



NHPC JE 2023

FINAL PUNCH



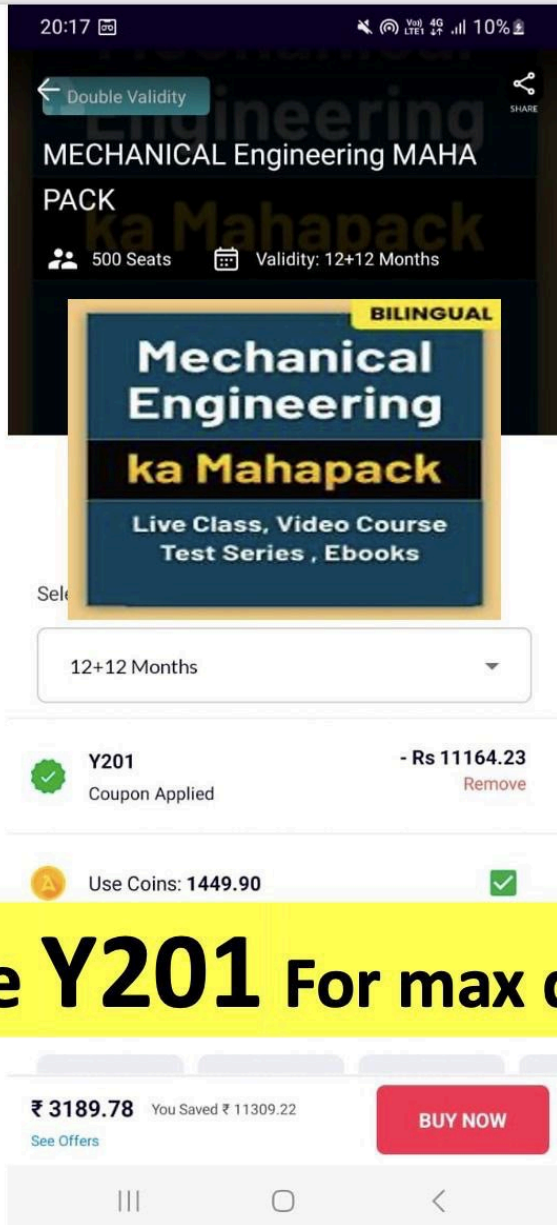
Engineering Drawing

Most Expected

Question



RK SIR



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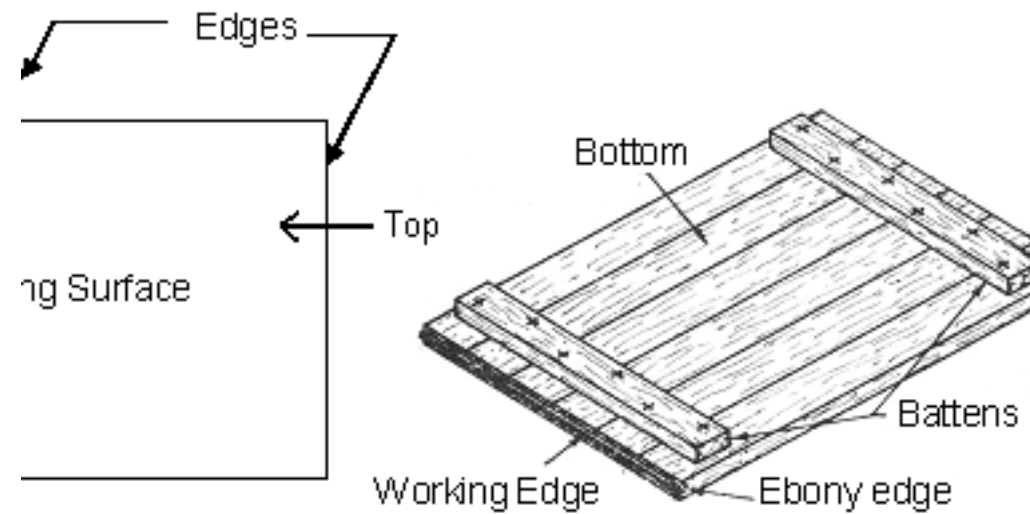
Q The part that doesn't belong to T-square is

- a) Working edge
- b) Blade
- c) Stock
- d) Ebony

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Ans d

Working edge and Stock are parts of T-square those which make 90 degrees with each other, the blade is the long bar that exists in T-Square. Ebony is part of Drawing board in which T-square is fitted to draw lines.



