Total No. of printed pages = 6

RETEST EXAMINATION–2019

Semester : 1st (New)

Subject Code : ME-101

ENGINEERING DRAWING

Full Marks – 100

Time – Four hours

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

Instruction :

1. *All* questions of PART–A are compulsory.

PART – A

Marks – 25

1. Fill up the blanks : 1×10=10

   (i) Two types of dimentions, needed on a drawing are ———— and ————.

   (ii) The extention line should extend about 3 mm beyond the ————.

[Turn over

(iii) When measurements are required in three units, ——— scale is used.

(iv) A 3.2 cm long line represents a length of 4m. the RF is ———.

(v) Lengthening Bar is used to draw circle of radius more than ———.

(vi) Ebony is the name of a part of the instrument called ———.

(vii) Both TV and FV lies below the reference line in the projection based on ——— quadrant.

(ix) Isomeric length is equal to ——— of true length.

(x) The angle between three axes in an isomeric drawing is ——°.

2. Write true or false : 1×10=10

(a) 15° can also be measured using set-square.

(b) The row pitch in chain riveted arrangement is 2d+6 mm

(c) Total number of rows in triple riveted single cover chain Butt joint is three.

(d) The height of Pan Head for 20 mm rivet dia is 12 mm.

(e) The cover plate thickness in double cover butt joint is 0.7t – 0.8t.

(f) In projection, the horizontal plane rotates in clockwise direction.

(g) The drawing sheet is so folded that the Title Block is always on the top.

(h) Oblong method / concentric circle method applies to construction of Parabola.

(i) In first angle projection method, the object comes between the observer and plane.

(j) In isometric projection, all three dimensions of a solid are shown in a single view and their actual sizes can also be measured from it.

3. Choose the correct one : 1×5=5

(a) The pitch in zig-zag riveted joint is same/ more/less compared to pitch in chain riveted arrangement.

(b) In buttress thread, the angle between two Flanks is 45°/50°/60°.

(c) Knuckle thread is a modified form of ACME /Metric / Square thread.

(d) The angle of champher on a nut with the base lies between 30-45° / 45-60° / 60-75°.

(e) Ring nut/Wing nut/ Dome is easy to operate by hand.

PART – B

Marks – 75

Question 9 is compulsory and answer any *four* questions from the rest.

4. (a) Draw the projection of a line AB, 75 mm long is inclined 45 to HP and 30 to VP. Its end B is in HP and 40 mm in front of VP. Draw its projections. 6

(b) Draw the projections of the following points : 3×3=9

(i) Q in both HP and VP

(ii) R in VP, 30 mm above HP

(iii) U in HP, 30 mm behind VP

5. (a) Draw the projection of a 75 mm long line when, 4×2=8

(i) Parallel to and 40 mm above HP and in VP

(ii) Inclined at 45° to VP, in the HP and its one end in VP.

(b) A point P is 20 mm below HP. Its shortest distance from the reference plane is 40 mm. Draw its projections if the point lies in 3rd quadrant. 7

6. (a) Construct a scale of RF =1/6250 to read upto 1km and to read meters on it. Show a length of 567 meters on it. 7

(b) (i) Quadra sect a line AB of length 11 cm

(ii) Trisect a right angle. 4×2=8

7. (a) Draw two views of a double riveted double strap chain butt joint for plate of 10 mm thickness. Rivet to be used are Pan headed with 20 mm dia. 9

(b) Draw dimensioned sketches of : 3×2=6

(i) Cup head

(ii) Countersunk head

8. (a) A cylindrical block of base 60 mm diameter and height 80 mm, standing on HP with its axis perpendicular to the VP. Draw its isometric view. 7

(b) Draw dimentioned sketch of: 2×4=8

(i) Square thread

(ii) Knuckle thread

(iii) Round or Cup set screw

(iv) Cylindrical or cheese set screw.

9. Draw TV, FV and LSV of the object shown in the figure which is in 1st quadrant. All dimensions are taken to be in mm. 15