

MONTHLY TEST

Q. ID: ITISKILL02875G

January 2026

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Answer Key

Duration: 60 Mins

Total Marks: 25

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1. Which state of equilibrium's example is A cone resting on its tip?

- A) Stable B) Unstable
C) Neutral D) Horizontal

Answer: B) Unstable

2. What is the centre of gravity of a solid hemisphere from its base?

- A) $3r/4$ B) $r/2$
C) $4r/5$ D) $3r/8$

Answer: D) $3r/8$

3. Which state of equilibrium's example is, A cone resting on its base?

- A) Un-stable B) Stable
C) Neutral D) Bothe A and B

Answer: B) Stable

4. What is the centre of gravity of a right circular cone from its base?

- A) $h/3$ B) $h/2$
C) $h/4$ D) $h/5$

Answer: C) $h/4$

5. Where the centre of gravity of a circle lies?

- A) At its centre B) Any where on its circumference
C) Any where on its radius D) Any where on its diameter

Answer: A) At its centre

6. What is the centre of gravity of a right circular cone from its base?

- A) $h/2$ B) $h/4$
C) $h/3$ D) $h/5$

Answer: B) $h/4$

7. What is the name of the point at which all the weight of the body concentrated?

- A) Centre of gravity B) Initial point
C) Centroid D) Central point

Answer: A) Centre of gravity

8. Which state of equilibrium's example is, A cone resting on its base?

- A) Stable B) Bothe A and B

- C) Un-stable D) Neutral

Answer: A) Stable

9. Which is thermo plastic material?

- A) Vinyl polymers B) Neoprene
C) Nylon D) Butyl rubber

Answer: A) Vinyl polymers

10. What is the centre of gravity of a solid hemisphere from its base?

- A) $3r/8$ B) $4r/5$
C) $r/2$ D) $3r/4$

Answer: A) $3r/8$

11. What is the centre of gravity of a rectangular body?

- A) Shorter side of rectangle B) At the corners
C) At the point of intersection of its diagonals D) Longer side of rectangle

Answer: C) At the point of intersection of its diagonals

12. What is the centre of gravity of a semi circle of diameter 12 cm?

- A) 2.54 cm B) 2.75 cm
C) 2.24 cm D) 3.25 cm

Answer: A) 2.54 cm

13. Which one of the following geometrical shapes centre of gravity lies from its base is $1/3$ of its height?

- A) Square B) Triangle
C) Cone D) Rhombus

Answer: B) Triangle

14. What is the name of the point at which all the weight of the body concentrated?

- A) Central point B) Initial point
C) Centre of gravity D) Centroid

Answer: C) Centre of gravity

15. What is the maximum percentage of stretch of its original length is allowable for elastic materials?

- A) 200% B) 100%
C) 400% D) 300%

Answer: D) 300%

16. Which affects the centre of gravity of the object

- A) Density
- C) Weight

- B) Shape
- D) Mass

Answer: D) Mass

17. Which state of equilibrium's example is A cone resting on its tip?

- A) Stable
- C) Neutral
- B) Unstable
- D) Horizontal

Answer: B) Unstable

18. What is the ratio of change in length to original length?

- A) Linear strain
- C) Volumetric strain
- B) Lateral strain
- D) Poisson's ratio

Answer: A) Linear strain

19. Which affects the centre of gravity of the object?

- A) Density
- C) Mass
- B) Shape
- D) Weight

Answer: C) Mass

20. Where the centre of gravity of a circle lies?

- A) Any where on its radius
- C) Any where on its circumference
- B) Any where on its diameter
- D) At its centre

Answer: D) At its centre

21. What is the centre of gravity of a sphere?

- A) On the circumference
- C) At the diameter
- B) At the radius
- D) At the centre

Answer: D) At the centre

22. What is the centre of gravity of a semi circle of diameter 12 cm?

- A) 3.25 cm
- C) 2.75 cm
- B) 2.54 cm
- D) 2.24 cm

Answer: B) 2.54 cm

23. What is the centre of gravity of a rectangular body?

- A) Longer side of rectangle
- C) Shorter side of rectangle
- B) At the point of intersection of its diagonals
- D) At the corners

Answer: B) At the point of intersection of its diagonals

24. What is the centre of gravity of a sphere?

- A) At the diameter
- C) At the centre
- B) On the circumference
- D) At the radius

Answer: C) At the centre

25. Which one of the following geometrical shape's centre of gravity lies from its base is $\frac{1}{3}$ of its height?

- A) Rhombus
- C) Cone
- B) Square
- D) Triangle

Answer: D) Triangle