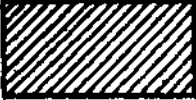
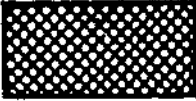
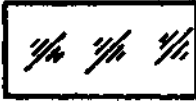
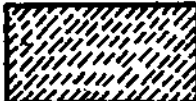


## Annexure

### Conventional representation of materials

| TYPE                            | CONVENTION                                                                          | MATERIAL                                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Metals                          |    | Steel, Cast Iron, Copper and its Alloys, Aluminium and its Alloys, etc.                                                              |
|                                 |    | Lead, Zinc, Tin, White-metal, etc.                                                                                                   |
| Glass                           |    | Glass                                                                                                                                |
| Packing and Insulating material |   | Porcelain, Stoneware, Marble, Slate, etc.                                                                                            |
|                                 |  | Asbestos, Fibre, Felt, Synthetic resin products, Paper, Cork, Linoleum, Rubber, Leather, Wax, Insulating and Filling materials, etc. |
| Liquids                         |  | Water, Oil, Petrol, Kerosene, etc.                                                                                                   |
| Wood                            |  | Wood, Plywood, etc.                                                                                                                  |
| Concrete                        |  | A mixture of Cement, Sand and Gravel                                                                                                 |

# Objective Questions (wherever necessary explain with sketches)

## 1. Chapter

- 1.1 Writing a letter is known as \_\_\_\_\_ and making a drawing is also known as \_\_\_\_\_.
- 1.2. The difference in height between the lead and leg points in compass is \_\_\_\_\_ mm.
- 1.3. A mechanical pencil is specified by the \_\_\_\_\_ of the lead.
- 1.4. Pencil leads are graded by the \_\_\_\_\_ or \_\_\_\_\_ of the lead.
- 1.5 An enlarged scale is to represent small dimension as big. (True/False)
- 1.6 Normally used scale is \_\_\_\_\_
- 1.7. Templates are used for \_\_\_\_\_ features.
- 1.8. As per BIS standard drawing sheets vary from \_\_\_\_\_ to \_\_\_\_\_
- 1.9. French curves help to make a smooth curve joining the points marked.  
(True/False).
- 1.10. M2 scale is used to represent \_\_\_\_\_ scale.
- 1.11. \_\_\_\_\_ is used in compass to draw large arcs or circles.
- 1.12. \_\_\_\_\_ compass is used for small circles.
- 1.13. \_\_\_\_\_ Mini draughter is used to make angles. (True/False)

## 2. Chapter

- 2.1 The principle involved in arriving at drawing sheet size is given by the relations \_\_\_\_\_ and \_\_\_\_\_.
- 2.2. For A1 size, the surface area is \_\_\_\_\_. The length is equal to \_\_\_\_\_ and width is equal to \_\_\_\_\_.
- 2.3. The size of the title block is \_\_\_\_\_.
- 2.4. The location of the title block is \_\_\_\_\_.
- 2.5. The ratio of thick to thin line thicknesses is \_\_\_\_\_.
- 2.6. Hidden lines are represented by \_\_\_\_\_ lines.
- 2.7. A dimension with importance in the component is known as \_\_\_\_\_ dimension.
- 2.8. Axes line cross at small dashes. (True/False)
- 2.9. The thickness of the line of letters having 10mm height is \_\_\_\_\_ mm.
- 2.10. Drawing title is written in \_\_\_\_\_ or \_\_\_\_\_ mm size.

- 2.11. Hatching and sub titles are written in \_\_\_\_\_ or \_\_\_\_\_ mm size.
- 2.12. The inclination of the inclined lettering is \_\_\_\_\_ degrees.
- 2.13. Lettering with adjoining stems require \_\_\_\_\_ spacing. (More/Less)
- 2.14. Some letter combinations have overlapping space. (True/False)
- 2.15. Each feature shall be dimensioned once only on a drawing. (True/False)
- 2.16. Dimension should be placed on the view where the shape is best seen.  
(True/False)
- 2.17. As far as possible dimension should be placed outside the view. (True/False)
- 2.18. Dimension should be taken from the hidden lines. (True/False)
- 2.19. A gap should be left between the feature and the starting of the dimension line.  
(True/False)
- 2.20. The proportions of the arrow head of the dimension line is \_\_\_\_\_.
- 2.21. Dimension should follow the symbol of the shape. (True/False)
- 2.22. Extension lines should meet without a gap. (True/False)
- 2.23. Hidden lines should meet without a gap (True/False)
- 2.24. Horizontal dimension line should be to \_\_\_\_\_ to insert the value of the dimension in both methods. (broken / not broken).
- 2.25. Dimension may be placed above or below the line. (True/False)
- 2.26. The terms Elevation and Plan are obsolete in drawing. (True/False)
- 2.27. Elevation is replaced by front view and plan by top view. (True/False)
- 2.28. Two methods of dimensioning are (a) \_\_\_\_\_ (b) \_\_\_\_\_.

