

BITS, Pilani – Dubai Campus

Knowledge Village, Dubai
I Year – I Semester 2005 – 2006

COMPREHENSIVE EXAMINATION

Course No. : TA UC111.
Course Title : Engineering Graphics.
Nature of Exam : Closed Book.
Weightage : 40 %
Duration : 90 minutes.
Date : 27.12.2005.

No. of Pages	= 1
No. of Questions	= 4

NOTE: Save your drawings every 5 minutes.

- Q1. A square prism of base side 35mm and axis 65 mm rests on the HP on its base with two of its rectangular faces equally inclined to the VP. It is cut by a plane perpendicular to the VP and inclined at 20° to the HP meeting the axis 40 mm from the base. Using third angle projection:
- Draw the projections of the solid.
 - Locate the cutting plane.
 - Show the sectional view.
 - Obtain the true shape of the section.
 - Mark the necessary dimensions.
- (10 marks)
- Q2. As part of a technical exhibition a group of students from BPDC do a working model of the cupola furnace. They decide to design the chimney of the furnace as a frustum of a hexagonal pyramid using copper sheets. Draw the development of the copper sheet that will form the chimney, if the base side is 45 cm, topside is 25 cm and the height of the frustum is 65 cm. Use first angle projection.
- (10 marks)
- Q3. A pipe joint involves the intersection of a vertical cylinder of base diameter 45 mm, axis height 75 mm with a horizontal square prism of base side 25 mm, axis height 55 mm. The axes of both the solids intersect each other and the base edges of the prism are equally inclined. Using first angle projection:
- Draw the projections of the solids (TV, FV and SV).
 - Locate the points of intersection.
 - Show the curves/lines of intersection.
 - Mark the necessary dimensions
- (10 marks)
- Q4. For the upcoming Dubai Shopping Festival, the Garhoud Bridge is to be decorated with illuminated sticks on its sidewalls. The sticks are to be attached to pairs of pegs projecting from the walls. Determine the true length to which the sticks are to be cut if each pair of pegs is 1.9 m and 3.2 m above the road and 1.4 m and 2.4 m in front of the sidewall. The distance between the pegs measured along the road and parallel to the wall is 5.5 m. (Use dim precision = 0.0)
- (10 marks)

All the BEST

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TEST – I

Course No. : TA UC111.
Course Title : Engineering Graphics.
Nature of Exam : Closed Book.
Weightage : 20 %
Duration : 1 hour.
Date : 16.10.2005.

No. of Pages	= 2
No. of Questions	= 4

NOTE: Answer all the questions. Save your drawing files every five minutes.

Part A

1. Snap and Grid are used to control the cursor movement. (True/False) (1 mark)
2. In figure for Q2, out of the three views, at least one view is incomplete. Add the missing line(s) and draw the isometric view of the same. (3 marks)

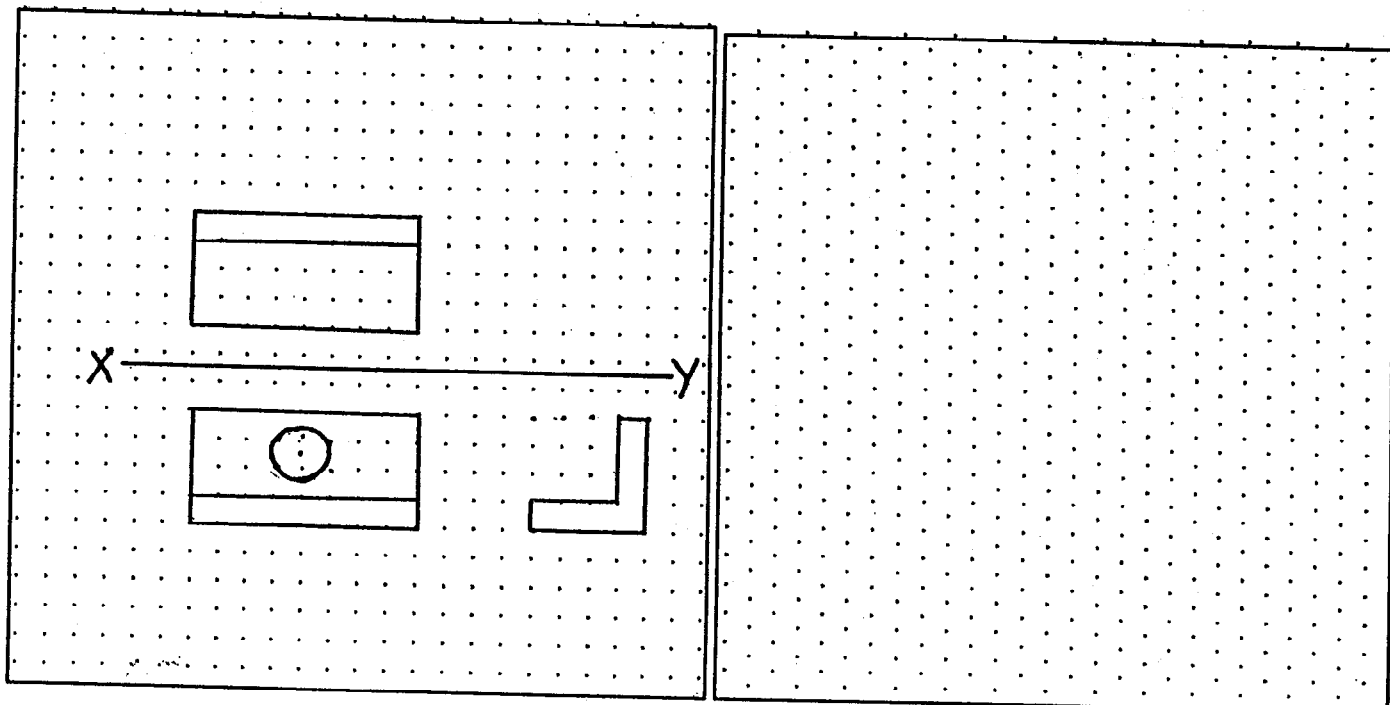


Fig. Q2

Part B

3. Draw the top view, front view and visible side view of the object shown in figure Q3. Use first angle projection. Show all the necessary dimensions. (10 marks)
4. Orthographic projections of an object are given in figure Q4. Obtain the isometric view. Show the direction of the front view in the isometric. (6 marks)

