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18/ENG02/007

COMPUTER ENGINEERING

ENG 232

1. How do you represent a sectioned surface on a drawing?

When sketching an object or part that requires a sectional view, they are drawn by eye at an angle of approximately 45 degrees and are spaced about 1/8 apart. Since they are used to set off a section, they must be drawn with care. It is best to use the symbol for the material being shown as a section on a sketch.

2. List out the various principles to be followed while dimensioning a drawing.

i) Dimension and extension lines are narrow continuous lines 0.35 mm thick, clearly placed outside the outline of the drawing.
ii.) The extension lines should not touch the outline of the drawing feature.
iii) Arrowheads should be triangular and touch the dimension line to which they refer
iv) Center lines should be clear and distinct and must never be used as dimension lines.
v) For dimensions to be read clearly, the figures are placed at the bottom of the drawing

3. Explain the terms, a) half section b) full section

Half section: - Is a view of an object showing one-half of the view in section. They can be used to show both the internal and outside view of symmetrical objects.

Full section: - It is the most widely-used sectional view, if the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed, it is called a full section.

4.How are leader lines terminated?

Leader lines are thin, solid lines that can be terminated in an arrowhead or Dot.

5. What do you understand by, a) scale=5.1 and b) scale=1:10?

 a) Scale = 5.1: - this is an enlargement scale. It means that for 1mm should be multiplied by 5 while drawing that is "R"2mm=5*2=10mm.

 b) Scale = 1:10: - this is a ridiculous scale. It means that for 10mm should be taken as 1mm while drawing that is 20mm=20/10=2mm.

6. Give the shape identification symbols for the following: a) diameter b) radius c) square d) spherical radius.

a) diameter: - "Ǿ"

b) radius: - "R"

c) square: - "□"

d) spherical radius: - "SǾ"

7. What are the elements to be considered while obtaining a projection and what is an orthographic projection?

 Elements to consider while obtaining projections are: - the object, the plane of projection, the point in space.

Orthographic projection is a type of "parallel" projection in which the four orthogonal views of an object are shown.

8. When is a projection of an object called an orthographic projection?

     If the projection from the object is perpendicular to the projection plan, then such a projection of the object is known as orthographic projection.

9. Explain the following indicating the symbol to be used in each case: a) first angle projection b) third angle projection

First angle projection: - Is a method of creating a 2D drawing of a 3D object. On the drawing paper, the front view and the side view is drawn at the top while the plan view is drawn at the bottom under the front view.

b) Third angle projection: - Is a method of creating a 2D of a 3D object. On the drawing paper, the front view and the side view is drawn at the bottom while the plan view is drawn at the top of the front view.

OBJECTIVES

1. To project the auxiliary view, an imaginary plane known as ……………….

    Answer: - Reference plane (A)

2. Reference plane is parallel to the direction of view

    Answer: - False

3. Dimension of one side of the inclined surface can be………………projected on

the reference plane

 Answer: -Directly (C)

4. In isometric projection the three edges of an object are inclined to each other at

 Answer: -120º (B)

5. The angle between the flanks of a metric thread is

    Answer: - 60º (A)

6. Which one among the following represents a permanent fastener

    Answer: -Rivet (B)

7. The convexity provided on the rim of the solid web cast iron pulley is called

    Answer: -Crowning (C)

8. Section lines are generally inclined with the base, at an angle of

Answer: -45º(B)

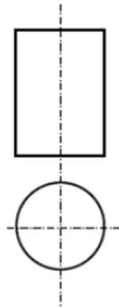9. The isometric view of a sphere is always

Answer: -A circle (A)

10. In isometric projection, the four center method is used to construct

Answer: - An Ellipse (A)

11.

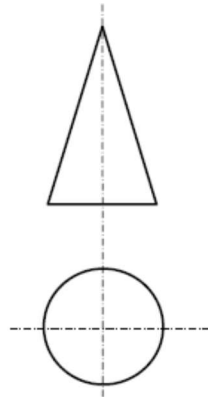(i) With respect to the elevation and plan given below, name the solid

(a) Cone
(b) hexagonal prism
(c) cylinder
(d) hexagonal pyramid

Answer: - Cylinder (C)

12.

(v) With respect to the front view and top view given below, name the solid

(a) Cone
(b) Cylinder
(c) Cube
(d) Frustum

Answer: - Cone (A)

13. A footstep bearing is a

Answer: - Thrust Bearing (B)

14. The angle between the flanks of B.S.W. thread is

Answer: - 55°(C)

15. Top view is projected on the

Answer: -Horizontal plane (D)