The areas of the two subsequent sizes of drawing sheet are in the ratio ____

- a) 1:5
- b) 1:4
- c) 1:2
- d) 1:10

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Ans c

Table 1.2 Standard Sizes of Drawing sheets as per BIS

Designation	Size (mm)
A0	841 x 1189
A1	594 x 841
A2	420 x 594
A3	297 x 420
A4	210 x 297

SP: 46 (2003) recommends the borders of _____ mm width for the sheet sizes A0 and A1, and _____ mm for the sizes A2, A3, A4 and A5.

- a) 10, 20
- b) 15, 20
- c) 20, 10
- d) 15, 10

Ans c

IS: 46 (2003) recommends the borders of 20 mm width for the sheet sizes A0 and A1, and 10 mm for the sizes A2, A3, A4 and A5. The BIS-SP 46 is the standard used in the educational institution for engineering drawing

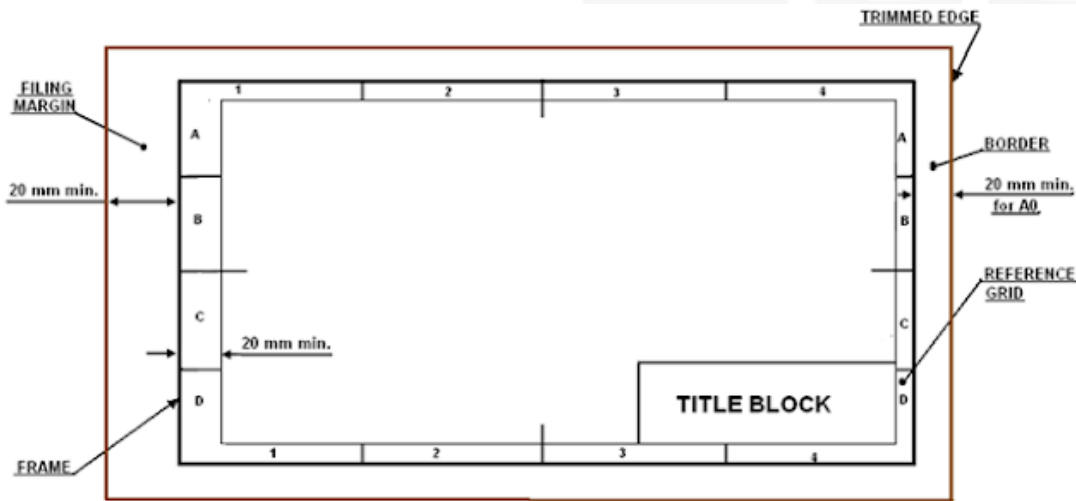


Table 1.2 Standard Sizes of Drawing sheets as per BIS

Designation	Size (mm)
A0	841 x 1189
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Which of the following instrument is made of thin strips of wood arranged in a line to form a rectangle and on which, the drawing is made?

- a) Mini - drafter**
- b) Drawing Board**
- c) Protractor**
- d) Scale**



Ad

Which of the following tools is used to draw horizontal lines?

- a) Mini - drafter
- b) Protractor
- c) T - square
- d) French curve

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Ans b

Mini drafter

- It is an important device used for making drawings quickly & accurately.
- **This instrument has a combination of T-square, set-square, protractor, and scales, it helps to draw the drawings at a faster rate.**
- They come in different sizes and a pattern called 'Pantagraph' type.
- It is fitted on the top left side, edge of the drafting board, mounted on an adjustable frame or table.



Erasing shield:

