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END SEMESTER EXAMINATION – 2021

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.

struction :

All questions of PART – A and PART – B are compulsory.

PART – A

Marks – 25

1. **Fill in the blanks :** 1×10=10

   (a) Circles and arcs of circles are drawn by means of a _____.

   (b) Uses of the T-square, set-squares, scale and protractor are combined in the _____.

(c) A sketch is considered to be good when its features are shown in correct _____.

(d) Centre lines, locus lines and pitch circles are drawn as _____.

(e) Plane geometry has _____ dimensions and solid geometry has _____ dimensions.

(f) When the measurements are required in three units _____ scales are used.

(g) In _____ projection, the projectors are perpendicular to the plane of projection.

(h) The _____ is the outer-most part of a thread.

(i) _____ is a type of pictorial projection in which the three dimension of a solid are not only shown in one view.

(j) Rivets are used to fasten _____ two or more plates or pieces of metal.

2. Write true or false : 1×10=10

(a) Interior or hidden edges and surfaces are shown by hidden lines.

(b) French curves are made of wood, plastic or celluloid.

(c) Plain scale is used to measure three units.

(d) Least count is related to diagonal scale.

(e) Designation of enlarging scale is X:1.

(f) Full form of BIS is "Bureau of International Standards".

(g) In this method of projection, the object is assumed to be situated in the third quadrant.

(h) A straight line is the shortest distance between two points.

(i) In a butt joint, the plates to be connected overlap each other.

(j) A washer is a cylindrical piece of metal placed below the nut to provide smooth bearing surface.

3. Choose the correct answer : 1×5=5

(i) The ratio of the length of the drawing of the object to the actual length of the object is called

(a) Resulting fraction

(b) Representative figure

(c) Representative fraction

(d) Resulting figure

(ii) Drawings of buildings are drawn using

(a) full-size scale

(b) reducing scale

(c) scale of chords

(d) enlarging scale

(iii) If a line AB parallel to both the horizontal plane and vertical plane then the line AB is

(a) parallel to profile plane

(b) lies on profile plane

(c) perpendicular to profile plane

(d) inclined to profile plane

(iv) The length of the drawing is 50 mm, the scale is given as 1:5. Find the actual length.

(a) 50 cm (b) 10 cm

(c) 25 cm (d) 10 mm

(v) Which of the following is a conic section.

(a) Triangle (b) Rectangle

(c) Circle (d) Square.

PART – B

Marks – 75

4. Draw the following : 5×4=20

(a) Inscribe a regular Pentagon in a circle of 40 mm dia.

(b) Describe an equilateral triangle about a circle of 50 mm dia.

(c) Construct regular quadrilateral of side 30 mm.

(d) Draw a tangent to a circle of 40 mm dia from a point 50 mm away from its centre.

5. Giving importance on the shape of letters, write the following in single stroke vertical style. Consider the height of letter 20 mm. 10

" SOCIAL DISTANCING "

6. Draw the projection : 10

(a) A point P is 45 mm above HP and 60 mm behind VP.

(b) A point Q is 45 mm below IT and 60 mm in front of VP.

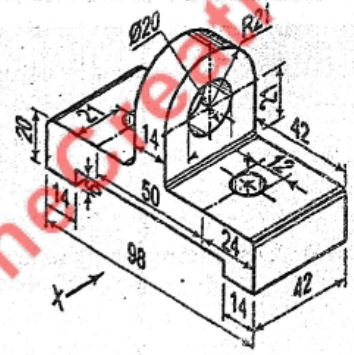
(c) A point C is 35 mm below HP and 25 mm behind VP.

7. Draw the orthographic view of the object with 1st angle projection. 15

(a) Front view

(b) Top view

(c) Side view.



8. A line AB is 80 mm inclined at 30° to HP and 45° to VP. The point A is 20 mm above HP and 30 mm in front of VP. Draw the projection of the line. 10

Or

Draw the following : 5×2=10

(a) Lap Joint

(b) Double cover Butt Joint.

9. 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. 10