BITS, PILANI – DUBAI CAMPUS
KNOWLEDGE VILLAGE, DUBAI.

I Year – II Semester 2003 – 2004

COMPREHENSIVE EXAMINATION

Course No.	**: TA UC111.**	**Course Title**	**: Engineering Graphics.**
Duration	**: 90 minutes.**	**Max. Marks**	**: 40**
Date	**: 24.05.04.**	**Weightage**	**: 40 %**

Note:

i. Save the drawing files in your ID No. followed by COMP. (____COMP)
ii. Use metric units and proper limits.

---

1. A pentagonal pyramid, side of base 30 mm and axis 60 mm long, rests with its base on the ground and one of the edges of the base perpendicular to the V.P. It is cut by a section plane perpendicular to the V.P., parallel to the H.P. and passing through the axis at a point 35 mm above the base. Draw the front view and the sectional top view. Use third angle projection.

(10 marks)

2. Two oranges on a tree are respectively 1.8 m and 3 m above the ground and 1.2 m and 2.1 m in front of a 0.3 m thick wall. The distance between the oranges measured along the ground and parallel to the wall is 2.7 m. Determine the real distance between the oranges.

(10 marks)

3. A monument in the form of a frustum of a square pyramid of base 1.2 m side, top 0.5 m side and height 1.0 m. An electrical connection is to be made along the surface of this monument between one corner of the base and diagonally opposite corner on the top. Draw the development of the monument and find the shortest distance of the wire required.

(10 marks)

4. A square prism of base edge 50 mm rests on one of its ends on the H.P. with the base sides equally inclined to the V.P. It is intersected by another square prism of base edge 30 mm. The axis of the intersecting prism is inclined at 30° to the H.P. and is parallel to the V.P. The faces of the inclined prism are also equally inclined to the V.P. Draw the projections of the solids and show the curves of intersection. Use first angle projection.

(10 marks)

BITS, PILANI – DUBAI CAMPUS
KNOWLEDGE VILLAGE, DUBAI.

I Year – II Semester 2003 – 2004

COMPREHENSIVE EXAMINATION

Course No.	**: TA UC111.**	**Course Title**	**: Engineering Graphics.**
Duration	**: 90 minutes.**	**Max. Marks**	**: 40**
Date	**: 24.05.04.**	**Weightage**	**: 40 %**

Note:

i. Save the drawing files in your ID No. followed by COMP. (____COMP)
ii. Use metric units and proper limits.

---

1. A hexagonal pyramid, side of base 35 mm and axis 65 mm long, rests with its base on the H.P. and two of the edges of the base parallel to the V.P. It is cut by a section plane perpendicular to the V.P., parallel to the H.P. and passing through the axis at a point 40 mm above the base. Draw the front view and the sectional top view. Use first angle projection.

(10 marks)

2. Two apples on a tree are respectively 1.6 m and 3.2 m above the ground and 1.4 m and 2.2 m in front of a 0.3 m thick wall. The distance between the apples measured along the ground and parallel to the wall is 2.6 m. Determine the real distance between the apples.

(10 marks)

3. A monument in the form of a frustum of a square pyramid of base 1.2 m side, top 0.5 m side and height 1.0 m. An electrical connection is to be made along the surface of this monument between one corner of the base and diagonally opposite corner on the top. Draw the development of the monument and find the shortest distance of the wire required.

(10 marks)

4. A square prism of base edge 50 mm rests on one of its ends on the H.P. with the base sides equally inclined to the V.P. It is intersected by another square prism of base edge 30 mm. The axis of the intersecting prism is inclined at 45° to the H.P. and is parallel to the V.P. The faces of the inclined prism are also equally inclined to the V.P. Draw the projections of the solids and show the curves of intersection. Use third angle projection.

(10 marks)

Batch 2

BITS, PILANI – DUBAI CAMPUS

Knowledge Village, Dubai

I Year – II Semester 2003 – 2004
TEST – I (make up)

Course No. : TA UC111.
Time : 1 hour

Course Title : Engineering Graphics.
Max. Marks : 20 Weightage : 20 %

NOTE:

i. Answer all the Questions.
ii. Save the drawing files in your ID No. followed by TEST1.
iii. Use metric units and proper limits.
iv. All dimensions are in mm.

