No. of Printed Pages : 3

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BET-016

DIPLOMA IN CIVIL ENGINEERING (DCLE(G))/ DIPLOMA IN MECHANICAL ENGINEERING (DME) / DCLEVI / DMEVI / DELVI / DECVI / DCSVI / ACCLEVI / ACMEVI / ACELVI / ACECVI / ACCSVI

Term-End Examination,

December 2019

BET-016 : ENGINEERING DRAWING

Time : 2 Hours] *[Maximum Marks : 70*

Note : *(i)* ***Part 'A'*** *is to be attempted on an answer script.*

(ii) ***Part 'B'*** *on a drawing sheet.*

Part - A

Questions No.**1** is **compulsory**. Attempt **any five** questions from the remaining **seven** questions. 5×2=10

1. a) How many units are to be measured by plain scale?

b) What is the standard size of a drawing board (designation-B1) according to B.S.I.?

c) Write down the value of eccentricity for a parabola.

d) Name the quadrant for a point 30 mm above the H.P. and 50 mm behind of V.P.

e) Value of eccentricity for hyperbola is less than or greater than one (choose the correct answer).

2. Draw a circle of a diameter 70mm and indicate the following parts in it. 6

   i) Chord

   ii) Segment

   iii) ARC

3. A map 500cm × 50cm sizes represents an area of 6250 square kilometers. Calculate the R.F. of this scale. 6

4. Explain, with the help of simple sketches, chain and progressive dimensioning systems. 6

5. What is the difference between a prism and a cone? Find out the developed length of a pentagonal prism, having one base edge 40mm and axis 70 mm long. 6

6. Define a conic section and give a list of various types of conic section. 6

7. Draw the projections of the following points : 6

   i) Point 'C' 40mm above H.P. and in V.P.

   ii) Point 'D' 55mm above H.P. and 55mm. behind V.P.

8. Choose the correct answer : 6

   i) A straight line will represent its true length in that reference plane to which it is (inclined/parallel/perpendicular)

   ii) Scale 2 : 1 is the ____ (Reducing scale/Half scale/Enlarging scale)

iii) The ratio between the isometric length and true length is ____

$$\left(\frac{z}{\sqrt{3}} \Big/ \frac{\sqrt{2}}{3} \Big/ \frac{\sqrt{2}}{\sqrt{3}}\right)$$

Part - B

Attempt **any two** questions. Each question carries **equal** marks.

9. Construct a diagonal scale of R.P. = $\frac{1}{4000}$ to show meters and long enough to measure upto 500-metres. Mark a distance of 247 metres on it. 15

10. Construct a "Parabola" by rectangular method when base and axis are given 60mm and 80mm respectively. 15

11. A pentagonal pyramid of base edge 25mm and axis 70mm long, rests on a corner of its base on the H.P. such that its axis makes an angle of 30° to H.P. and parallel to V.P. Draw its projections. 15

12. A line AB is parallel to H.P. and inclined 45° to the V.P. Point A is 5cm above H.P. and 5cm infront of V.P. The actual length of the line is 10cm. Draw projections of the line. 15

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