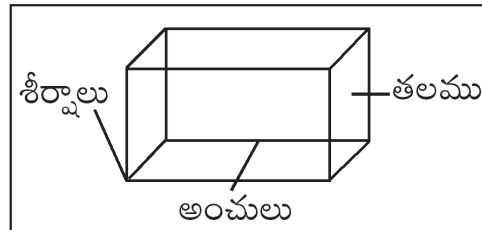


8. VISUALISING SOLID SHAPES

3D Shapes : The shapes which have length, breadth and height (depth) are called 3- dimensional or solid

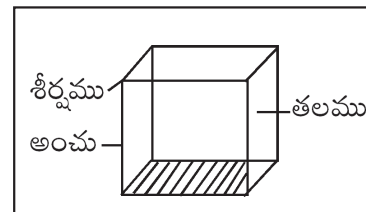
shapes

Ex : Match box, ball, wood, disc, cap etc



2D Shapes : The shapes which have only length and breadth are called 2-Dimensional or linear shapes

Ex : - Triangle, Quadrilateral, Rectangle etc

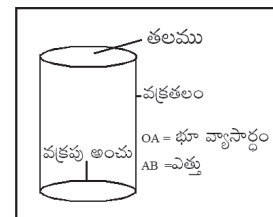


Cuboid :- A cuboid is a three - dimensional shape whose faces are all rectangles.

Ex : - Match box, brick, Trunk box, etc

→ Cuboid has 6 faces, 12 Edges and 8 Vertices

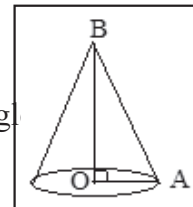
Cube : A cube is a three - dimensional shape with all its faces square and all its edges equal in length.



Prism : A prism is a solid shape whose cross sections parallel to an end are all identical.

Right Prism: A right prism is a prism whose sides are at right angle

→ Name of the prism based on its base shape



Cylinder A cylinder is a 3-D shape whose cross sections are all circles of the same radius.

Ex : Piece of pipe, candle, Tube light etc

Cone : A cone is a 3-D shape with a circular base tapering to a point (vertex)

Ex : Carrot, heap of rice, bafloom cap, ice ream cup etc

→ It has base radius (r) , height (h) and slant height (l)

Sphere A sphere is a perfectly round shape. Set of points in a space which are all the same distance from a fixed point.

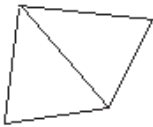
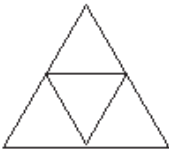
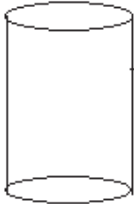
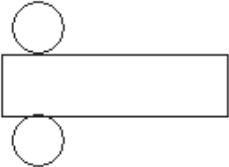
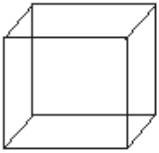
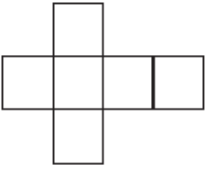
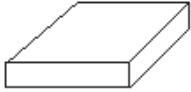
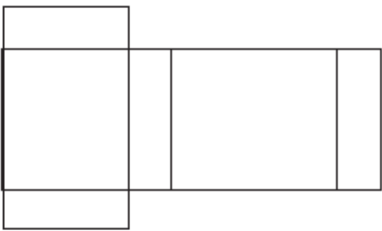
Ex : Ball, Lime fruit, Laddus, Marbles etc

Pyramid:- If base is a polygon, top is a vertex and lateral surfaces become triangle then it is a pyramid. Name become based on base shape



Net diagrams of 3-D shapes :

→ The representation of 3-D shapes in the form of 2-D shapes is called Net diagrams

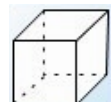
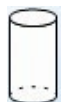
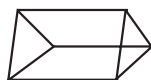
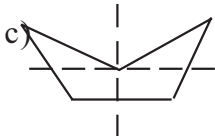
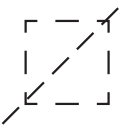
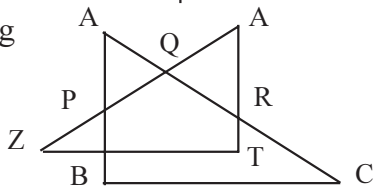
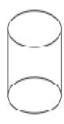
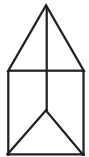
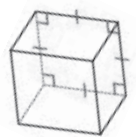
	3- D shape	Net diagram
Pyramid		
Cylinder		
Cube		
Cuboid		

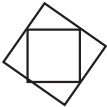
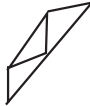
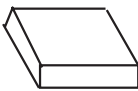
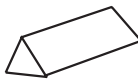
Dice dice is a cube in which each face has unique number from 1 to 6

