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

Term-End Examination

June, 2018

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BET-016 : ENGINEERING DRAWING

Time : 2 hours   *Maximum Marks : 70*

Note : *Part A is to be attempted on the answer script, and Part B on a drawing sheet.*

PART A

Question no. 1 is **compulsory.** *Attempt any* **six** *questions from the remaining eight questions.*

1. (a) What is the use of "French curves" ?   2

    (b) State the position of any object in "Second-Quadrant".   2

    (c) Define "Trace" of a straight line.   2

    (d) Differentiate between "Isometric view" and "Isometric projection".   2

    (e) What is the value of Representative Fraction (R.F.) in case of full size scale ?

2. Name and sketch any four types of lines which are commonly used in engineering drawing. 5

3. Name the Quadrant to which the following points belong : 5

   (a) Point 'A' is 40 mm below H.P. and 50 mm in front of V.P.

   (b) Point 'B' is 60 mm above H.P. and 30 mm behind V.P.

4. An area of 144 sq.cm on a map represents an area of 36 sq.km on the field. Find out the Representative Fraction (R.F.) for this map. 5

5. Draw a neat sketch of "Cone" with name of parts and also define its "Axis". 5

6. By using an Isometric scale, calculate the isometric length when the true length is 80 mm. 5

7. Explain with the help of sketches "Aligned" and "Unidirectional" systems of dimensioning. 5

8. For the development of lateral surface of a "Cone", write down the formula to calculate the subtended angle. 5

9. Define "Conic Section" and also make a list of various types of conic sections. 5

PART B

*Attempt any **two** questions of the following :*

10. Construct an Ellipse by the "Arcs of Circles Method" when 'major' and 'minor' axes are 125 mm and 75 mm long respectively.   *15*

11. A regular pentagon plane of 35 mm side has one of its sides in H.P. Draw its projections when its surface makes an angle of 60° to H.P. and perpendicular to V.P.   *15*

12. A triangular prism of base 50 mm side and axis 70 mm long, is resting on one of its bases on H.P. with a base side parallel to V.P. It is cut by a section plane which is inclined at 60° to H.P. and passes through a point on the axis which is 20 mm above from its base. Draw its projections and also the development of the lateral surface of the remaining portion.   *15*

13. A sphere of radius 25 mm, is resting centrally on the top of a square prism of base side 40 mm and axis 60 mm long. Draw its isometric projection.   *15*