ENG 232 QUESTIONS AND ANSWERS

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

ANS: It is represented by drawing a line inclined at 45 degrees through the sectioning plane with arrow heads to show the direction of section.

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

ANS:

a) Only thin continuous lines are used

b) The extension lines should not touch the drawing. A gap of 2-3mm would do.

c) The arrow heads should be triangular and should touch the lines to which they refer.

d) Center lines must never be used as dimension lines.

e) Dimensions should be done in millimeters and should be to the lowest possible decimal places.

f) Adequate space should be left between rows of dimensions

g) Drawings should be placed properly so as to make dimensioning easy.

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

ANS:

a) A half section is a view of an object showing one-half of the view in section where the cutting plane line cuts halfway through the part and removes one quarter of the material.

b) In full section, the cutting plane line passes through the part

4) How are leader lines terminated**?**

ANS: They are terminated at the circumference.

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

ANS:

a) 5:1 or (5 ratio 1) means that the dimensions of the drawing is five times larger than that of the actual object.

b) 1:10 or (1 ratio 10) means that the drawing is 10 times smaller than the object. NB: The number that comes before the column is always for the drawing while the one after is for the Object.

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

ANS:

a) Diameter- Ø

b) Radius- R

c) Square- 

d) Spherical radius- SR

e) Center Line-

f) Cutting Plane Line-

g) Long Break Line

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

ANS:

a) **Front Elevation**

i) **Side Elevation**

ii) **Plan**

b) An Orthographic Projection is a method of a method of projection in which an object is depicted using parallel lines to project its outline on to a plane. It is also rreferred to as **orthogonal projection**, used to be called **analemma. Can also be defined as** a means of representing three-dimensional objects in two dimensions.

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

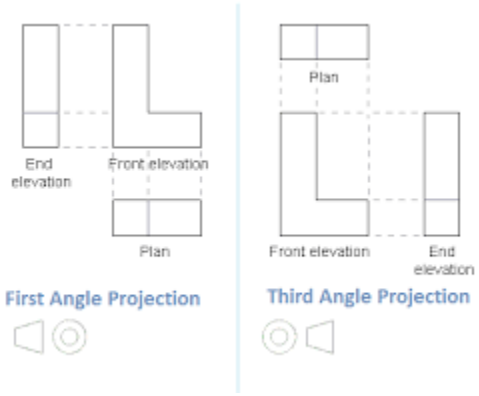
ANS: A projection of an object is called Orthographic when multiple views of the object are represented.

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

ANS:

a) First angle projection: It is a method of creating a 2D drawing from a 3D object. An example is shown below.

b) Third angle projection: It's also for creating 2D drawings from 3D objects.



Objectives

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

   a) Reference Plane

   b) Principle plane

c) Normal plane

d) Inclined plane

2. Reference plane is parallel to the direction of view ANS: A

a) True

b) False

3. Dimension of one side of the inclined surface can be…ANS: D……projected on the reference plane

a) Indirectly

b) Equally

c) Directly

d) Normally

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

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

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

(a) 60^o (b) 90^o (c) 75^o (d) 55^o

6. Which one among the following represents a permanent fastener ANS: B

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

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

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

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

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

9. The isometric view of a sphere is always ANS: B

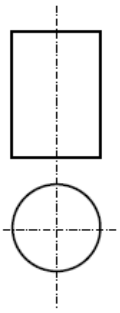
a) a circle b) an ellipse c) a Parabola d) a Semicircle

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

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

11 ANS: C

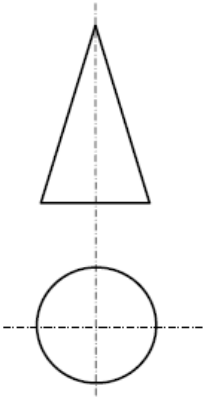
(i) With respect to the elevation and plan given below, name the solid



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

12 ANS: A

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



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

13. A footstep bearing is a

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

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

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

15. Top view is projected on the

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