# Physics ECAT Pre Engineering Chapter 5 Circular Motion

| Sr | Questions | Answers Choice |
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| 1 | A point on the rim of a wheel moves 0.2 m when the wheel turns through an angle of 14.3 degrees. The radius of the wheel is | A. 0.05 m<br>B. 0.08 cm<br>C. 0.8 m<br>D. 0.008 m |
| 2 | The net force acting on a 100 kg man standing in an elevator accelerating downward with a = 9.8 m $sec^{-2}$comes out to be | A. 980 N<br>B. 580 N<br>C. 1380 N<br>D. Zero |
| 3 | Moment of linear momentum is called. | A. Moment arm<br>B. Moment of inertia<br>C. Inertia<br>D. Angular momentum |
| 4 | In rotational motion, analogue of force F us called: | A. Couple<br>B. Torque<br>C. Mass<br>D. Moment of intertia |
| 5 | When angular acceleration is positive, the body rotates: | A. Slower<br>B. Slowest<br>C. Faster<br>D. None of these |
| 6 | Which one is related to angular motion: | A. Moment of a force<br>B. Moment of inertia<br>C. Moment of momentum<br>D. None of these |
| 7 | Direction of motion_____ in circular of motion: | A. Changes off and on<br>B. Changes continuously<br>C. Does not change<br>D. None of them |
| 8 | When a body moves with a constant speed in a circle: | A. No work is done on it<br>B. No acceleration is produced in the body<br>C. Velocity remains constant<br>D. None of these |
| 9 | Angular velocity is a: | A. Scalar quantity<br>B. Vector quantity<br>C. Complex quantity<br>D. None of these |
| 10 | Centripetal acceleration is also called _____ acceleration: | A. Tangential<br>B. Radial<br>C. Angular<br>D. None of them |
| 11 | A point on the rim of a wheel moves 0.2 m where the wheel turns through an angle is 14.3 degrees. The radius of the wheel is: | A. 0.05 m<br>B. 0.08 m<br>C. 0.8 m<br>D. 0.008 m |
| 12 | A stone is tied to the end of a 20 cm along string is whirled in a horizontal circle. if centripetal acceleration is 9.8 $m/sec^2$, then its angular velocity in rad/sec is: | A. 22/7<br>B. 7<br>C. 14<br>D. 21 |
| 13 | Which of the following pairs does not have identical dimensions? | A. Torque and energy<br>B. Energy and work<br>C. Momentum and impulse<br>D. Mass and moment of inertia |
| 14 | Circular motion is an example of motion in: | A. One dimension<br>B. Two dimensions<br>C. Three dimensions<br>D. None of these |
| 15 | Moment of inertia depends upon: | A. Mass<br>B. Selection of axis of rotation<br>C. Both of them |

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| | | D. None of these |
| 16 | A disc rolls down a hill and its speed at bottom is found to be 11.4 m/sec. Height of the hill is then nearly: | A. 10 m<br>B. 12 m<br>C. 13 m<br>D. 15 m |
| 17 | Conventionally the angular velocity is directed at an angle of | A. 90° to the axis of rotation<br>B. 30° to the axis of rotation<br>C. 0° to the axis of rotation<br>D. None of the above |
| 18 | The instantaneous acceleration of a body moving with constant speed in a circle: | A. Remains constant<br>B. Is called centripetal acceleration<br>C. Tangential acceleration<br>D. None of these |
| 19 | Angular momentum is a: | A. vector quantity<br>B. Imaginary quantity<br>C. Complex Quantity<br>D. Scalar Quantity |
| 20 | If a gymnast sitting on a rotating stool with his arms outstretched, brings his arms towards the chest, then its angular velocity will | A. Increase<br>B. Decrease<br>C. Remain constant<br>D. None of these |