# R. C. PATEL INSTITUTE OF TECHNOLOGY, SHIRPUR

## Department of Mechanical Engineering

## Sub:- Engineering Graphics A.Y. – 2018-19

# Sample multiple Choice Questions (MCQ)

## UNIT - I

**1-The following is not included in title block of drawing sheet.**

a. Sheet No
b. Scale
c. Method of Projection
d. Size of sheet

**(Ans: d)**

**2-Which of the following represent reducing scale?**

a. 1:1
b. 1:2
c. 2:1
d. 10:1

**(Ans: b)**

**3-In first angle projection method, object is assumed to be placed in**

a. First quadrant
b. Second quadrant
c. Third Quadrant
d. Fourth quadrant

**(Ans: a)**

**4-The following line is used for visible outlines**

a. Continuous thick
b. Continuous thin
c. Chain thin line
d. Short zigzag thin

**(Ans: a)**

**5-The following line is used for dimension line**

a. Continuous thick
b. Continuous thin
c. Chain thin line
d. Short zigzag thin

**(Ans: b)**

**6-The dotted lines represents**

a. Hidden edges
b. Projection line
c. Centre line
d. Hatching line

**(Ans: a)**

**7-Hatching lines are drawn at ___ degree to reference line**

a. 30
b. 45
c. 60
d. 90

**(Ans: b)**

**8-In aligned system of dimensioning, the dimensions may be read from**

a. Bottom or right hand edges
b. Bottom or left hand edges
c. Only from bottom
d. Only from left side