1. Draw the front, top and right side view of the object shown in fig.1. Use third angle projection. Show the dimensions.

(10 marks)

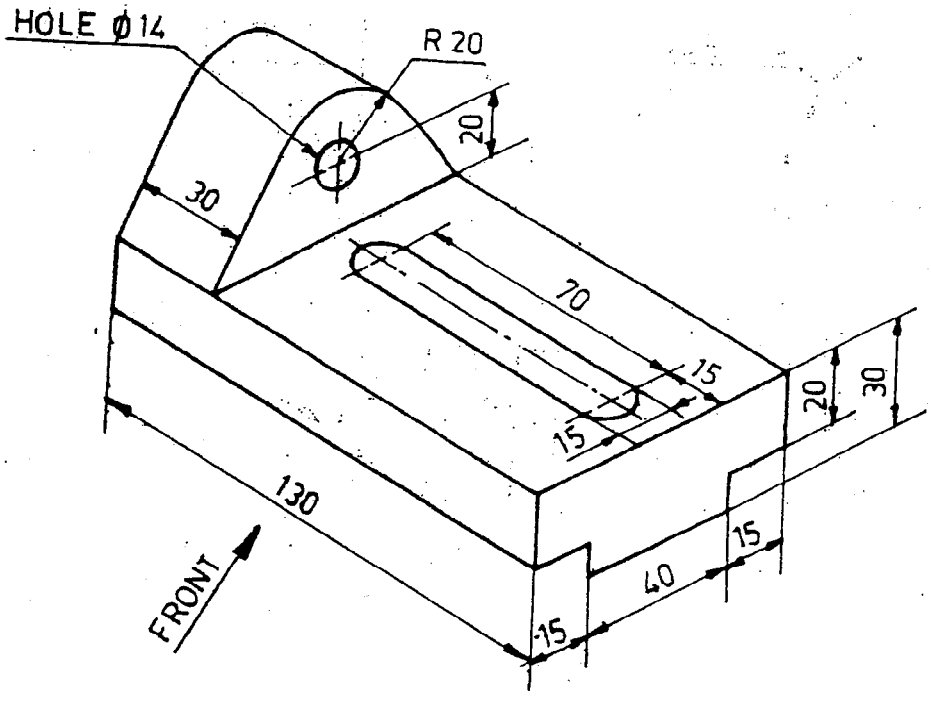

FIG. 1.

2. Draw the isometric views of the semi – circular plate shown below.
   a. lying horizontally.
   b. lying vertically.

(5+5 marks)

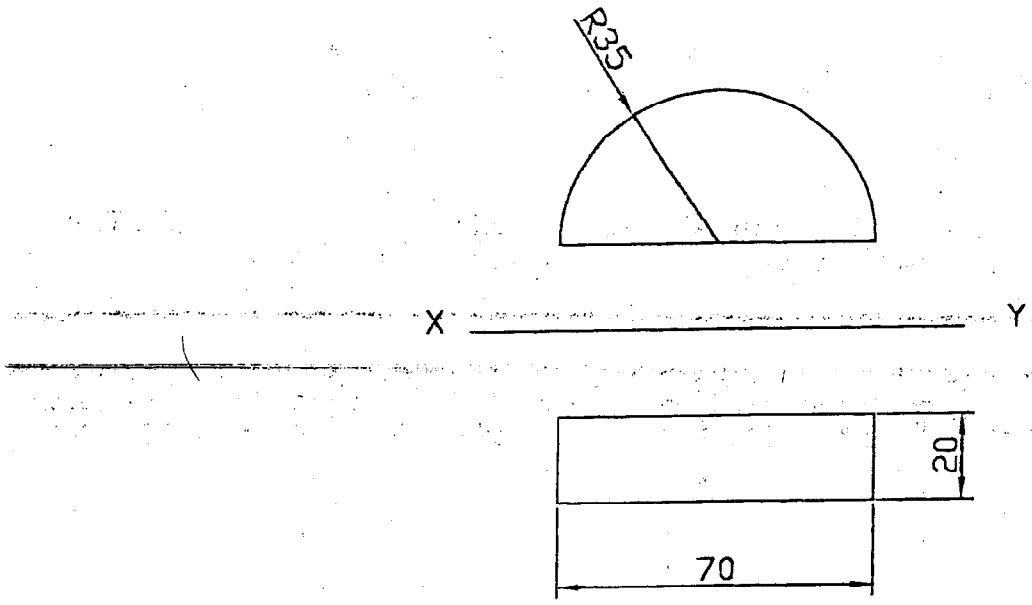

FIG. 2. a.

