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Code: 7793

1. Which affects the centre of gravity of the object

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

12. What are the various types of heat treatment processes?

- A) Annealing, Normalising, Hardening and Tempering
C) Hardening, Soaking, Painting and Packing
- B) Normalising, Heating, Cooling and Painting (Incorrect)
D) Tempering, Cooling, Packing and Solling

13. What is the process of heat treatment?

- A) The process of heating and cooling to change the structure and properties
C) The process of cooling to measure the dimensions
- B) The process of heating to change the dimensions
D) The process of heating and bending as per our requirement (Incorrect)

14. What are the various stages of heat treatment?

- A) Heating, Cooling and Quenching
C) Heating, Soaking and Quenching
- B) Quenching, Cooling and Heating
D) Soaking, Quenching and Cooling (Incorrect)

15. What is the name of the structure formed, if a steel is heated for about 723 Degree C?

- A) Cementide (Incorrect)
C) Martensite
- B) Austenite
D) Ferrite

16. Which heat treatment process is done to refine the grain structure of the steel?

- A) Annealing (Incorrect)
C) Hardening
- B) Normalising
D) Tempering

17. What is the name of heat treatment process done to relieve strain and stress?

- A) Normalising (Incorrect)
C) Hardening
- B) Annealing
D) Tempering

18. Which process produce equilibrium conditions?

- A) Annealing and Hardening B) Normalising and Tempering (Incorrect)
C) Annealing and Normalising D) Normalising and Tempering

19. Which process steel is heated in a carbonaceous atmosphere for the penetration of carbon?

- A) Case hardening B) Nitriding (Incorrect)
C) Carburising D) Induction hardening

20. Which is the suitable nitriding process for all alloyed and unalloyed steels?

- A) Silver nitriding (Incorrect) **B) Nitriding in salt-bath**
C) Nitriding in Quenching tank D) Gas nitriding

21. What is the name of the heat treatment process, where the metal is heated and quenched in water or oil?

- A) Hardening** B) Normalising and Tempering

C) Annealing D) Tempering (Incorrect)

22. Which is a kind of surface hardening process?

- A) Cementite B) Ferrite (Incorrect)
C) Nitriding D) Tempering

23. How much time is allowed normally in soaking zone for a 10mm thick metal piece while hardening?

- A) 5 minutes** B) 10 minutes
C) 15 minutes D) 20 minutes (Incorrect)

24. What is colour of a metal piece when heated to 250 Degree C while doing the tempering process?

- A) Blue **B) Brown**
C) Purple (Incorrect) D) Pale

25. What is the purpose of tempering a steel?

- A) To reduce the brittleness (Correct)** B) To remove the ductility
C) To increase the hardness D) To increase the brittleness