Code No: 51012 **R09**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year Examinations, June - 2015
ENGINEERING DRAWING
(Common to ME, MMT)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1.a) Construct a hyperbola when the distance from focus is 70 mm and eccentricity is 3:2. Draw normal and tangent from a point 20 mm above the axis.
b) A circle of 50 mm diameter rolling on a plain ground for one complete revolution. Trace the path of a point on the circumference of circle without slipping. [7+8]

2.a) A line AB 70 mm long is in H.P such that one end A is 10 mm in front of V.P and other end is 40 mm in front of V.P. Draw the projections.
b) A line AB 80 mm long has its end A is in HP and 15 mm in front of V.P. It is 35^0 to H.P and 50^0 to V.P. Draw the projections and find the traces. [7+8]

3. A Hexagonal prism of 30 mm side, axis 70 mm is resting on one of its base edges in H.P and inclined at 30^0 to V.P. Its axis makes an angle of 50^0 with H.P. Draw the projections. [15]

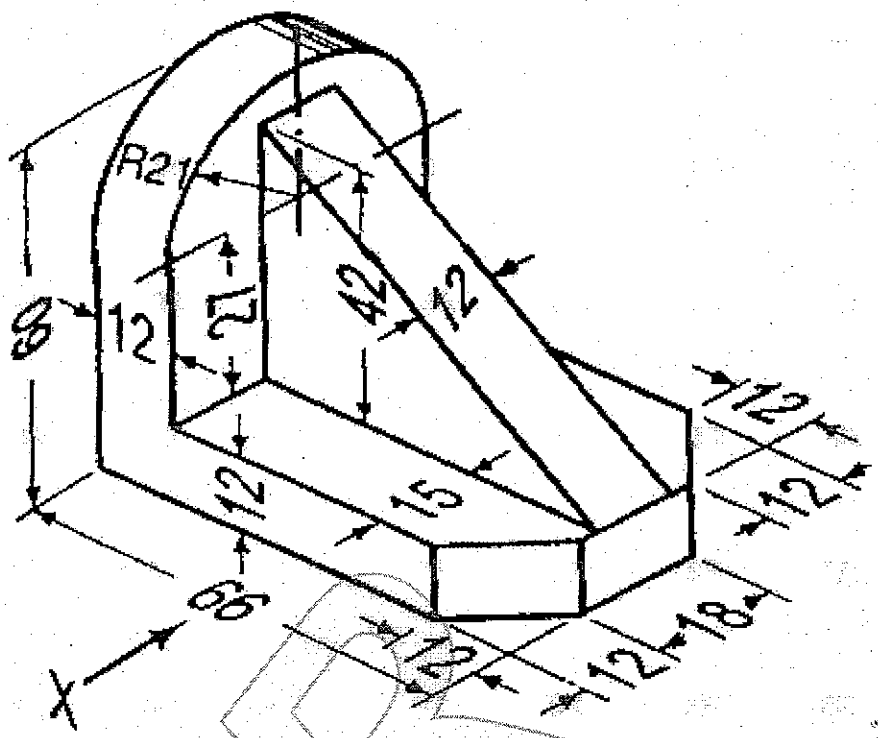
4. A cylinder of 50 mm diameter and height 7 cm. is resting on its base in H.P. It is cut by a section plane perpendicular to V.P, inclined at 30^0 to H.P and passes through left top corner of the cylinder. Draw the development of the lateral surface of the cut cylinder. [15]

5. A square prism of base side 50 mm height 120 mm is resting on its base in H.P, such that all the edges of the base are equally inclined to V.P, it is penetrated by another square prism of 30 mm side 120 mm length, such that axis is parallel to H.P and V.P and all the edges are equally inclined to H.P. Draw the projections showing the lines of intersection. [15]

6. A Sphere of 30 mm diameter is placed centrally on the top of frustum of square pyramid of top face side 40 mm. bottom face side 60 mm and height 60 mm. Draw the isometric projection of the combination. [15]

7. A rectangle of 50 mm × 30 mm sides lies on the ground. The corner nearest to pp is 15 mm behind it and an edge containing that corner is making 30^0 with pp. The station point is 30 mm in front of pp, 50 mm above GP and lies in a central plane passing through the mid-point of the rectangle. Draw the perspective projection of the rectangle. [15]

8. Draw front view, top-view and side view for the component shown in figure. All dimensions are in mm. [15]



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