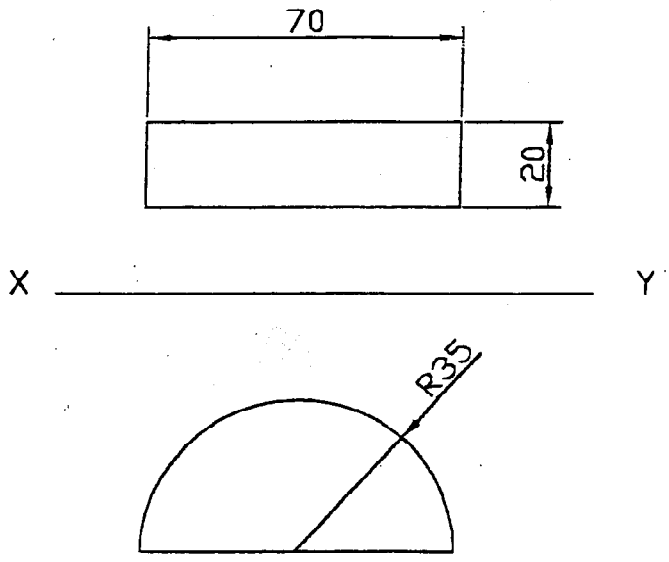

FIG. 2. b.

BITS, Pilani – Dubai Campus
Knowledge Village, Dubai

I Year – II Semester 2003 – 2004

TEST – I

Course No. : TA UC111. **Course Title : Engineering Graphics.**
Time : 1 hour **Max. Marks : 20 Weightage : 20 %**

NOTE:
i. Answer all the questions.
ii. Save the drawing files in your ID No. followed by TEST1.
iii. Use metric units and proper limits.
iv. All dimensions are in mm.

Part A

1. Define auxiliary plane and auxiliary view. (2 marks)

2. Give any one application of auxiliary projections. (1 mark)

Part B

1. Draw the front, top and visible side view of the object shown in figure.1. Use third angle projection. Show all the necessary dimensions.

(7 marks)

2. Incomplete projections of a solid are shown in figure 2.
   a. Find the missing view and draw the complete orthographic projection. Use first angle projection.

(5 marks)

   b. Draw the isometric view of the solid.

(5 marks)

P.T.O.

