

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

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

- The ratio of angular speed of minute's hand and hour's hand of watch is:**
 (A) 1:6 (B) 6:1 (C) 1:12 (D) 12:1
- A body travelling in a circle at constant speed:**
 (A) Has constant velocity (B) Has an inward radial acceleration
 (C) Is not accelerated (D) Has an outward radial acceleration
- A stone at the end of long string is whirled in vertical circle. The tension in the string will be minimum when the stone is:**
 (A) At the top of the circle (B) Half way down
 (C)) At the bottom of the circle (D) Anywhere in the circle
- Energy point of rotating rigid body has:**
 (A) Same angular velocity (B) Same linear velocity
 (C) Same linear acceleration (D) Same linear distance
- The minimum velocity necessary to put a satellite into the orbit is called:**
 (A) Terminal velocity (B) Critical velocity
 (C) Artificial velocity (D) Angular velocity
- An astronaut is orbiting around the Earth in a large capsule. Then,**
 (A) He will be in state of weightlessness with respect to capsule
 (B) He is freely falling towards the Earth
 (C) A ball projected at an angle has a straight line path as observed by him
 (D) All of above
- An object in uniform circular motion makes 10 revolutions in 2 seconds. Which of the following statement is true:**
 (A) Its period is 2.0 s (B) Its period is 20 s
 (C) Its frequency is 5 Hz (D) Its frequency is 0.2 Hz
- A man inside the artificial satellite feels weightlessness because the force of attraction due to the Earth is:**
 (A) Zero at pole
 (B) Balanced by the force of attraction due to the moon
 (C) Equal to the centripetal force
 (D) Non-effective due to some particular design of the satellite
- A bottle of soda water is grasped from the neck and swung briskly in a vertical circle. Near which portion of the bottle do the bubbles collect:**
 (A) Near the bottom
 (B) In the middle of bottle
 (C) Bubbles remain distributed throughout the volume of the bottle
 (D) Near the neck of the bottle

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10. The moment of inertia of body depends upon:

- (A) Mass of the body and its distribution about axis of rotation
- (B) Volume of the body
- (C) Kinetic energy of the body
- (D) Angular momentum of the body

Answer Key

1	D	2	B	3	A	4	A
5	B	6	B	7	C	8	C
9	D	10	A				