

## ECAT Physics Online Test

| Sr | Questions  | Answers Choice  |
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| SI | Questions  |   |
| 1  | Bernoulli's equation is the fundamental equation in fluid dynamics, which relates pressure to fluid  | A. speed B. height C. none of them D. both of them  |
| 2  | Which of the following has the greatest coefficient of viscosity?  | A. water B. gasoline C. honey D. tar  |
| 3  | Wien's constant is measured in:  | A. Metre per kelviin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes   |
| 4  | Acceleration produced in a body by the force varies  | A. inversely as the applied force B. directly as the applied force C. directly as the mass of the body D. none of them  |
| 5  | Electric generators which convert mechanical energy into   | A. solar energy B. thermal energy C. kinetic energy D. electrical energy  |
| 6  | In the reverse process, the working substance passes through the same stages as in the direct process and                                      | A. thermal effects at each stage are exactly reversed B. mechanical effects at each stage are exactly reversed C. thermal and mechanical effects at each stage remain the same D. thermal and mechanical effects at each stage are exactly reversed   |
| 7  | The magnetic force exerted on an electron moving with velocity 'v' at right angle to the magnetic field is given by                            | A. F=eVB B. F=e <sup>2</sup> V/B C. F=e/VB D. F=B <sup>2</sup> /ev  |
| 8  | For normal operation of transistor, the batteries  | A. V <sub>CC</sub> is of much lower value than V <sub>BB</sub> B. V <sub>CC</sub> is of much higher value than V <sub>BB</sub> C. V <sub>CC is equal to</sub> V <sub>BB</sub> D. none of these  |
| 9  | The force between two chares 0.06 m apart is 5 N. If each charge is moved towards the other by 0.01 m, then the force between them will become | A. 7.20 N<br>B. 11.25 N<br>C. 22.50 N<br>D. 45.00   |
| 10 | Magnetic effect of current is used:  | A. <span style='font-size:12.0pt; line-height:107%;font-family:";Times New Roman","serif"'>In electric motor<o:p></o:p></span> B. <span style='font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"'>To detect current<o:p></o:p></span> C. <span style='font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"'>To measure current<o:p></o:p></span> D. <span style='font-size:12.0pt; line-height:107%;font-family:"'>To measure current<o:p></o:p></span> D. |

|    |  | " I imes New Roman", serif;">All of these <b>&lt;0:p&gt;</b> E. <span style='font-size:12.0pt; line-height:107%;font-family:"Times New Roman","serif"'>None of these&lt;0:p&gt;</span> |
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| 11 | The study of fluid in motion basically involves law of conservation of:  | A. Mass B. Energy C. Change D. Both A and C E. Both A and B  |
| 12 | The magnitude of the force producing an acceleration of 10 m/sec <sup>2</sup> in a body of mass 500 grams is:                                      | A. 3 N<br>B. 4 N<br>C. 5 N<br>D. 6 N   |
| 13 | γ-rays behave like a particle because they explain the   | A. Compton effect B. Photoelectric effect C. Pair-production D. all the above  |
| 14 | The magnetic field in the middle of a solenoid due to current is   | A. weak B. strong and uniform C. none-uniform D. zero  |
| 15 | The induced current in a conductor depends upon  | A. Resistance of the loop B. Speed with which the conductor moves C. Any of these D. Both A and B E. None of these   |
| 16 | A capacitor of capacity 1 $\mu$ F is charged to 1 KV. The energy stored in J   | A. 5<br>B. 0.5<br>C. 0.005<br>D. 50  |
| 17 | In the equilibrium state, the potential difference between two ends of the conductor moving across a magnetic field is called:                     | A. Motion emf B. Electrostatic emf C. Induced emf D. Both A and B E. Both A and C  |
| 18 | The electric intensity at infinite distance from the point charge will be  | A. Infinite B. Positive C. Zero D. Negative  |
| 19 | A point charge Q is placed at the mid-point of a line joining two charges. 4q and q. if the net force on charge q is zero. then Q must be equal to | Aq<br>B. +q<br>C2q<br>D. +4q   |
| 20 | When the bob of simple pendulum is at mean position, its K.E will be   | A. maximum B. minimum C. zero D. all of them   |
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