

Total No. of printed pages = 6

**END SEMESTER/RETEST EXAMINATION-2019**

Semester : 1st

Subject Code : Me-101

**ENGINEERING DRAWING**

Full Marks – 100

Time – Four hours

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

**Instructions :**

1. All questions of PART-A are compulsory.
2. Answer any five questions from PART-B.

**PART – A**

1. Fill in the blanks with appropriate words :

1×10=10

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

(b) When the measurements are required in three units \_\_\_\_\_ scales are used.

[Turn over

(c) The ratio of the length of the drawing of the object to the actual length of the object is called \_\_\_\_\_.

(d) Isometric scale is used in \_\_\_\_\_ projection.

(e) T-square is used for drawing \_\_\_\_\_ lines.

(f) Uses of T-square, set square, scale and protector are combined in the \_\_\_\_\_.

(g) A line of 4m is shown by 40 mm on a scale. Its representative fraction is \_\_\_\_\_.

(h) When two plates are joined by overlapping one another, the joint is called \_\_\_\_\_.

(i) All the angles of an equilateral triangle are \_\_\_\_\_.

(j) The diagonal of a quadrilateral is a line joining the \_\_\_\_\_.

2. Write the description and general application of the following lines:  $2 \times 5 = 10$

(a) Centre Line

(b) Leader

(c) Section Line

(d) Projection line

(e) Cutting plane line.

3. Answer the following questions :

(a) Write two differences between 1st and 3rd angle projection. 2

(b) Write four names of drawing instruments. 2

(c) What is comparative scale? 1

PART - B

Marks -75

Answer any five questions.

4. (a) What are two systems of placing dimensions on a drawing? 5

(b) Draw a scale of 1:70 to show meters and decimeters and long enough to measure upto 7 meter. 5

(c) Construct a diagonal scale of  $RF = 1/4000$  to show meters, and long enough to measure upto 800 meters. 5

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

"I LOVE MY COUNTRY"

- (b) Write the two systems planning dimensions on a drawing. 5
6. (a) Construct a regular hexagon of side 50 mm. 5
- (b) Construct a rectangle of sides 70 mm and 50 mm long. 5
- (c) Draw a line AB and AC making angle  $75^\circ$ . Draw a circle of radius 25 mm touching them. 5
7. Draw the projections of the following points on the same ground line, keeping the projections 25 mm apart.  $2\frac{1}{2} \times 6 = 15$
- (a) In the H.P. and 30 mm behind the V.P.
- (b) 35 mm above the H.P. and 25 mm in front of the V.P.
- (c) In the V.P. and 50 mm above H.P.

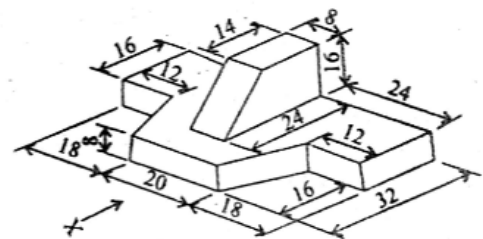
- (d) 20 mm below H.P. and 20 mm behind the V.P.
- (e) 25 mm above the H.P. and 15 mm behind the V.P.

8. Draw the following thread forms taking pitch 25 mm :  $5 \times 3 = 15$

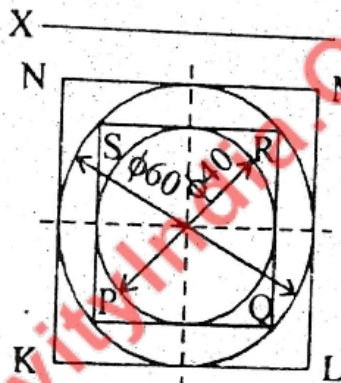
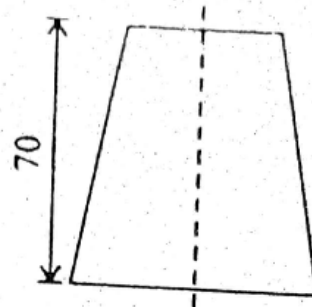
- (a) Square thread
- (b) Acme thread
- (c) Knuckle thread

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

- (a) Front view
- (b) Top view
- (c) Both side views



10. (a) Draw the isometric view of the frustum of the cone as shown in the figure : 6



- (b) Draw the three view of a hexagonal nut for a 28 mm diameter bolt, according to approximately standard dimensions. 9