**(Ans: a)**

**9-The Length:Width in case of an arrow head is**

a. 1:1
b. 2:1
c. 3:1
d. 4:1

**(Ans: c)**

**11-The internal angle of regular pentagon is ___ degree.**

a. 72
b. 108
c. 120
d. 150

**(Ans: a)**

**12-The internal angle of regular hexagon is ___ degree.**

a. 72
b. 108
c. 120
d. 150

**(Ans: c)**

**13-A point 'P' is above Horizontal Plane (HP) and in front of Vertical Plane (VP). The point is in**

a. First quadrant
b. Second quadrant
c. Third quadrant
d. Fourth quadrant

**(Ans: a)**

**14-The side view of an object is drawn in**

a. Vertical plane
b. Horizontal plane
c. Profile plane
d. Any of the above

**(Ans: c)**

**15-Which type of line is part of a dimension?**

A) break lines
B) phantom lines
C) extension lines
D) cutting plane lines

**ANS: C**

**16-Which line type is thin and light?**

A) visible lines
B) center lines
C) construction lines
D) all of the above

**ANS: C**

**17-Which line type is thick and black?**

A) visible lines
B) center lines
C) construction lines
D) all of the above

**ANS: A**

**18-The top, front, and bottom views align in this manner:**

A. Horizontally
B. Vertically
C. According to the planar views
D. Parallel to the frontal plane

**Ans:- B**

**19- If a plane is parallel to the plane of projection, it appears:**

A. True size
B. As a line or edge
C. Foreshortened
D. As an oblique surface

**Ans:- A**

**20- This line pattern is composed of three dashes, one long dash on each end with a short dash in the middle:**

A. Object
B. Hidden
C. Center
D. Phantom

**Ans:- C**

**21- This is the plane upon which the top view is projected:**

A. Horizontal

B. Frontal

C. Profile

D. Base

**Ans:- A**

**22 - The primary unit of measurement for engineering drawings and design in the mechanical industries is the:**

A. Millimeter

B. Centimeter

C. Meter

D. Kilometer

**Ans:- A**

**23. Which Type of Line is Thick and Black**

a. Visible Line

b. Center Line

c. Construction Line

d. All of above

**Ans:- a**

**24. which tool can be used to draw a 90 degree line**

a. 30/60 set square

b. protactor

c. drafter

d. All of above

**Ans:- d**

**25. The Height width and depth of an object can be shown with a minimum of how many orthographic projection views**

a. One

b. two

c. Six

d. Four

**Ans:- b**

## UNIT - II

## PROJECTION OF POINTS

**1) The line joining the front and top views of a point is called**

(a) Reference line (b) Projector (c) Connector (d) Locus

**2) A point lying in the HP, has its top view above XY line. Its front view will be**

(a) On XY line (b) Above XY line (c) Below XY line (d) Any of these

**3) A point whose elevation and plan are above XY, is situated in**

(a) First angle (b) Second angle (c) Third angle (d) Fourth angle

**4) A point whose elevation is above XY line may be situated in**

(a) First angle (b) Second angle (c) Vertical plane (d) Any of these

**5) A point is 20 mm below HP and 30 mm behind VP. Its top view will be**

(a) 20 mm below XY (b) 30 mm below XY (c) 20 mm above XY (d) 30 mm above XY

**6) The front view of a point is 50 mm above xy line and the top view is 20 mm below the front view. the point lies in**

(a) First angle (b) Second angle (c) Third angle (d) Fourth angle

**Answer: (i) b (ii) a (iii) b (iv) d (v) d (vi) b (vii) b (viii) c (ix) d (x) a (xi) b xii)**

**7) If both the front and the top views of a point lie on the opposite side of the reference line the point may be situated in following angles**

(a) First or second (b) First or third (c) Second or fourth (d) Third or fourth

**8) If both the front and the top views of a point lie on the same side of the reference line the point may be situated in following angles**

(a) First or second (b) First or third (c) Second or fourth (d) Third or fourth

**9) If top view of a point is situated 60 mm below the reference line and its front view is 20 mm above the top view, the point lies in**

(a) First angle (b) Second angle (c) Third angle (d) Fourth angle

**10) The front view of a point is 40 mm above xy and the top view is 50 mm below xy, the position of point is**

(a) 40 mm above HP (b) 40 mm below HP (c) 50 mm above HP (d) 50 mm below HP

**11) State the position of a point the front view of which lies on the reference line and the top view is 40 mm above it.**

(a) 40 mm above HP and in the VP (b) 40 mm behind VP and in the HP (c) 40 mm below HP and in the VP (d) 40 mm in front of VP and in the HP

**12) State the position of a point the top view of which lies on the reference line and the front view is 30 mm below it.**

(a) 30 mm above HP and in the VP (b) 30 mm behind VP and in the HP (c) 30 mm below HP and in the VP (d) 30 mm in front of VP and in the HP

**Answer: (i) b (ii) a (iii) b (iv) d (v) d (vi) b (vii) b (viii) c (ix) d (x) a (xi) b xii)**

## ORTHOGRAPHIC PROJECTIONS

**1) Projection of an object shown by three views is known as**

(a) Perspective (b) Isometric (c) Oblique (d) Orthographic

**2) Which of the following describes the theory of orthographic projection?**

(a) Projectors parallel to each other and perpendicular to the plane of projection (b) Projectors parallel to each other and parallel to the plane of projection (c) Projectors parallel to each other and oblique to the plane of projection (d) Projectors perpendicular to each other and parallel to the plane of projection

**3) In orthographic projection, the elevation is obtained on a plane called**

(a) Horizontal (b) Vertical (c) Profile (d) Auxiliary

**4) In multiview projections, the XY line is also known as**

(a) Horizontal line (b) Horizontal trace (c) Reference line (d) All of these

**5) In first angle projection method, the relative positions of the object, plane and observers are**

(a) Object is placed in between (b) Plane is placed in between (c) Observer is placed in between (d) May be placed in any order

**6) In first angle projection system, the right hand side view of an object is drawn**

(a) Above of the elevation (b) Below of the elevation (c) Left of the elevation (d) Right of the elevation

**7) If the front view of an object exhibits width and height, then what dimensions of an object are exhibited by a right side view?**

(a) Length and width (b) Length and height (c) Height and width (d) Length and breadth

