EKOK NZIE OKPOKAM
18/ENG05/045
MECHATRONICS ENG

ENG 232 QUESTIONS

1. How do you represent a sectioned surface on a drawing?
   The sectioned plane is hatched except for webs and joints.
2. List out the various principles to be followed while dimensioning a drawing.

✓ Dimensions should not be duplicated
✓ Dimensions should be attached to the view that best shows the contour of the feature being dimensioned.
✓ Avoid dimensioning to hidden lines.
✓ Avoid dimesions over and through objects
✓ Wherever possible locate dimensions in adjacent views

3. Explain the terms,

(a) half section: When the cutting plane passes halfway through an object and one-quarter of the object is removed the resulting section is called a half section.
(b) Full section:When the cutting plane passes entirely through an object, the resulting section is called a full section.

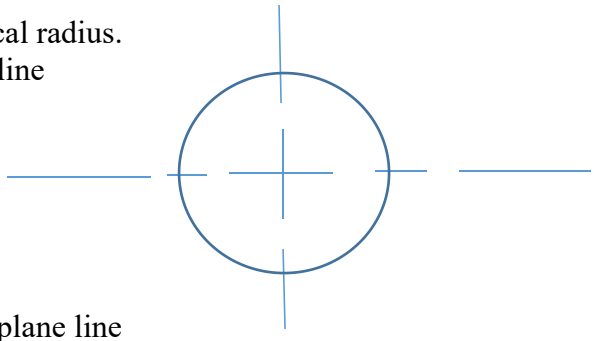
4. How are leader lines terminated?
   They end with an arrow.
5. What do you understand by

(a) scale = 5:1 : It means five large times the original size
(b) scale = 1:10 : It means ten times smaller than the original drawing.

6. Give the shape identification symbols for the following:

(a) Diameter
(b) Radius 

(c) square
(d) spherical radius.
(e) Centre line



(f) cutting plane line

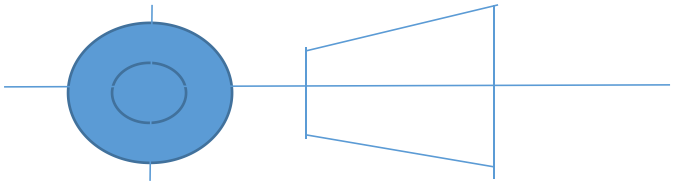
(g) long break

7. What are the elements to be considered while obtaining a projection and what is an orthographic projection?
    1. Type of projection
    2. Planes of projection involved

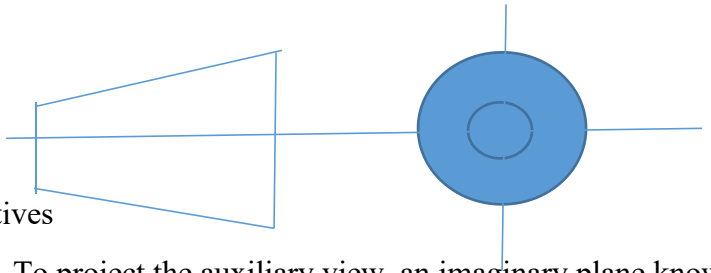
    Orthographic projection can be defined as is a means of representing three-dimensional object in two dimensions
8. When is a projection of an object called an orthographic projection?

    This is when an object is depicted using parallel lines to project its outline on to a plane.
9. Explain the following, indicating the symbol to be used in each case:

(a)Third angle projection,



(b)First angle projection



Objectives

1. To project the auxiliary view, an imaginary plane known as …….
    a) <u>Reference Plane</u>
    b) Principle plane
    c) Normal plane
    d) Inclined plane
2. Reference plane is parallel to the direction of view
    a) <u>True</u>
    b) False
3. Dimension of one side of the inclined surface can be……projected on the reference plane
    a) Indirectly
    b) <u>Equally</u>
    c) Directly
    d) Normally
4. In isometric projection the three edges of an object are inclined to each other at

(a) 60º **<u>(b) 120º</u>** (c) 100º (d) 90º

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

    (a) **<u>60º</u>** (b) 90º (c) 75º (d) 55º

6. Which one among the following represents a permanent fastener

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

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

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

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

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

9. The isometric view of a sphere is always

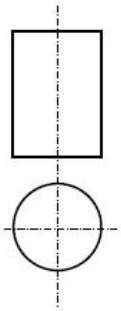
a) a circle b) **an ellipse** c) a Parabola d) a Semicircle

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

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

11.**C**

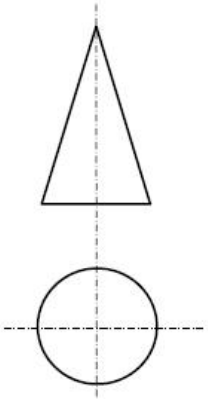
(i) With respect to the elevation and plan given below, name the solid



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

12.**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

a) 60° b) 65° **c) 55°** d)75°

15. Top view is projected on the

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