

1. The rotational K.E of hoop is equal to the
- A. its translational K.E                      B. half than its translational K.E
- C. double than its translational K.E      D. four times than its translational K.E

**Answer:** Option A

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2. A hoop and disc have same mass and radius. Their rotational K.E are related by an equation
- A.  $K.E_{hoop} = K.E_{disc}$                       B.  $K.E_{hoop} = 2K.E_{disc}$
- C.  $K.E_{hoop} = 1/2K.E_{disc}$                 D.  $K.E_{hoop} = 4K.E_{disc}$

**Answer:** Option B

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3. The critical speed of an artificial satellite is
- A. 8 Kms-1                                      B. 8.1 Kms-1
- C. 7.9 Kms-1                                  D. 8 ms-1

**Answer:** Option C

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4. Geo-stationary satellite completes one rotation around earth in
- A. 3 hours                                        B. 6 hours
- C. 12 hours                                      D. 24 hours

**Answer:** Option D

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5. Radius of geo-stationary orbit from center of earth is nearly
- A. 42000km                                      B. 36000km
- C. 24000 km                                    D. 18000 km

**Answer:** Option A

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6. According to Einstein the gravity interaction is possible between

- A. material objects only                      B. material objects and electromagnetic radiation only
- C. electromagnetic radiations              D. none of the above

**Answer:** Option B

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7. One radian is equal to

- A. 67.3?    B. 57.3?
- C. 87.3?    D. 60?

**Answer:** Option B

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8. The period of a circular motion is given by

- A.  $T = rV$     B.  $T = ?w$
- C.  $T = 2??$     D.  $T = 2?/?$

**Answer:** Option D

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9. The direction of linear velocity of body moving in a circle is

- A. along the axis of rotation                      B. along the tangent
- C. directed towards the center                      D. directed away form the center

**Answer:** Option B

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10. When a body moves in a circle, the angle between its linear velocity and angular velocity is always

- A. 180?    B. 0?
- C. 90?    D. 45?

**Answer:** Option c