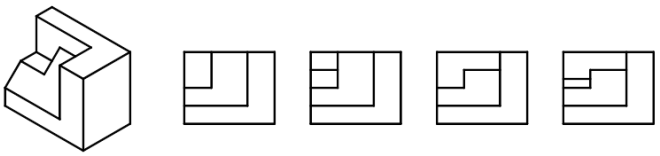
**8) For orthographic projections, B.I.S. recommends the following**

(a) First angle projection (b) Third angle projection (c) Second angle projection (d) Fourth angle projection

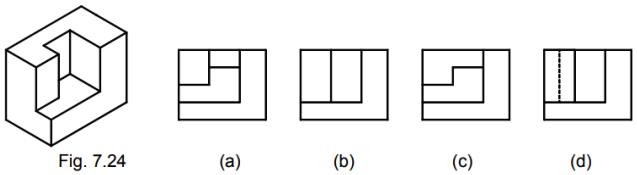
**9) The recommended symbol for indicating the angle of projection shows two views of the frustum of a**

(a) Square Pyramid (b) Triangular pyramid (c) Cone (d) Any of these

**10) For the object shown in Fig. 7.23 select the correct front view**




**11) For the object shown in Fig. 7.24 select the correct front view**




**Answer: (i) d (ii) a (iii) b (iv) c (v) a (vi) c (vii) b (viii) a (ix) c (x) c (xi) b**

## UNIT – III

### PROJECTIONS OF STRAIGHT LINES

**1) If a line is parallel to both HP and VP, its true length will be seen in**

(a) Front View (b) Top View (c) Side view (d) Both front and top views

**2) If the apparent and the true inclinations of a line with HP are equal, the line is**

(a) Parallel to horizontal plane (b) Parallel to vertical plane (c) Parallel to profile plane (d) Inclined to both reference planes

**3) The point at which the line intersects the VP, extended if necessary, is known as**

(a) Profile trace (b) Horizontal trace (c) Vertical trace (d) Auxiliary trace

**4) If the front view of a line is parallel to the xy line its true length is shown in**

(a) Front View (b) Top View (c) Side view (d) Both front and top views

**5) If top view of a line is a point, its front view is**

(a) Parallel to xy line and of true length (b) Parallel to xy line and of apparent length (c) Perpendicular to xy line and of true length (d) Perpendicular to xy line and of apparent length

**6) Horizontal trace of a line exits when the line is**

(a) Parallel to horizontal plane (b) Inclined to horizontal plane (c) Perpendicular to vertical plane (d) Perpendicular to profile plane

**7) If a line is inclined at 45º to the HP and 30º to the VP, its front view is inclined at**

(a) 30º to xy (b) 45º to xy (c) Between 30º and 45º (d) Greater than 45º

**8) If a line is inclined at 30º to the HP and 60º to the VP, its front and top views are inclined at an angle of**

(a) 30º and 60º to xy respectively (b) 60º and 30º to xy respectively (c) Both at 90º to xy (d) Both greater than 30º but less than 90º

**9) For a line situated in the first angle which of the following is not correct**

(a) HT and VT may lie below xy (b) HT lies below xy and VT lies above xy (c) HT and VT may lie above xy (d) HT lies above xy and VT lies below xy

**10) A 90 mm long line PQ, inclined at 30º to the HP and 45º to the VP has end P 15 mm above HP and 25 mm in front of VP. The other end Q will lie in**

(a) First angle (b) Third angle (c) Second or fourth angle (d) Any of these

**11) If the front and top views of a line are inclined at 30º and 45º to the reference line, the true inclination of the line with HP will be**

(a) 30º (b) 45º (c) Less than 30º (d) Greater than 45º

**12) If both the front and top views of a line are perpendicular to the reference line, the true inclination of the line with HP and VP may be respectively**