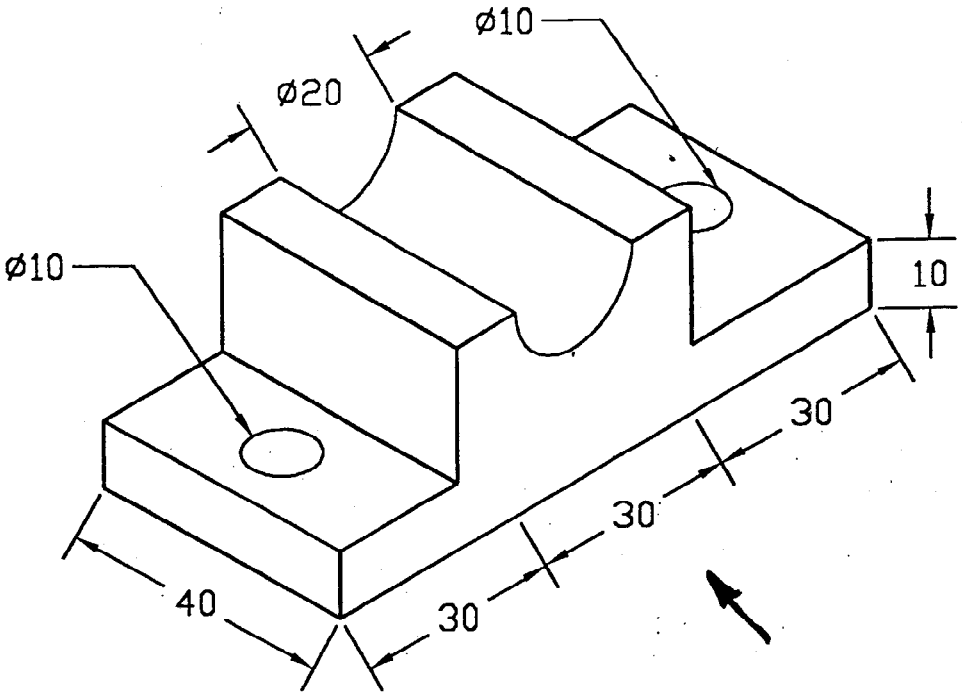

Figure 1

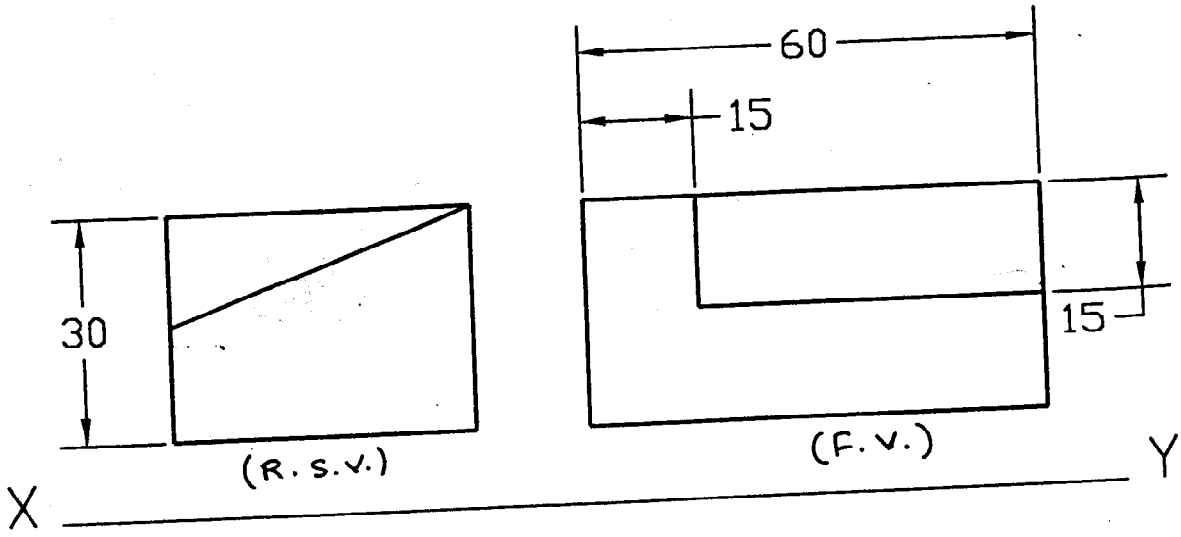

Figure 2

BITS, Pilani – Dubai Campus

Knowledge Village, Dubai

I Year – II Semester 2003 – 2004

TEST – I

Course No. : TA UC111. **Course Title : Engineering Graphics.**
Time : 1 hour **Max. Marks : 20 Weightage : 20 %**

NOTE:

i. Answer all the questions.
ii. Save the drawing files in your ID No. followed by TEST1.
iii. Use metric units and proper limits.
iv. All dimensions are in mm.

Part A

1. Define auxiliary plane and auxiliary view. (2 marks)

2. Give any one application of auxiliary projections. (1 mark)

Part B

1. Draw the front, top and visible side view of the object shown in figure.1. Use third angle projection. Show all the necessary dimensions.

(7 marks)

2. Incomplete projections of a solid are shown in figure 2.
   a. Find the missing view and draw the complete orthographic projection. Use first angle projection.

(5 marks)

   b. Draw the isometric view of the solid.

(5 marks)

P.T.O.