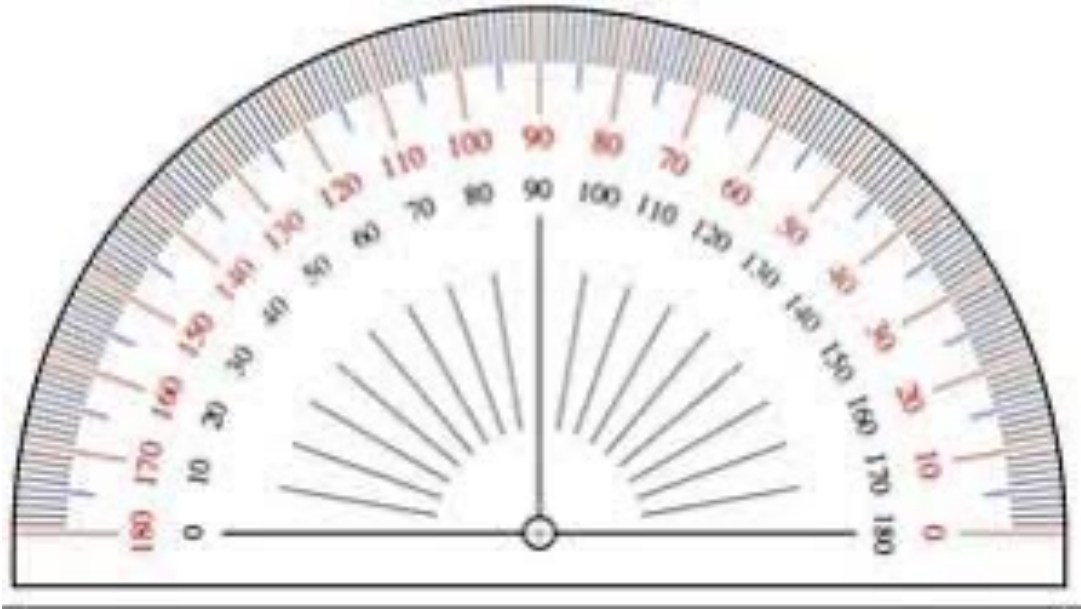
- When, on a drawing, if a part of a line or some lines among many other lines needs to be erased modified, in the normal way of erasing will damage the other nearby lines.
- In such a situation an erasing shield is effectively useful.
- It is a thin metallic sheet having small openings of different sizes and shapes.
- A suitable opening is aligned to the line to be erased and the line is removed by the eraser.



A French curve is a template usually made from metal, wood or plastic composed of many different segments of the Euler spiral (aka the clothoid curve). It is used in manual drafting and in fashion design to draw smooth curves of varying radii



Protractor is used to draw and measure the angles of lines in the drawing. It is transparent and made of plastic. It is in the shape of semi-circle, and the edge of semi-circle part consists reading with one-degree accuracy. The bottom line joins the 0° to the 180°



primarily as a guide for drawing straight horizontal lines on a drafting table. It can also be used in conjunction with a set square to draw vertical and angled lines. Its name is derived from its resemblance to the letter 'T'.



Initial work and construction lines are drawn using _ pencil.

- a) 3H
- b) 4H
- c) H
- d) 2H

Ans C








- Initial work and construction lines are drawn using H pencil.
- 2H pencil is used for outlines, dotted lines, dimension lines and arrowheads.
- 3H, 4H are used for centre lines and section lines.



The line given below is used for

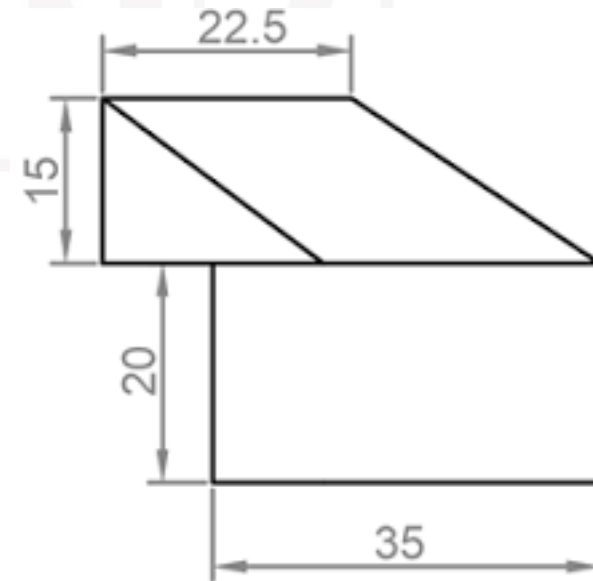


- a) Hidden outlines
- b) Cutting planes
- c) Hidden edges
- d) Dimension lines

Illustration	Application
Thick 	Outlines, visible edges, surface boundaries of objects, margin lines
Continuous thin 	Dimension lines, extension lines, section lines leader or pointer lines, construction lines, boarder lines
Continuous thin wavy 	Short break lines or irregular boundary lines – drawn freehand
Continuous thin with zig-zag 	Long break lines
Short dashes, gap 1, length 3 mm 	Invisible or interior surfaces
Short dashes 	Center lines, locus lines Alternate long and short dashes in a proportion of 6:1,
Long chain thick at end and thin elsewhere 	Cutting plane lines

The advised position of placement of the dimensions should be _____

- a) Inside the view
- b) Outside the view
- c) On the boundaries of the view
- d) Cutting the view



Ans a

**Q If there is a need for the center line,
then it can be used as a _____**

a)Dimension

b)Leader

c)Extension

d) Section

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Q The straight lines which are drawn from various points on the contour of an object to meet a plane are called as _____

- a) connecting lines
- b) projectors
- c) perpendicular lines
- d) hidden lines.