(a) 15º and 75º (b) 30º and 60º (c) Both 45º (d) Any of these

**Answer: (i) d (ii) b (iii) c (iv) b (v) c (vi) b (vii) d (viii) c (ix) d (x) d (xi) c (xii) d**

## PROJECTIONS OF PLANES

**1) If a thin set-square is kept perpendicular to both the horizontal and vertical planes, its true shape is seen in**

(a) Horizontal plane (b) Vertical plane (c) Auxiliary inclined plane (d) Profile plane

**2) Planes which are inclined to both the horizontal and vertical planes are called**

(a) Oblique planes (b) Profile planes (c) Auxiliary planes (d) None of these

**3) If a thin rectangular plate of 60 mm X 30 mm is inclined at an angle of 60º to HP its top view may be**

(a) Square of 60 mm side (b) Square of 30 mm side (c) Rectangle of 60 mm X 45 mm (d) Rectangle of 45 mm X 30 mm

**4) In multi-view orthographic projection, the front view of a circular plane may be**

(a) A circle (b) An ellipse (c) A straight line (d) Any one of these

**5) If both front and top views of a plane are straight lines the true shape will lie on**

(a) Profile plane (b) Horizontal plane (c) Vertical plane (d) Any of these

**6) If a circular plane is inclined at 30º with the HP and 60º with the VP its side view will be**

(a) An ellipse (b) A straight line (c) A circle (d) True shape

**7) The front view of an elliptical plane may be**

(a) An ellipse (b) A circle (c) A straight line (d) Any of these

**8) If the top view of a plane is a rhombus the object may be**

(a) A square (b) A rhombus (c) Either (a) or (b) (d) Neither (a) nor (b)

**9) The trace of a hexagonal plane may be**

(a) A straight line (b) A point (c) A hexagon (d) An equilateral triangle

**10) A 60º set-square has its shortest edge in the VP. The surface is perpendicular to the HP and inclined to the VP. Its front view may appear as.**

(a) An equilateral triangle (b) An isosceles triangle (c) An obtuse angled triangle (d) A acute angled triangle

**11) A 60º set-square has its shortest edge in the HP and the surface is perpendicular to the VP. Its top view may appears as.**

(a) An isosceles triangle (b) A right angled triangle (c) A straight line (d) Any of these

**12) If both the principle views of a plane object are ellipse of the same size, the side view will be**

(a) A horizontal line (b) A vertical line (c) An inclined line (d) An ellipse

**Answer: (i) d (ii) a (iii) b (iv) d (v) d (vi) b (vii) d (viii) c (ix) d (x) b (xi) d (xii) b**

# Sample Three Marks Questions

## UNIT – I

1. Draw a Square of 40 mm side

2. Draw a Regular Pentagon with circle Radius 30 mm.

3. Draw Heptagon using general method of side 30 mm.

4. Draw a Hexagon with circle diameter 50 mm.

5. Draw a Octagon having side 40 mm.

## UNIT – II

1. Draw projections of a point P which is 20 mm above H.P. and 30 mm in front of V.P.

2. Draw projections of a point Q which is 20 mm above H.P. and 30 mm behind V.P.

3. Draw projections of a point R which is 20 mm below H.P. and 30 mm behind V.P.

4. Draw projections of a point S which is 20 mm below H.P. and 30 mm in front of V.P.

5. Draw projections of a point P which is 25 mm above H.P. and 35 mm in front of V.P.

## UNIT – III

1. A line AB of length 60 mm is parallel to both H.P. and V.P. draw its projection when point A is 20 mm above H.P. and 30 mm infront of V.P.

2. A line AB of length 60 mm is parallel to both H.P. and V.P. draw its projection when point A is 20 mm below H.P. and 30 mm behind V.P.

3. A line PQ of length 55 mm is inclined to H.P. at an angle of 30° point P is 15 mm above H.P. and 20 mm infront of V.P. draw its projections.

4. A line PQ of length 55 mm is inclined to V.P. at an angle of 30° point P is 15 mm above H.P. and 20 mm infront of V.P. draw its projections.

