Total No. of printed pages = 4

Me-101/ED/1st Sem/2014/N

ENGINEERING DRAWING

Full Marks – 100

Pass Marks – 40

Time – Four hours

The figures in the margin indicate full marks for the questions.

Question No.7 is compulsory and answer any *four* questions from the rest.

1. (a) Draw a line 125 mm long and quadrisect it. 4

(b) Construct a regular hexagon, given the length of its side as 40 mm. 4

(c) Inscribe a circle in an equilateral triangle of side 50 mm. 4

(d) The distance between the centres of two circle of 65 mm and 90 mm diameters is 120 mm. Draw an internal and external tangent (common) to the two circles. 4

(e) Describe a regular pentagon about a circle of 100 mm diameter. 4

[Turn over

2. (a) A 3.2 cm long line represents a length of 4 metres. Extend this line to measure lengths upto 25 metres and show on it units of metre and 5 metres. Show the length of 17 metres on this scale. 8

(b) An area of 144 sq cm on a map represents an area of 36 sq km on the field. Find the R.F of the scale for this map and draw a diagonal scale to show kilometres, hectametres and decimetres and to measure upto 25 km. Show a distance of 17.6 km on this scale. 2+10=12

3. (a) A point A is 35 mm above H.P and 25 mm in front of V.P. Another point B is 20 mm above H.P and 15 mm in front of V.P. The distance between their projector is 40 mm. Draw the projections of the points A and B and find the distance between them. 10

(b) A line AB, 90 mm long is inclined at 45° to the H.P and its top view making an angle of 60° with the V.P. The end A is in the H.P and 12 mm in front of the V.P. Draw the projection of the line and the inclination with the V.P. 10

4. (a) Draw the projections of a hexagonal pyramid base 30 mm side and axis 60 mm long having its base on the H.P and one of the edges of the base inclined at 45° to the V.P. 10

(b) Give dimensioned sketches of the following forms of screw threads. (any *two*). 2½×2=5

(i) Acme

(ii) Buttress

(iii) Unified

(iv) B.S.W.

(c) Draw the following terms used in connection with a screw thread in diagram. 5

(i) Core diameter

(ii) Outside diameter

(iii) Crest

(iv) Flank

(v) Pitch.

5. (a) Sketch neatly two views of a double riveted lap joint using rivets in zig-zag arrangement. Take thickness of plates 10 mm and diameter of rivets 20 mm. Give all other dimensions. 12

(b) Draw three views of a hexagonal nut for a 24 mm diameter bolt, according to approximately standard dimensions. 8

6. (a) Write freehand, in single stroke, inclined capital letters of 25 mm height, the following sentence. 10

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(b) What are the two systems of placing dimensions on a drawing ? Illustrate your answer with sketches. 5

(c) Show by sketches the difference between continuous or chain dimensioning and progressive or parallel dimensioning. 5

7. Draw the (i) front view, (ii) side view from the right and (iii) top view of the figure given below. Use first angle projection method. 8+7+5=20