

**QUIZ NO: 450**  
**TOPIC: ENGINEERING MECHANICS**  
**DATE: 03/06/2021**

**1. The branch of Mechanics that deals with the body in motion a without considering the forces causing the motion is called as?**

- [A] Kinetics
- [B] Dynamics
- [C] Kinematics
- [D] Statics

**Answer: C**

**2. A body which does not regain its shape on removal of load applied to the body**

- [A] Plastic body
- [B] Rigid Body
- [C] Elastic body
- [D] None of the above

**Answer: A**

3. In a Rigid body if the point of application of a force can be changed along its line of action, then the effect of force remains unchanged, this law/principle is called as?

- [A] Parallelogram law of force
- [B] Polygon law of force
- [C] Principle of Transmissibility
- [D] Triangle law of forces

**Answer: C**

4. As per Parallelogram law of forces, the angle made by the resultant with the horizontal force component of the parallelogram is given as

- [A]  $\tan \alpha = \frac{Q \sin \theta}{P+Q \cos \theta}$
- [B]  $\tan \alpha = \frac{Q \cos \theta}{P+Q \sin \theta}$
- [C]  $\tan \alpha = \frac{P \sin \theta}{Q+P \cos \theta}$
- [D]  $\tan \alpha = \frac{P \sin \theta}{P+Q \cos \theta}$

**Answer: A**

5. Two unlike parallel forces equal in magnitude and separated by a distance is called

- [A] Parallel forces
- [B] Coplanar forces
- [C] Couple

[D] Collinear forces

**Answer: C**

**6. Centre of gravity is the point at which**

[A] Entire mass of the body is concentrated

[B] Entire weight of the body is concentrated

[C] Centre of the body

[D] None of the above

**Answer: B**

**7. The centroid of an equilateral triangle of side 'a' from the base is**

[A]  $a/2\sqrt{2}$

[B]  $a/\sqrt{12}$

[C]  $a/2\sqrt{3}$

[D] Both b and c

**Answer: D**

**8. Radius of gyration is given by**

[A] Ratio of moment of inertia to the area of cross section

[B] Square root of ratio of moment of inertia to the area of cross section

[C] Ratio of section modulus to area of cross section

[D] None of the above

**Answer: B**

**9. The maximum frictional force experienced by a body before it just begins to move is called**

- [A] Static friction
- [B] Dynamic friction
- [C] Limiting Friction
- [D] None of the above

**Answer: C**

**10. Moment of inertia of a right triangle of height 'h' and base 'b' with respect to an axis passing through the base of the triangle is**

- [A]  $bh^3/36$
- [B]  $bh^3/12$
- [C]  $bh^3/4$
- [D] None of the above

**Answer: B**

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