5. Line AB of length 50 mm is inclined to H.P. such that point A is 15 mm above H.P and 20 mm infront of V.P. and point B is 35 mm above H.P. and 20 mm infront of V.P. draw its projection and determine its inclination with H.P.

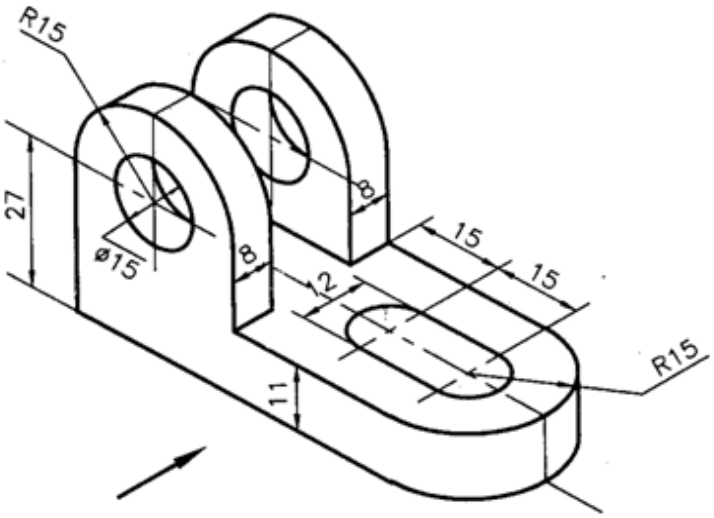
# Sample Eight Marks Questions

## UNIT – I

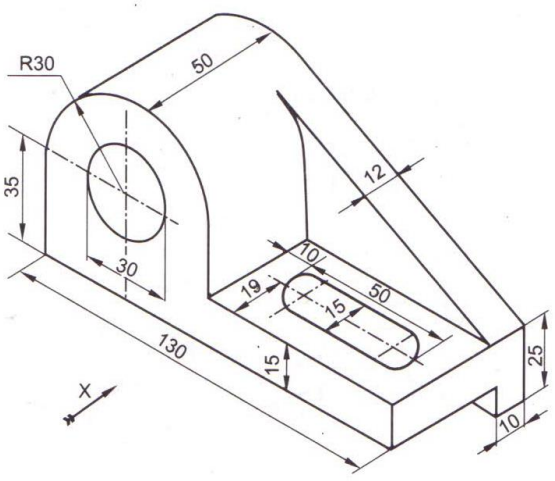
1. Using General Method Draw a) Pentagon and b) Hexagon both of 50 mm side.
2. Inscribe a Regular Square and Pentagon in a circle of Diameter 60 mm.
3. Using Arc Method Draw a) Heptagon and b) Octagon of side 50 mm.
4. Using Inscribed circle method draw a) Pentagon and b) Heptagon of side 45 mm.

## UNIT – II

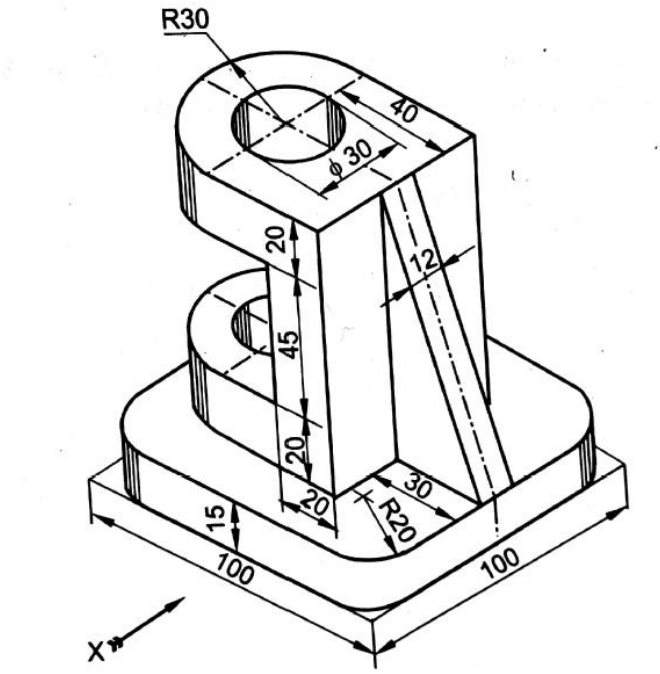
1. Using First Angle Method of Projection Draw a) Front View and b) Top View



