



KINETICS

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IIT-JEE | Medical | Foundations

Visualising Solid Shapes

Question 1.

Which of the following statements is false?

- (a) A sphere has one flat surface.
- (b) A cone has one flat face.
- (c) A cylinder has two circular faces.
- (d) A sphere has one curved face.

Answer: (a) A sphere has one flat surface.

Question 2.

Which of the following can be other name of a cylinder?

- (a) A triangular prism
- (b) A rectangular prism
- (c) A vertical prism
- (d) A circular prism

Answer: (d) A circular prism

Question 3.

A three dimensional shape is _____ object.

- (a) solid
- (b) 2d
- (c) plane
- (d) None of these

Answer: (a) solid

Question 4.

How many circular bases does a cylinder have?

- (a) 2
- (b) 3

- (c) 4
- (d) 1

Answer: (a) 2

Question 5.

The top-view of a cube looks like a:

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

Answer: (b) Square

Question 6.

How many vertices does a cone have?

- (a) 2
- (b) 1
- (c) 3
- (d) 4

Answer: (b) 1

Question 7.

What is the difference between a rectangle and a cube?

- (a) A rectangle is 3-dimensional and a cube is 2-dimensional.
- (b) A rectangle and a cube are both 2-dimensional.
- (c) A rectangle is 2-dimensional and a cube is 3-dimensional.
- (d) A rectangle and a cube are both 3-dimensional.

Answer: (c) A rectangle is 2-dimensional and a cube is 3-dimensional.

Question 8.

How many triangles would you find in a net that folds into a square pyramid?

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

Answer: (b) 4

Question 9.

How many vertices does a triangular pyramid have ?

- (a) 1
- (b) 2
- (c) 3
- (d) 4

Answer: (d) 4

Question 10.

A square pyramid always has ____.

- (a) Four lateral faces, which are parallel to each other.
- (b) Four lateral faces, which are congruent equilateral triangles and a rectangular base.
- (c) Two bases which are congruent and parallel.
- (d) Four lateral faces, which are congruent isosceles triangles and a square base.

Answer: (d) Four lateral faces, which are congruent isosceles triangles and a square base.

Question 11.

Which is the three-dimensional figure formed by rotating a triangle?

- (a) Cone
- (b) Quadrilateral
- (c) Prism
- (d) Square

Answer: (a) Cone

Question 12.

The faces of a cube consist of

- (a) 8 squares
- (b) 4 squares and 2 rectangles
- (c) 2 squares and 4 rectangle
- (d) 6 squares

Answer: (d) 6 squares

Question 13.

Which is/are three dimensional shapes?

- (a) Sphere

- (b) Cylinder
- (c) Cone
- (d) All of the above

Answer: (d) All of the above

Question 14.

What do you call solid figures with line segments as their edges?

- (a) Polygons
- (b) Squares
- (c) Cylinders
- (d) Polyhedrons

Answer: (d) Polyhedrons

Question 15.

The faces of a triangular pyramid consist of

- (a) 1 square and 3 triangles
- (b) 2 triangles and 3 rectangles
- (c) 4 triangles
- (d) 2 rectangles and 3 triangles

Answer: (c) 4 triangles

Question 16.

The top-view of a cuboid looks like a:

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

Answer: (c) Rectangle

Question 17.

For a polyhedron, if 'F' stands for number of faces, V stands for number of vertices and E stands for number of edges, then which of the following relationships is named as Euler's formula ?

- (a) $F + V = E + 2$
- (b) $F + E = V + 2$
- (c) $V + E = F + 2$
- (d) $F + V = E - 2$

Answer: (a) $F + V = E + 2$

Question 18.

Which of the following statements is true?

- (a) The lateral faces of a square prism are triangles.
- (b) The lateral faces of a triangular prism can be squares or rectangles.
- (c) The lateral faces of a square pyramid can be squares.
- (d) The lateral faces of a triangular pyramid can be squares or rectangles.

Answer: (b) The lateral faces of a triangular prism can be squares or rectangles.

Question 19.

Identify the statement that is false for a prism.

- (a) A right prism has rectangular lateral faces.
- (b) A right prism has two bases.
- (c) A right prism has triangular lateral faces.

Answer: (c) A right prism has triangular lateral faces.

Question 20.

The lateral faces of a pyramid are ____.

- (a) triangles
- (b) pentagons
- (c) rectangles
- (d) None of these

Answer: (a) triangles

Question 21.

How many circular bases does a cylinder have?

- (a) 1
- (b) 2
- (c) 3
- (d) 4

Answer: (b) 2

Question 22.

How many congruent edges does a cube have?

- (a) 12
- (b) 6
- (c) 8
- (d) none of these

Answer: (a) 12
