

## Physics ECAT Pre Engineering MCQ's Test For Full Book

| Sr | Questions  | Answers Choice   |
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| 1  | Work is a scalar product of  | A. Force, Velocity<br>B. Velocity, Displacement<br>C. Force, Displacement<br>D. Force, Momentum          |
| 2  | The motion in a plane is the motion in   | A. one dimension<br>B. two dimension<br>C. three dimension<br>D. four dimension                          |
| 3  | Matter is made up of very tiny particles called  | A. Atoms<br>B. Molecules<br>C. Ions<br>D. None of these  |
| 4  | One radian is equal to:  | A. $30.3^\circ$<br>B. $45.3^\circ$<br>C. $50.3^\circ$<br>D. $57.3^\circ$                                 |
| 5  | The lines of a difference grating have a spacing of 1.2 m. When a beam of monochromatic light is incident normally on the grating. The first order maximum monochromatic light is. | A. 1200 nano meters<br>B. 450 meters<br>C. 600 nano meters<br>D. 700 nano meters                         |
| 6  | When a body moves to and fro motion, this type of motion is called   | A. translatory motion<br>B. circular motion<br>C. oscillatory motion<br>D. all of them                   |
| 7  | On the power stroke, a spark fires the mixtures causing a rapid increase in pressure and temperature and the burning mixture expands   | A. adiabatically<br>B. isothermally<br>C. isochorically<br>D. isobarically                               |
| 8  | The second law of thermodynamics is concerned with the circumstances in which  | A. heat can be converted into work<br>B. direction of flow of heat<br>C. none of them<br>D. both of them |
| 9  | Sadi carnot described an ideal heat engine in  | A. 1820<br>B. 1840<br>C. 1860<br>D. 1880   |
| 10 | The work done on the system by the environment is considered as  | A. positive<br>B. negative<br>C. zero  |

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|    |  | <p>C. zero</p> <p>D. any one of them</p>   |
| 11 | The kinetic energy of one molecule of a gas at normal temperature and pressure will be ( $k = 8.31 \text{ J/mole K}$ ) : | <p>A. <math>1.7 \times 10^{23} \text{ J}</math></p> <p>B. <math>10.2 \times 10^{23} \text{ J}</math></p> <p>C. <math>3.4 \times 10^{23} \text{ J}</math></p> <p>D. <math>6.8 \times 10^{23} \text{ J}</math></p>   |
| 12 | When a mass 'm' is pulled slowly, the spring stretches by an amount $x_0$ , then the average force would be              | <p>A. <math>F = Kx</math></p> <p>B. <math>F = 1/2Kx</math></p> <p>C. <math>F = 2Kx</math></p> <p>D. <math>F = 4Kx</math></p>   |
| 13 | A current of 1 ampere is passing through a conductor. The charge passing through it in half a minute s                   | <p>A. One coulomb</p> <p>B. 0.5 coulomb</p> <p>C. 30 coulombs</p> <p>D. 2 coulombs</p> <p>E. None of these</p>   |
| 14 | Deep water almost runs still when surface water flow in rivers. What does it explains                                    | <p>A. Magnus effect</p> <p>B. Equation of continuity</p> <p>C. Surface energy</p> <p>D. Bernoulli's equation</p>   |
| 15 | The graphical representation of ohm's law is   | <p>A. hyperbola</p> <p>B. straight line</p> <p>C. ellipse</p> <p>D. parabola</p>   |
| 16 | A second's pendulum is a pendulum whose time period is   | <p>A. 1 second</p> <p>B. 2 seconds</p> <p>C. 3 seconds</p> <p>D. 4 seconds</p>   |
| 17 | The mechanics, which deals with the objects moving with velocities approaching that of light is called                   | <p>A. Relativistic mechanics</p> <p>B. Wave mechanics</p> <p>C. Quantum mechanics</p> <p>D. Statics</p>  |
| 18 | The path (or trajectory) described by a projectile is  | <p>A. a parabola</p> <p>B. a hyperbola</p> <p>C. a circle</p> <p>D. a straight line</p>  |
| 19 | The surface density of charge is defined is:   | <p>A. <math>\frac{\text{Charge}}{\text{Volume}}</math></p> <p>B. <math>\frac{\text{Charge}}{\text{Area}}</math></p> <p>C. <math>\frac{\text{Charge}}{\text{Length}}</math></p> <p>D. <math>\frac{\text{Charge}}{\text{Mass}}</math></p> <p>E. Both (B) and (C)</p> |

- A. Moment arm
  - B. Moment of inertia
  - C. Inertia
  - D. Angular momentum
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