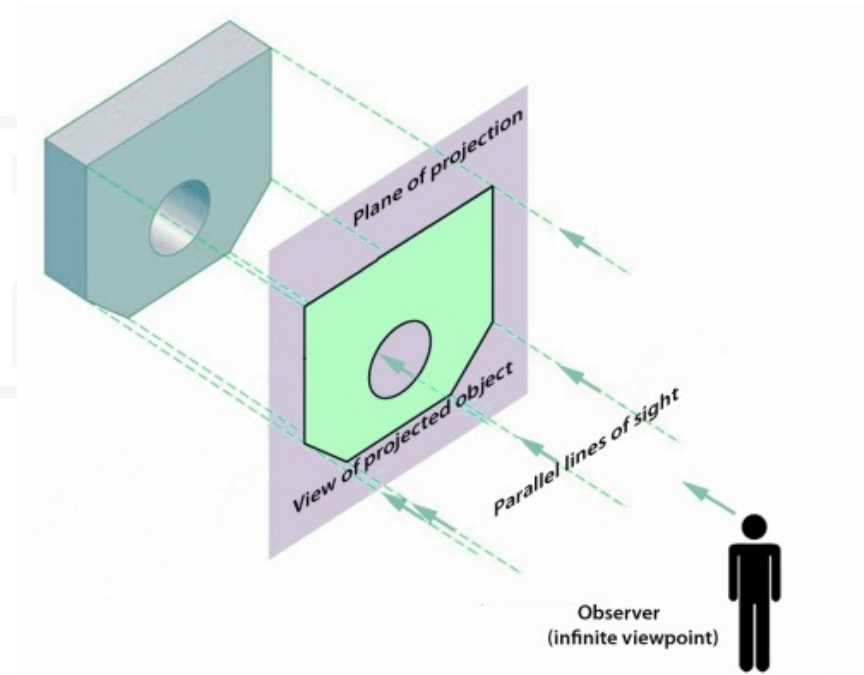
Ans b

When the projectors are parallel to each other and also perpendicular to the plane, the projection is called

-
- a) Perspective projection**
 - b) Oblique projection**
 - c) Isometric projection**
 - d) Orthographic projection**

In orthographic projection, the projectors are parallel to each other and also perpendicular to the plane

but in oblique projection, the projectors are inclined to the plane of projection and projectors are parallel to each other.

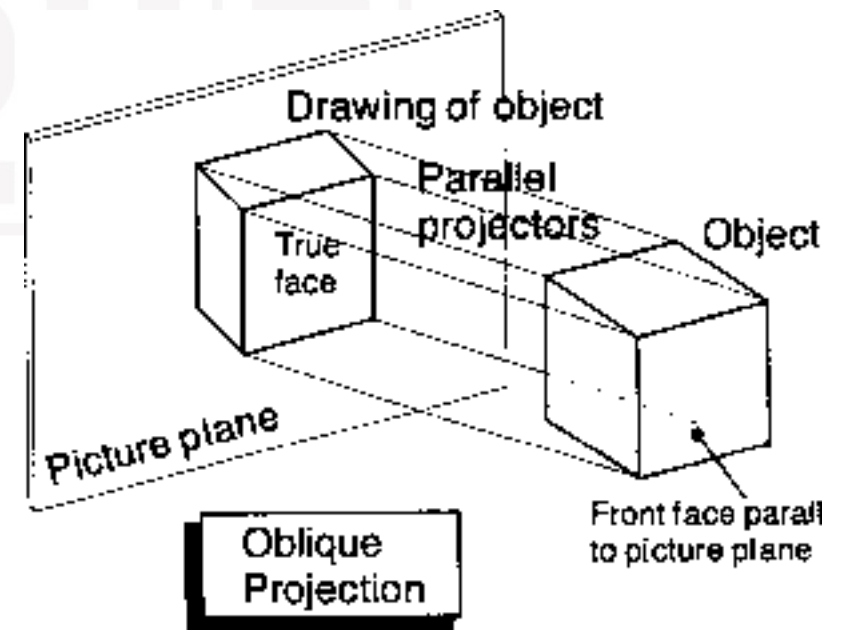


Q In the Oblique projection an object is represented by how many views?

- a) one view**
- b) two views**
- c) three views**
- d) four views**

Ans a

Oblique projection is one method of pictorial projection. Oblique projection shows three dimensional objects on the projection plane in one view only. This type of drawing is useful for making an assembly of an object and provides directly a production drawing.



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