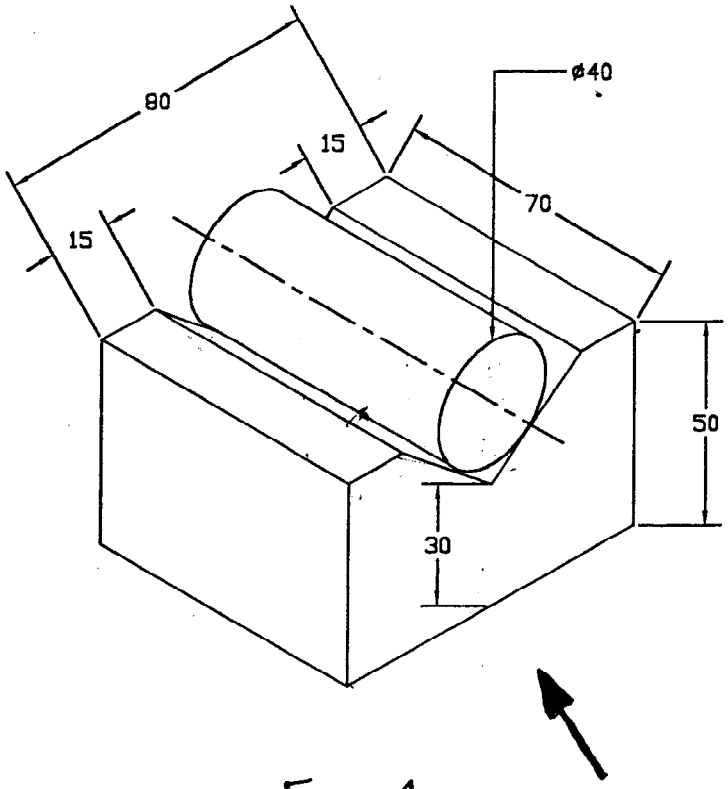

Figure 1

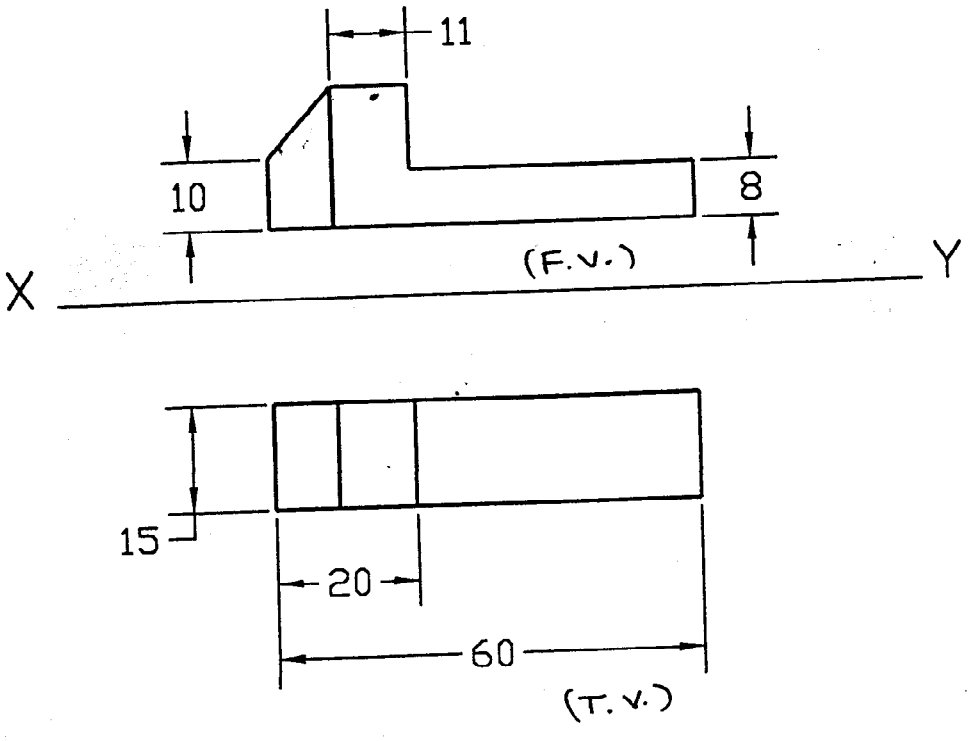

Figure 2

BITS, PILANI – DUBAI CAMPUS
Knowledge Village, Dubai

I YEAR - II Semester 2003-2004

TEST 1

Course No. : TA UC111.
Time : 60 minutes.
Date : 04.04.04.

Course Title : Engineering Graphics.
Max. Marks : 20
Weightage : 20 %

KEY

Q1. View — (1)
Plane — (1)
application — (1)

Q2. TV — (2)
FV — (2)
SV — (2)
Dimensions — (1)

Q3. (a) missing view — (2)
Dimensions — (1)
Other views (question) — (2)

(b) Box method — (2)
complete isometric — (2)
Accuracy — (1)

20