### **3. Chapter**

- 3.1. What is RF?
- 3.2. Drawings are normally made to \_\_\_\_\_ scale.
- 3.3. The scale factor for reducing is \_\_\_\_\_.
- 3.4. For drawing of small components \_\_\_\_\_ scale is used.
- 3.5. To measure three units \_\_\_\_\_ scale is used.
- 3.6. What is a plain scale ?
- 3.7. What is the application of diagonal scale?
- 3.8. What are the differences between a vernier and diagonal scale ?
- 3.9. Name the types of verniers.

- 3.10. The main scale of a vernier scale is a \_\_\_\_\_ scale.
- 3.11. The main scale of a vernier is divided into primary and secondary divisions.  
(True/False)
- 3.12. In a direct vernier, 9 main scale divisions are divided into 10 equal parts on the vernier. (True/False)
- 3.13. In a retrograde vernier, 19 main scale divisions are divided into 20 equal parts on the vernier (T /F)
- 3.14. What is a least count ?

#### **4. Chapter**

- 4.1. Name the solids of revolution.
- 4.2. What is a conic section ?
- 4.3. Define (a) Ellipse, (b) Parabola, (c) Hyperbola
- 4.4. When a cone is cut by a plane the intersection curve obtained is known as \_\_\_\_\_.
- 4.5. A cone with an apex angle  $2\theta$  is cut by a cutting plane at an angle  $\alpha$  .  
 (a) When  $\alpha$  is greater than  $\theta$  , the intersection curves is \_\_\_\_\_.  
 (b) "  $\alpha$  is equal to  $\theta$  , " \_\_\_\_\_.  
 (c) " less than  $\theta$  , " \_\_\_\_\_.  
 (d) "  $\alpha = 90^\circ$  - " \_\_\_\_\_.
- 4.6. When a cone is cut by a section plane that is parallel to the axis and passing through it, their intersection curve is \_\_\_\_\_.
- 4.7. In a rectangular hyperbola, the asymptotes intersect each other at \_\_\_\_\_ angle.
- 4.8. Ellipse is a curve traced by a point moving such that the sum of its distances from the two fixed points, foci, is constant and equal to the major axis .(True/False)
- 4.9. The terms transverse and conjugate axes refer to the curve \_\_\_\_\_.
- 4.10. Differentiate between epicycloid and hypocycloid.
- 4.11. What is a generating circle?
- 4.12. Define directing circle.
- 4.13. Define an involute.
- 4.14. The curves generated by a fixed point on the circumference of a rolling circle in known as \_\_\_\_\_.

- 4.15. The size of the cycloidal curve is the same irrespective of the size of the generating circle . ( True / False).
- 4.16. The curve generated by a point on the circumference of a rolling circle, rolling along another circle, outside it is called \_\_\_\_\_.
- 4.17. The curve traced by a point on a straight line, when it rolls without slipping along a circle or a polygon is called \_\_\_\_\_.
- 4.18. The profile of a gear tooth is \_\_\_\_\_.

### **5. Chapter**

- 5.1 Name two systems of projection.
- 5.2. Sketch the symbols of projection.
- 5.3. In orthographic projections, the \_\_\_\_\_ are perpendicular to the \_\_\_\_\_ of projection.
- 5.4. In \_\_\_\_\_ Projection, any view is so placed that it represents the side of the object away from it.
- 5.5. Placing the view represented by any side of the object nearer to it is called \_\_\_\_\_ projection.
- 5.6. In first angle projection, the object is placed in between the observer and the plane of projection (T/F).
- 5.7. In third angle projection, the object is placed in between the observer and the plane of projection (T/F)
- 5.8. A surface of an object appears in its true shape, when it is \_\_\_\_\_ to the plane of projection (Parallel / Perpendicular).
- 5.9. The front view of an object is obtained as a projection on the \_\_\_\_\_ plane, by looking the object, \_\_\_\_\_ to its front surface.
- 5.10. The top view of an object is obtained as a projection on the \_\_\_\_\_ plane, by looking the object normal to its \_\_\_\_\_ surface.
- 5.11. In first angle projection (a) the top view is \_\_\_\_\_ of the front view and (b) the right side view is to the \_\_\_\_\_ of the front view.
- 5.12. In third angle projection (a) the top view is \_\_\_\_\_ of the front view and (b) the right side view is to the \_\_\_\_\_ of the front view.
- 5.13. The side view of an object is obtained as a projection on the plane, by looking the object \_\_\_\_\_ to its \_\_\_\_\_ surface.
- 5.14. In both the methods of projection, the views are identical in shape and detail but only their location with respect to the front view is different. (True/False).