ENG 232 QUESTIONS

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

[When sketching an object that involves a sectional view, they are drawn at angles of 45 degrees, and are spaced about 1/8 apart. Since they are used to set off a section, they must be drawn with care. Its best to use the symbol for material being shown as a section of sketch

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

[The dimension should be legibly written and it should be visible]

[The extension and dimension lines should not intersect in drawing drafts]

[Dimensions are clearly grouped]

[All dimensions (major and minor) should be written parallel to the object line and once again very legibly written]

1. Explain the terms, (*a*) half section, (*b*) Full section

[ Half section are employed when an object is symmetrical: ‘the same either side of the center lines’- One half’s used as a sectional view to show the inside and the other half shows the outside view.]

[Full section has cutting plane right across the object]

1. How are leader lines terminated?

[Termination is achieved with the employment of **arrowheads**, **dots** and other times **nothing** at all

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

[5:1 is direct multiplication of actual measurement by 5 for example A **50**mm line is to be drawn at a scale of **5:1** (i.e. 5 times more than its original size). The measurement **50**mm is multiplied by **5** to give **250**mm. A **250**mm line is drawn.]

[1:10 is direct division of measurement by 10 for example A **10**mm line is to be drawn at a scale of 1:10. The measurement **10**mm is divided by 10 to give 1mm. A 1mm line is drawn]

1. Give the shape identification symbols for the following: (*a*) diameter, (*b*) radius, (*c*) square and (*d*) spherical radius.
2. Centre line, (*b*) cutting plane line and (*c*) long break

[diameter – L]

[radius – R]

[square radius – SR]

[spherical radius – SR]

[Centre line – CL]

[Cutting plane line – CPL]

[Long break- LB]

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

[Orthographic projection is common method of representing three dimensional objects: object is viewed along parallel lines that are perpendicular to the plane of drawing]

[All projections involve some level of distortion, Lines are parallel to the plane, the shape of an object is seen in actual size in such drawing, the plane is faced toward the object whose view is to be prepared, in most drawings it is assumed the drawing is at infinity]

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

[In orthographic projection, different planes are placed in a particular order]

1. Explain the following, indicating the symbol to be used in each case: (*a*) First angle projection, (*b*) Third angle projection

Ans. **First angle projection** is a method of creating a 2D drawing of a 3D object. To get the **first angle projection**, the object is placed **in the first** quadrant meaning it's placed **between** the plane of **projection** and the observer

Third **angle projection** is the preferred method of orthographic **projection**. For the **third angle projection**, the object is placed below and behind the viewing planes meaning the plane of **projection** is **between** the observer and the object.

Objectives

1. To project the auxiliary view, an imaginary plane known as ……………….
2. Reference Plane
3. Principle plane
4. Normal plane
5. Inclined plane

Ans. A (reference plane)

1. Reference plane is parallel to the direction of view
2. True
3. False

Ans. B.(False)

1. Dimension of one side of the inclined surface can be………………projected on the reference plane
2. Indirectly
3. Equally
4. Directly
5. Normally

Ans. C (Directly)

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

(a) 60o (b) 120o (c) 100o (d) 90o

Ans. B(120degrees)

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

1. 60o (b) 90o (c) 75o (d) 55o

Ans. A (60 degrees)

6. Which one among the following represents a permanent fastener

a) Nut b) Rivet c) Screw d) Bolt

Ans. (B)Rivet

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

a) Bending b) Curving c) Crowning d) Riveting

Ans. C (Crowning)

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

a) 30o b)45o c)60o d)90o

Ans. B (45degrees)

9. The isometric view of a sphere is always

a) a circle b) an ellipse c) a Parabola d) a Semicircle

Ans. A circle

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

a) an ellipse b) a square c) a triangle d) a rectangle

Ans. A ellipse

11

Ans. Cylinder

12

Ans. Cone

13. A footstep bearing is a

a) journal bearing b) thrust bearing c) pivot bearing d) pedestal bearing

Ans. C (pivot bearing)

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

a) 60o b) 65o c) 55o d)75o

Ans. D (55 degrees)

15. Top view is projected on the

a) Vertical Plane b) Corner Plane c) Side Plane d) Horizontal Plane

Ans. Horizontal plane