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Score: 18/25 (72.00%)

Code: 5147

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

- A) Weight  
 B) **Mass (Correct)**  
 C) Density  
 D) Shape

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) Stable  
 B) Neutral (Incorrect)  
 C) **Unstable**  
 D) Horizontal

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

- A) Square  
 B) Rhombus

- C) **Triangle (Correct)**  
 D) Cone

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

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

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

- A) 2.24 cm  
 B) **2.54 cm (Correct)**  
 C) 3.25 cm  
 D) 2.75 cm

12. Which is thermo plastic material?

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

13. What is the ratio between the change in dimension to its original dimension of the substance?

- A) Stress (Incorrect)  
 B) **Strain**  
 C) Poisson's ratio  
 D) Factor of safety

14. What is the ratio of shear stress to shear strain?

- A) Modulus of elasticity  
 B) **Modulus of rigidity (Correct)**  
 C) Bulk modulus  
 D) Yield point

15. What is the ratio between stress and strain?

- A) Yield point  
 B) Factor of safety  
 C) **Youngs Modulus (Correct)**  
 D) Poisson's ratio

16. Which force acts on crank shaft?

- A) Shear stress  
 B) **Torsional stress (Correct)**  
 C) Tensile stress  
 D) Compressive stress

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

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

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

- A) **At its centre (Correct)**  
 B) Any where on its radius

C) Any where on its circumference

D) Any where on its diameter

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

A)  $h/2$

B)  $h/3$  (Incorrect)

C)  $h/4$

D)  $h/5$

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

A) Longer side of rectangle

B) Shorter side of rectangle

C) At the point of intersection of its diagonals (Correct)

D) At the corners

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

A)  $4r/5$

B)  $3r/8$  (Correct)

C)  $3r/4$

D)  $r/2$

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

A) At the centre (Correct)

B) On the circumference

C) At the diameter

D) At the radius

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

A) Stable (Incorrect)

B) Neutral

C) Unstable

D) Horizontal

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

A) Un-stable

B) Neutral

C) Stable (Correct)

D) Both A and B

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

A) 2.24 cm

B) 2.54 cm (Correct)

C) 3.25 cm

D) 2.75 cm