

# WCS friction and center of gravity questions

Q. ID: ITISKILL1523UM

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Answer Key

Duration: 30 Mins

Total Marks: 22

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

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

**Answer: C)  $3r/8$**

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

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

**Answer: C) Mass**

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

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

**Answer: D) At the point of intersection of its diagonals**

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

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

**Answer: D) At the centre**

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

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

**Answer: C) 2.54 cm**

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

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

**Answer: A) Unstable**

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

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

**Answer: D) Unstable**

8. 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)  $3r/8$**

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

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

**Answer: D) Stable**

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

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

**Answer: B)  $h/4$**

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

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

**Answer: C) At its centre**

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

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

**Answer: D) At the point of intersection of its diagonals**

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 centre of gravity of a semi circle of diameter 12 cm?

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

**Answer: C) 2.54 cm**

15. Which affects the centre of gravity of the object

- A) Weight
- B) Shape

C) Mass

D) Density

**Answer: C) Mass**

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

A) Stable

B) Neutral

C) Both A and B

D) Un-stable

**Answer: A) Stable**

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

A)  $h/5$

B)  $h/2$

C)  $h/3$

D)  $h/4$

**Answer: D)  $h/4$**

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

A) Centroid

B) Initial point

C) Central point

D) Centre of gravity

**Answer: D) Centre of gravity**

**19.** Which one of the following geometrical shape's centre of

gravity lies from its base is  $1/3$  of its height?

A) Rhombus

B) Cone

C) Triangle

D) Square

**Answer: C) Triangle**

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

A) Any where on its diameter B) Any where on its radius

C) At its centre

D) Any where on its circumference

**Answer: C) At its centre**

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

A) Initial point

B) Centre of gravity

C) Centroid

D) Central point

**Answer: B) Centre of gravity**

**22.** What is the centre of gravity of a sphere?

A) At the diameter

B) At the centre

C) On the circumference

D) At the radius

**Answer: B) At the centre**