5178

BOARD DIPLOMA EXAMINATION, (C–16)
MARCH/APRIL—2018
DME—FIRST SEMESTER EXAMINATION

ENGINEERING DRAWING—I

Time : 3 hours]   [*Total Marks* : 60

PART—A   5×4=20

Instructions : (1) Answer **all** questions.

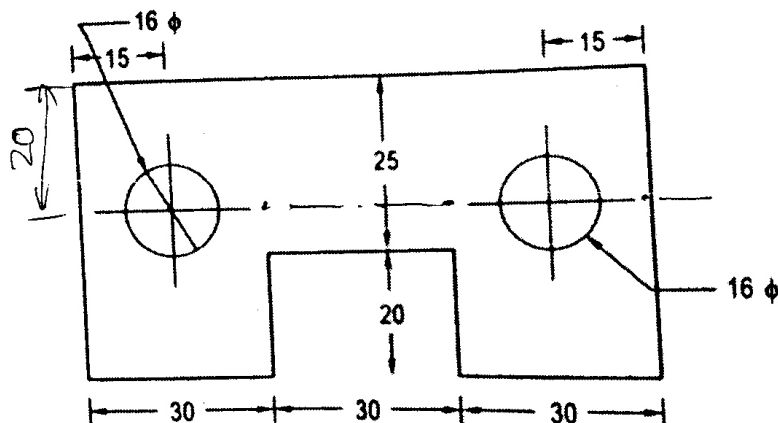(2) Each question carries **five** marks.

(3) All dimensions are in mm.

(4) Take suitable scale whenever required.

1. Print the following title in simple vertical, single-stroke capitals by free hand lettering of 10 mm size :

"DEPARTMENT OF TECHNICAL EDUCATION"

2. Redraw the following figure and dimension it properly using parallel dimensioning :

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3. Construct an internal tangent common to two circles whose radii are 30 mm and 20 mm and distance between their centres is 80 mm.

4. Draw the projections of a point when it is 40 mm above the horizontal plane and 25 mm in front of the vertical plane.

PART—B   10×4=40

Instructions : (1) Answer *any* **four** questions.

(2) Each question carries **ten** marks.

(3) All dimensions are in mm.

(4) Take suitable scale whenever required.

5. Describe any ellipse whose major axis and minor axis are 80 mm and 60 mm respectively by concentric circle method.

6. Draw a cycloid for a circle of radius 25 mm and also draw a tangent at any point.

7. A regular hexagon of 25 mm side has its one edge on HP. The surface of the plane is perpendicular to VP and inclined at 40° to HP. Draw the projections of the plane.

8. A hexagonal pyramid, with side of base 30 mm and axis 60 mm long, is resting with its base on HP such that one of the base edges in inclined to VP at 45° and the axis is 50 mm in front of VP. Draw the hexagonal pyramid.

9. A cube of 40 mm side rests on its base on HP such that a face is inclined at 30° to VP. It is cut by a section plane parallel to VP and 10 mm away from the axis. Draw the projections of the solid.

10. A hexagonal prism of side of base 30 mm and axis length 65 mm, rests on HP on one of its bases with two of its rectangular faces parallel to VP. It is cut by a plane perpendicular to VP and inclined at 35° to HP. The cutting plane meets the axis at 35 mm from the bottom base. Draw the front view, sectional top view and true shape of the section.

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