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COMBINED FIRST AND SECOND SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, MAY 2010

EN 09- 108 (A) ENGINEERING GRAPHICS (A)

(2009 admissions)

(Common to B.Arch. AE, AN, AU, BT, EC, EEE, JC, PE, PT)

Time: Three Hours

Maximum: 70 Marks

Answer three questions from Part A and any two questions from Part B.

All questions carry equal marks.

Part A

1. (a) The mid-point of a straight line AB 90 mm long is 60 mm above the HP and 50 mm in front of VP. It is inclined at 30 degree to HP and 45. degree to YP. Draw its projections.

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- (b) A circular lamina of diameter 65 mm has the end C of the diameter CD in the HP and the end D in the VP. Draw its top and front views when its surface is inclined at 45° to HP and 35° to the VP.
- 2. (a) A pentagonal pyramid of base side 30 mm and altitude 65 mm is resting on ground on one of its one of its base edges with the axis inclined at 35° to HP and parallel to VP. Draw its projections.

Or

- (b) A hexagonal pyramid of base of side 25 mm and altitude 50 mm rests with its base on HP with two edges of the base perpendicular to VP. A cutting plane inclined at 45° to HP cuts the pyramid at a height of 20 mm above the base. Draw the sectional top view and the true shape of section.
- 3. (a) A hexagonal prism of base side 30 mm and axis length 60 mm is resting on HP on its base with two of its vertical faces perpendicular to VP. It is cut by a plane inclined at 50° to HP and perpendicular to VP and meets the axis of prism at a distance 10 mm from the top end. Draw the development of the lateral surface of the prism.

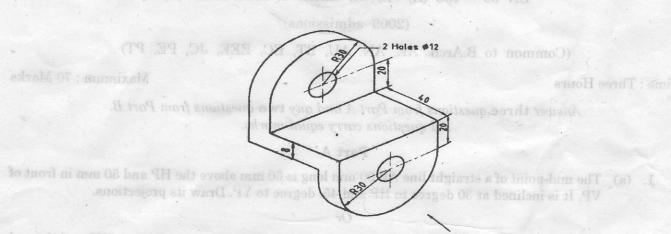
Or

(b) Draw the development of the lower portion of a cylinder of diameter 45 mm and the axis 60 mm. and it is cut by a plane inclined at 35° to the HP, perpendicular to the VP and bisecting the axis.

Part B

4. A square pyramid of base 30 mm side and axis 65 mm height rest on the ground on its base with base edge parallel to VP. It is cut by a plane perpendicular to the VP, inclined to the HP bisects the axis. Draw the isometric projection of the square pyramid.

- 5. A hexagonal pyramid of base side 25 mm and axis length 50 mm is resting on GP on its base with a side of base is parallel to and 20 mm behind PP. The section point is 60 mm above the GP and 80 mm in front of PP and lies a central plane which is 50 mm to the left of the axis of the pyramid. Draw the perspective view of the pyramid.
- 6. Draw the plan, elevation and left side view of the block shown in Figure below.



- (b) A circular lamina of diameter 65 mm has the end C of the diameter CD in the HP and the end D in the VP. Draw its top and front views when its surface is inclined at 45° to HP and 35° to
- (a) A pentagonal gyramid of base side 30 mm and altitude 65 mm is resting on ground on one of its one of its base edges with the axis inclined at 35° to HP and parallel to VP. Draw its numericans
- A hexagonal pyramid of base of side 25 mm and altitude 50 mm rests with its base on HP with two edges of the base perpendicular to VP. A cutting plane inclined at 45° to HP cuts the pyramid at a height of 20 mm above the base. Draw the sectional top view and the true shape of continuous continuou
- (a) A hexagonal prism of base side 50 mm and axis length 60 mm is resting on HP on its base with two of its vertical faces perpendicular to VP. It is cut by a plane inclined at 50° to HP and perpendicular to VP and meets the axis of prism at a distance 10 mm from the top end. Draw the development of the lateral surface of the axism.
- b) Draw the development of the lower portion of a cylinder of diameter 45 mm and the axis
 60 mm and it is cut by a plane inclined at 35° to the HP, perpendicular to the VP and bisecting
 the axis

Part R

A square pyramid of base 30 mm side and axis 65 mm height rest on the ground on its base with base edge parallel to VP. It is cut by a plane perpendicular to the VP, inclined to the HP bisects the axis. Traw the isometric projection of the square pyramid.