetrahedron of edge length 50mm is resting on one of its faces with an edge of that face perpendicular to the VP. A cutting plane perpendicular to the VP and inclined to the HP cuts the solid so that the true shape of the section is an isosceles triangle with a 30mm base and 35mm altitude. Draw the front view, sectional top view and the shape of the section. [10]

12. A cone with radius of the base 40mm and height 90mm has its circular base on the HP. A string is wound around the lateral surface of the solid starting from a point P on the base and returned to the same point by the shortest path. Show the string in elevation and plan. [10]

13. A vertical cylinder of 50mm diameter of the base and 70mm length of the axis is penetrated by a cylinder of 40mm diameter and 120mm length. The axis of the penetrating cylinder is parallel to the VP and inclined at 30° to the HP and bisects the axis of the vertical cylinder. Draw the projections showing the curves of intersection. [10]

14. Draw isometric view of combination of solids: A sphere of radius 20mm resting centrally on a hexagonal prism of side 40mm and axis 60mm and prism is mounted centrally on a cube of side 60mm. [10]

15. Convert the following isometric drawing into the orthographic views (FV, TV & SV)　　　[10]
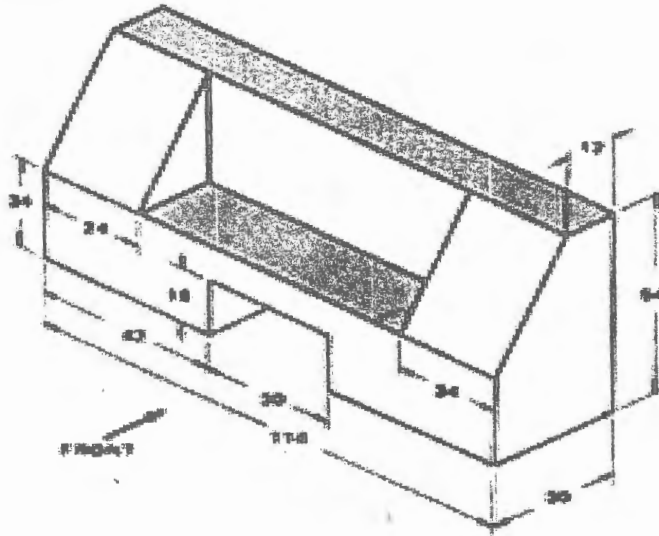
All Dimensions are in mm

16. A pentagonal pyramid with edge length of base 25mm and axis 40mm has one of its side　　[10]
surfaces on the HP with the axis parallel to the VP. It is cut by a section plane perpendicular
to the HP, inclined at 45º to the VP and bisecting the axis. Draw the top view and the
sectional front view of the pyramid, if the apex is removed.

17. Answer any **two** of the following:
　　a) Draw development of a cube side: 50mm with a through circular hole of diameter　　[5]
　　　　25mm on one of its faces.
　　b) Describe the box method of drawing the isometric drawings with a suitable example.　　[5]
　　c) Differentiate between isometric view and isometric projection.　　[5]

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