→ Sum of numbers in opposite sides is 7 in dice

Isometric shapes :-The representation of 3-D shapes using Isometric paper is called Isometric shapes

OBJECTIVE QUESTIONS

1. Number of edges in given figure []
 a) 12 b) 8 c) 6  d) 4
2. Which of the following figure has 6 faces []
 a)  b)  c)  d) 
3. Which of the following is divided into 2 parts using dotted lines []
 a)  b)  c)  d) 
4. Number of triangle in the following []
 a) 3 b) 5 c) 6 d) 7

5. Which of the following figures from rectangle by joining edges []
 a)  b)  c)  d) 
6. Which of the following is different []
 a)  b)  c)  d) 
7. Which of the following apperas like  from front view,  from top view []
 a)  b)  c)  d) 
8. Which shape we get by rotate right triangle along height []
 a) Sphere b) Cyllender c) Cone d) Cuboid 

9. Sum of length of edges in adjacent cube is []
 a) 24 cm b) 30 cm c) 32 cm d) 36 cm
10. Which of the following statement is true []
 a) cone has 2 vertex b) cube has 8 vertices
 c) Cylender has 1 vertex d) cuboid has 10 faces
11. Top view, Front view of a solid is given what is that shape []
 a) Cylender b) Cone
 c) Prism d) Pyramid
12. Which of the following is net diagrams of []
 a)  b)  c)  d) 
13. Which of the following has 3 rectangles, 2 triangles []
 a)  b)  c)  d) 
14. Which of the following cube has 4cm edge []
 a)  b)  c)  d) 
15. In figure what is sum of digits in opposite side of 4 + 3 in two dices []
 a) 3 b) 5
 c) 12 d) 7
16. Which number is in dice opposite side of 5 []
 a) 1 b) 2 c) 3 d) 6
17. What is the vertical cross - section of a dice []
 a) Triangle b) Rectangle
 c) Square d) Cube
18. The shadow of 3-D object is given what is that []
 a) Brick b) Ball c) Pipe d) Cone
19. The shadow of 3-D object is given what is that []
 a)  b)  c)  d) 

20. It is the face of an object what is that []

- a) Dice b) Match box c) Pyramid d) Ball

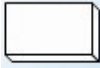
21. The front view, side view and top view has given what is that shape []

- a)  b)  c)  d) 

22. Front view of the picture is []

- a)  b)  c)  d) 

23. The 3D object with only one flat surface []

- a)  b)  c)  d) 

24. The 3D object with two flat surface []

- a)  b)  c)  d) 

25. How many flat surfaces are there in the given figure []

- a) 4 b) 3
c) 5 d) 2



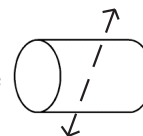
26. Number of vertices in given figure []

- a) 8 b) 6 c) 12 d) 10



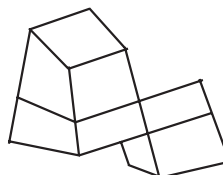
27. Which of cross-section of dotted line in given figure []

- a)  b)  c)  d) 



28. How many tetrahedrans in given figure []

- a) 16 b) 9
c) 18 d) 12



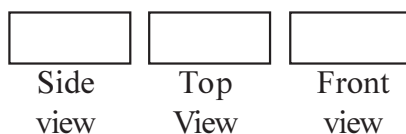
29. What is 3-D object showing below figure []

a) cube

b) cuboid

c) cone

d) sphere



LEVEL -2

1. The name of the given shape []

a) Rectangle

b) Square

c) Quadrilateral

d) Parallelogram



2. Which of the following is difference between cube and cuboid []

a) No difference between cube and cuboid

b) Length, breadth and height are equal in cube but not in cuboid

c) Length, breadth and height difference in cube but not in cuboid

d) A or C

3. Which of the following has more vertices []

a) Cone

b) Cylinder

c) Cuboid

d) Pyramid

4. When joining cubes of 3cm x 3cm x 2 cm side by side what we get in following []

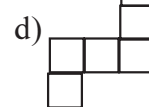
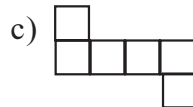
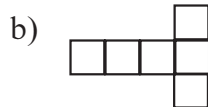
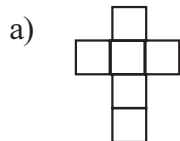
a) 6 x 6 x 6

b) 12 x 12 x 12

c) 9 x 6 x 3

d) 9 x 3 x 3

5. Which of the following is not a net diagram of cube []



6. What is the cross-section of brick at vertices of 5cm, 5cm, 10cm measurements []

a) cuboid

b) Cylinder

c) Cube

d) Triangle

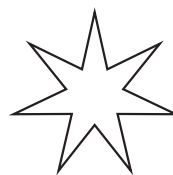
7. Number of corners in the following figure []

a) 6

b) 10

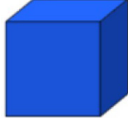
c) 14

d) 13



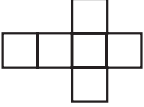
8. Which of the following is correct []
 a) Triangle has 3 sides, 4 vertices b) Cylinder has 3 faces
 c) All sides equal in a rectangle d) Cuboid has 4 faces, 12 edges
9. Which shape can be formed when Rakesh arrange 1 rupee coins one by one
 a) circle b) cylinder c) cube d) cone []
10. Which of the following is not correct []
 a) cuboid has 3 pair of opposite faces b) cube has 6 faces
 c) all sides equal in square d) cuboid is a 3-D shape
11. Match the following []
- i) 

