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**DEPARTMENT: Computer
Engineering.**

COURSE CODE: ENG 232

TITLE: Engineering Drawing

Question 1

You can do so by using section lines that are inclined at angle 45°

Question 2

- A. Never cross extension lines.
- B. Unnecessary dimensions shouldn't be used - only the dimensions needed to create or inspect the part.
- C. Make sure to avoid dimensioning to hidden lines wherever possible.

- D. Dimensions shouldn't be placed on the object unless that is the only option.
- E. A circle is dimensioned by its diameter, an arc by its radius.
- F. Holes should be located by their center lines.
- G. Holes should be located in the view that shows the feature as a circle.
- H. Dimensions should never be crossed.
- I. Dimensions shouldn't be duplicated or the same information will be given in two different ways .

Question 3

a) Half-section: A half-section is a view of an object showing one-half of the view in section. Symmetrical parts can be shown in half sections. Half sections are commonly used to show both the internal and outside view of symmetrical objects. The cutting plane is off-set to include features that are not in a straight line.

b) Full-section: If the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed, this is called a "full section." A full section is the most widely-used sectional view.

Question 4

A leader line is a line that establishes a connection between a graphical representation of an item and some text. A leader line also has a terminator and some text. It may have a reference line under the text. An arrow terminator is used to point to an edge of an item. The dot is used to point to a face. The Architectural tick can be used for referring to multiple parallel edges.

Question 5

Scale is commonly known as the relative size or extent of something, scales are usually used to represent something larger on a smaller surface.

a. 5:1 scale: Used for enlarge the object 5 times its original size(Enlargement Scale). I.e 1cm of the object is equal to 5cm on the diagram/drawing

b. 1:10 scale: Used to reduce the object 10 times its original size (Reduction Scale). I.e 1cm on the diagram or drawing is equal to 10cm of the object

Question 6

- a. Φ
- b. R
- c.
- d. SR

Question 7

- a) The Plan
- b) Front View
- c) Side View

An orthographic drawing is a clear and detailed way to represent the image of an object.

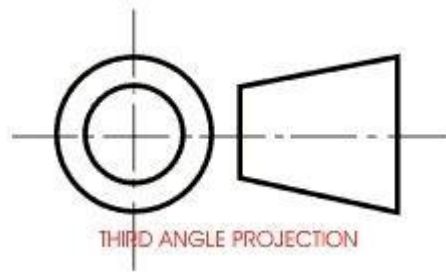
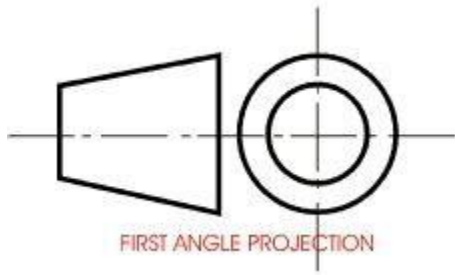
Question 8

It is called oblique projection when the principal planes or axes of an object in an orthographic projection are not parallel with the projection plane

Question 9

Orthographic *Projection* is a way of drawing an object from different directions. Usually a front, side and plan view are drawn so that a person looking at the drawing can see all the important sides

- a) 1st Angle Projection: It is a method of creating a 2D drawing of a 3D object. It is mainly used in Europe and Asia and has not been officially used in Australia for many years. In Australia, third angle projection is the preferred method of orthographic projection. Note the symbol for first angle orthographic projection.
- b) 3rd Angle Projection: is a method of orthographic projection which is a technique in portraying a 3D design using a series of 2D views. 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.



Objective Answers

1. A
2. A
3. C
4. B
5. A
6. B
7. C
8. B
9. A
10. A
11. C
12. A
13. C
14. C

15. D