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MATRIC NO: 18/ENG05/036

DEPARTMENT: MECHATRONICS

COURSE: ENGINEERING DRAWING 2

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 material being shown as a section on a sketch.

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

• The dimensions should be given on such view which illustrates the true shape

and size of an object.

• As far as possible the dimensions should be given outside a view but can be given

inside as well if unavoidable.

• All the dimensions are given in group form. Scattering of these is not correct.

• The dimensions should be intelligibly written.

• All the dimensions should be written parallel to the object line and the numbers

should be written such that they could be read easily.

• The extension and dimension lines should not intersect in any case.

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

Half Section : Half sectional views are used when an object is symmetrical (the same either side of the centre line). One half is used as a sectional view to show the inside and the other half shows the outside view. The cutting plane only removes a quarter of the object. Full Section : When the cutting plane is right across the object it results in a full

sectional view (commonly referred to as a full section)

4. How are leader lines terminated?

Leader lines are terminated by the use of arrow heads.

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

• Means a 50mm line is to be drawn at a scale of 5:1

• This scale means that the object is 10 times smaller than in real life.

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

and (d) spherical radius. Centre line, (b) cutting plane line and (c) long break

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

orthographic projection?

An orthographic projection is a common method of representing three-dimensional

objects, usually by three two-dimensional drawings in each of which the object is

viewed along parallel lines that are perpendicular to the plane of the drawing. For

example, an orthographic projection of a house typically consists of a top view, or

plan, and a front view and one side view (front and side elevations).

It should comply with relevant standards (such as British Standards) to prevent

misunderstanding and avoid errors in interpreting the drawing.

8. 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.

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