Reg. No.										

MANIPAL UNIVERSITY

FIRST SEMESTER B. ARCH. DEGREE EXAMINATION – NOVEMBER 2015

SUBJECT: ARC 105 & 107 - ARCHITECTURAL GRAPHICS I
(COMMON FOR 2010 & 2007 SCHEME)

Thursday, November 19, 2015

Time: 14:00 – 17:00 Hrs. Max. Marks: 50

✍ **Answer any FIVE FULL questions. Missing data, if any, may suitably be assumed.**

1A. The distance between the centres of two circles is 90 mm. The radii of the circles are 30 mm and 45 mm. Draw an arc of radius 50 mm tangential externally to both the circles.

1B. The major axis of an ellipse is 130 mm long and the minor axis is 90 mm long. Draw one half of the ellipse by rectangle method and the other half by concentric circles method.

(5+5 = 10 marks)

2A. Trace the conic section when the focal point is at a distance of 40 mm from the directrix and eccentricity of the curve is 1. Name the curve.

2B. Draw a pair of hyperbolae when the distance between the foci is 100 mm and the distance of the vertices is 20 mm from the foci.

(5+5 = 10 marks)

3A. A rectangular lamina of 40 mm × 60 mm sides is resting such that one edge is touching HP and its opposite edge is touching VP. If it appears as a square of 40 mm in plan, draw its plan and elevation and determine its inclination with HP.

3B. An equilateral triangular lamina of 40 mm sides is resting in HP with an edge touching HP such that the lamina is inclined at 30° to HP. The edge on which it rests is inclined to VP at 40°. Draw its plan and elevation.

(5+5 = 10 marks)

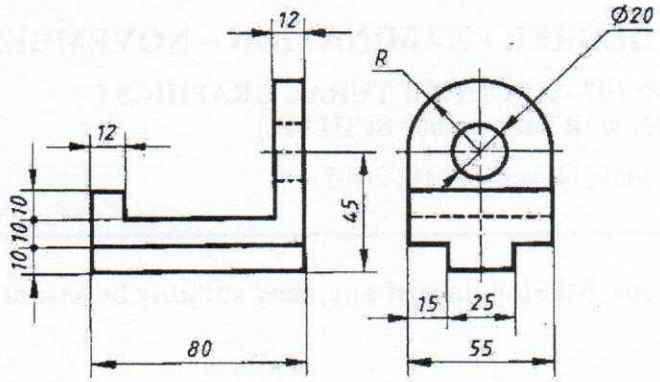
4. A cylinder of base diameter 50 mm and axis height 75 mm is resting on HP with a point on its circumference touching HP such that its circular base is inclined to HP at 30° and axis appears to be perpendicular to VP. Draw its plan and elevation.

(10 marks)

5. A hexagonal pyramid of 30 mm sides of base and axis height 70 mm is resting on HP with a triangular face touching HP such that its axis appears to be inclined to VP at 45°. Draw the plan and elevation.

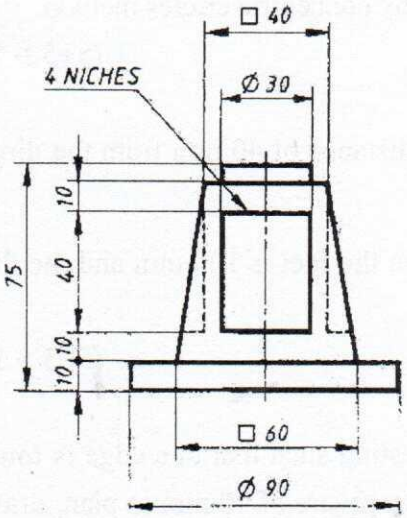
(10 marks)

6A. Orthographic projections of an object are shown in figure below. Draw its isometric projection. All dimensions are in mm.



Right View Elevation

6B. Draw the axonometric projection of an object whose orthographic projections are as shown in Fig below. All dimensions are in mm.



Right view & Elevation

(5+5 = 10 marks)