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RETEST EXAMINATION

MAY/JUNE–2025

Semester : 1st (Old)

Branch : All Branch

Subject Code : Me-101

ENGINEERING DRAWING

Full Marks – 100

Time – Four hours

Instructions :

(i) Question Nos. 1, 2 and 3 are compulsory.

(ii) Answer any *five* questions from the rest.

1. Fill in the blanks with appropriate words : 1×10=10

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

   (b). ____ are drawn to represent visible edges and surface boundaries of objects.

   (c) The length of the three sides of an equilateral triangle are _____ .

[Turn over

(d) Lettering is usually done in _____ letters.

(e) Drawings of buildings are drawn using _____ scale.

(f) The line joining the top view and front view of a point is called a _____.

(g) A _____ is the shortest distance between two points.

(h) In Orthographic projection, the _____ lies between the observer and the plane of projection.

(i) The angle between the isometric axes is_____.

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

2. Write True or False : 1×10=10

(a) Drawing instruments are used to prepare drawings easily.

(b) To bisect a given straight line means to divide a line into three equal parts.

(c) The size of a letter is described by its height.

(d) The diagonal scales are used when drawing is required in minute or small units.

(e) The line joining the top view and the front view of a point is always perpendicular to the reference line.

(f) The inclination of a line with the H.P. isseen in the top view.

(g) In the first-angle projection method, the object is kept in the first quadrant.

(h) The lines perpendicular to the isometric axes are called isometric lines.

(i) Rivets are used to fasten permanently two or more pieces of metal.

(j) In a butt joint, the plates to be connected over lap each other.

3. Choose the correct answers : 1×5=5

(a) TheT-square is used for drawing

(i) vertical lines (ii) curves

(iii) horizontal lines (iv) inclined lines

(b) Which of the following is used for drawing curves which can not be drawn by a compass ?

(i) protractor

(ii) french curves

(iii) bow compass

(iv) lengthening bar

(c) Which of the following scale is used when measurements are required in three units ?

(i) diagonal (ii) plain

(iii) scale of chords (iv) comparative

(d) When the projectors are parallel to each other and also perpendicular to the plane, the projection is called

(i) Orthographic projection

(ii) Isometric projection

(iii) Oblique projection

(iv) Perspective projection

(e) The length of the drawing is 60 mm, the scale is given as 1 : 6. Find the actual length.

(i) 36 mm (ii) 66 mm

(iii) 36 cm (iv) 66 cm.

4. (a) What are the two systems of placing dimensions ? Define them with the help of appropriate sketches. 4

(b) What is R.F ? Draw a scale of 1:50 to show metres and decimetres and long enough to measure upto 5 metres. 5

(c) Construct a diagonal scale of R.F = $\frac{1}{4000}$ to show metres and long enough to measure up to 500 metres. 6

5. (a) Giving importance on the shape of letters, write the following line in single stroke vertical style. Consider the height of letter 20 mm."

DRAWING IS THE LANGUAGE OF ENGINEERS." 10

(b) Write about any five types of lines. Give the description of each line with appropriate sketches. 5

6. (a) Construct a regular pentagon of side 30mm. 5

(b) Construct a regular square of side 60 mm. 5

(c) Divide a 50 mm line into 6 equal parts. 5

7. (a) A point A is 35 mm above H.P. and 25mm 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. 6

(b) A line PQ 75mm long, has its end P in the V.P. and the end Q in the H.P. The line is inclined at 30° to the H.P. and at 60° to the V.P. Draw its projections. 9

8. (a) Draw the isometric view of a cone, base 50 mm diameter and axis 65 mm long when its axis is vertical. 7

(b) Draw neat and dimensional sketches of the following threads using 25 mm Pitch.

(i) Whitworth thread

(ii) Knuckle thread. 8

9. (a) Draw the typical drawing of the following rivets with dimensions :

(i) Snap head

(ii) Pan head.

(b) Draw the following : 10

(i) Double-riveted (zigzag) lap joint

(ii) Single-riveted (single strap) butt joint

10. (a) State three differences between first-angle projection method and third-angle projection method. 3

(b) Draw the orthographic view of the object with 1st angle projection. 12

(i) Front view

(ii) Side view

(iii) Top view.