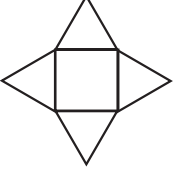
ii) 

iii) 

iv) 

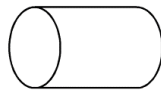
a) 

b) 

c) 

d) 
- a) i-d, ii-b, iii-c, iv-d b) i-d, ii-a, iii-b, iv-c
 c) i-c, ii-b, iii-a, iv-d d) i-d, ii-a, iii-c, iv-b
12. If 3-D shape has 6 faces, 12 edges then number of vertices are []
 a) 8 b) 10 c) 12 d) 18
13. What is the relation between vertices (v) , Edges (E) and Faces (F)[]
 a) $F + V - E = 2$ b) $F + V = E - 2$ c) $F - V = E - 2$ d) $F - V + E = 2$

14. What is the name of left side picture []



- a) Cylender b) Cone c) Sphere d) Cuboid

15. If two cubes having 2cm x 2 cm x 2 cm lengths to be arranged side by side then what is resultant length of cuboid []

- a) 2 cm b) 3 cm c) 4 cm d) 6 cm

16. Which of the following become cuboid []

- a) 2- Dimensional b) 3-Dimensional c) a and b d) None of these

17. Which of the following is 3-Dimensional []

- a) Rectangle b) Circle c) Cuboid d) Square

18. Number of faces in a sphere []

- a) 1 b) 6 c) 2 d) 3

19. Number of vertices in a cone []

- a) 1 b) 6 c) 2 d) 3

20. Number of surfaces in a triangular prism is []

- a) 4 b) 5 c) 6 d) 3

21. Number of surfaces in square pyramid is []

- a) 4 b) 5 c) 6 d) 3

22. Sum of digits of side opposie to the side 2 + 1 in two dices is []

- a) 3 b) 7 c) 11 d) 6

23. If two dices shows 6 + 2 them what is sum of digits in opposite side []

- a) 3 b) 7 c) 11 d) 6

24. If we cut an apple vertically then what shape we got []

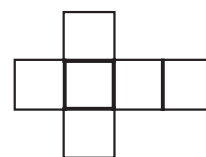
- a) Rectangle b) Square c) Circle d) Triangle

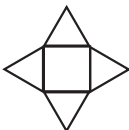
25. Verticle Cross - section of cylinder []

- a) Rectangle b) Square c) Circle d) Triangle

26. Which of following shows adjacent net diagram []

- a) Pyramid b) Cone
c) cube d) cuboid



26.  The net diagram shows the following []

- a) Pyramid b) Cone c) cube d) cuboid

27. What is the name of adjacent figure []

- a) cylinder b) cone c) sphere d) cuboid

28. What is 3-D shape the adjacent figure shows []

- a) cylinder b) cone
c) sphere d) cuboid



29. Two dice placed such that $5 + 6$ showing them what is the sum of opposite side

- a) 3 b) 7
c) 11 d) 6



[]

30. What is cross-section of dice

[]

- a) Rectangle b) Square c) Circle d) triangle

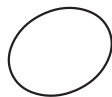
31. Match

i)



a) cuboid

ii)



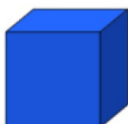
b) cylinder

iii)



c) cube

iv)



d) sphere

v)



e) pyramid

vi)



f) cone

a) i-d, ii-a, iii-c, iv-b, v-e, vi-f

b) i-b, ii-a, iii-f, iv-c, v-e, vi-f

c) i-b, ii-d, iii-a, iv-c, v-f, vi-e

d) i-a, ii-b, iii-c, iv-d, v-e, vi-f

VISUALISING SOLID SHAPES

KEY

LEVEL - 1

1	B
2	B
3	D
4	B
5	C
6	A
7	C
8	C
9	A
10	B
11	A
12	B
13	C
14	C
15	D
16	B
17	C
18	A
19	A
20	C
21	A
22	D
23	A
24	B
25	C
26	A
27	C
28	C
29	B

LEVEL - 2

1	C
2	B
3	C
4	D
5	D
6	D
7	C
8	B
9	B
10	B
11	B
12	A
13	A
14	A
15	C
16	B
17	C
18	A
19	A
20	A
21	B
22	C
23	D
24	C
25	A
26	C
27	A
28	A
29	B
30	A
31	B
32	C