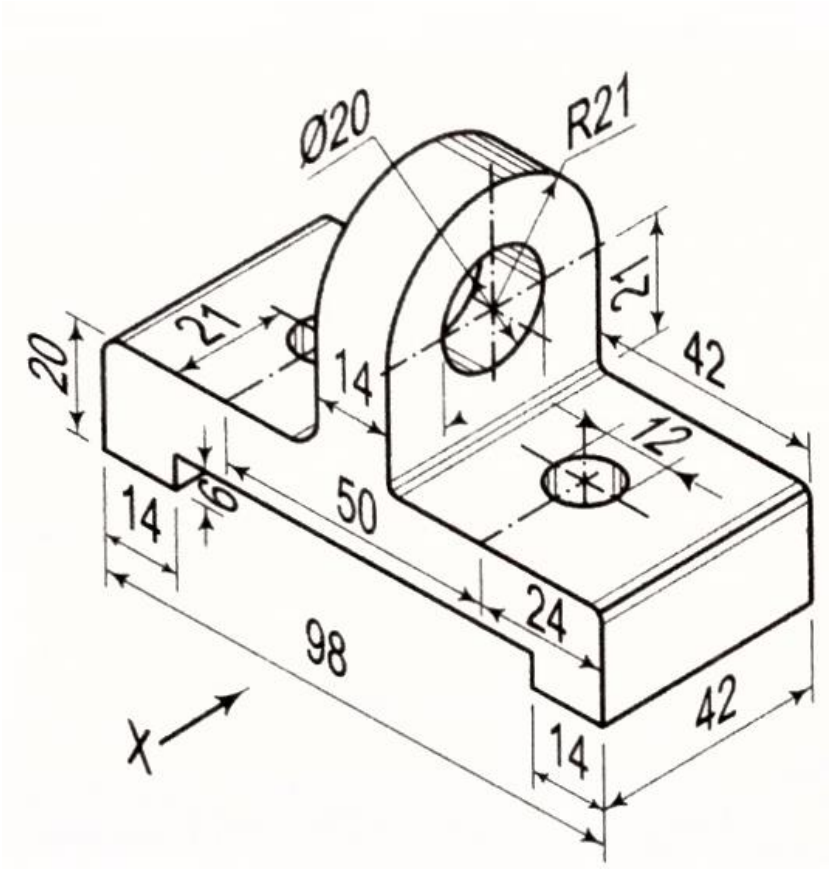

2. Using Third Angle Method Draw a) Front View and b) RHSV



**3.** 1. Using First Angle Method of Projection Draw :- a) Front View and b) Top View




4. Using Third Angle Method Draw a) Front View and b) RHSV



## UNIT – III

1. A line AB, 70 mm long is inclined at an angle of 45° to the H.P. and 30° to the V.P. its end point A is oh the H.P. and 25 mm infront of the V.P. Draw the projections of line AB assuming it to be in first quadrant. Also locate its traces.

2. A line AB 75 mm long is inclined at an angle of 30° to the V.P. its end point A is 20 mm above H.P. and 15 mm infront of V.P. Plan length of the line is 50 mm. Draw the projections of line AB assuming it to be in first quadrant. Also locate its traces.

3. A hexagonal plane of 30 mm side has one of its sides on H.P. and inclined at 45° to V.P. the surface of plane is inclined at 45° to H.P. Draw its projections

4. A circular plate of diameter 60 mm is kept on H.P. on a point of its circumference. The surface of the circular plate makes an angle of 40° to H.P. Draw the projections of the circle when diameter passing through the point on H.P. makes an angle of 30° to V.P.