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1ST YEAR ENTRY TEST SESSION

NAME:			ROLL NO:		TIME:	15: MIN
SUB:	Physics	Date:			CLASS:	1st Year
SYLLABUS	Chp. 3 (Circular and Rotational Motion) Entry Test MCQs		T. MARKS	10	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x10=10)

1. **The person stand on a weight scale in a lift going up world with constant velocity, If the weight of person under normal circumstances is W, the wait showing by weighing scale in the lift will be:**
   (A) Less than W (B) More than W
   (C) Equal than W (D) None of these
2. **A 100 kg satellite orbiting 400 km above earth has an orbital speed of 'v' km\hour. A 200 kg satellite with the same orbital radius will require an orbital speed:**
   (A) V Kmh^{-1} (B) 2v Kmh^{-1}
   (C) $\sqrt[V]{2}$ kmh^{-1} (D) $\sqrt{2}$ v kmh^{-1}
3. **Two satellites are to be launched into space from the surface of earth. Satellite 1 has mass 10 kg and volume 1500 cm^2 while satellite 2 has 5 kg and volume 1000 cm^3. Assume the required escape velocities of Satellite 1 and Satellite 2 are v_1 and v_2 respectively. The relation between v_1 and v_2 is:**
   (A) Relation depends on the launch (B) $V_1 = V_2$
   (C) $V_1 > V_2$ (D) $V_1 < V_2$
4. **An object mass 'm' is suspended in an elevator moving downward with acceleration equal to acceleration due to gravity. What will be the apparent weight of the object?**
   (A) Zero (B) 2mg
   (C) mg (D) mg\2
5. **Due to some mechanical fault, a lift falls freely from the top of a multistory building. Which of the followings is the apparent weight of a man inside the lift, if mass is 80 kg while value of 'g' is 10 $m\s^2$?**
   (A) 900 N (B) Zero
   (C) 800 N (D) 700 N
6. **A man in an elevator ascending with an acceleration will conclude that his weight has:**
   (A) Increased (B) Decreased
   (C) Reduced to zero (D) Remained constant
7. **Which of the following gives the relationship between linear velocity and angular velocity:**
   (A) $v = r\omega$ (B) $v = r\theta$
   (C) $v = s\omega$ (D) $v = s\theta$
8. **Angular speed of minutes hand of mechanical watch is:**
   (A) π\30 rad min^{-1} (B) π\2 rad min^{-1}
   (C) π rad min^{-1} (D) None of these

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9. A body is moving in a circular path with constant speed. The magnitudes of tangential and centripetal acceleration are: Which combination will cause the largest turning effect about the pivot?

	Tangential	Centripetal
(A)	rv^2	0
(B)	0	0
(C)	0	V^2/r
(D)	V^2/r	V^2/r

10. A body is having 20 N. When the elevator is descend with a = 0.1 ms^{-2}, then the value of tension 'T' is:

(A) 196 N
(B) 19.8 N
(C) 1.98 N
(D) 2 N

Answer Key											
1	C	**2**	A	**3**	B	**4**	A	**5**	B	**6**	A
7	A	**8**	A	**9**	C	**10**	B				