ECAT Physics Online Test

Sr	Questions	Answers Choice
1	If R is gas constant for 1 gram mole, $C_p$and $C_v$are specific heat for a solid then	A. C_p- C_v= R B. C_p- C_{v < R} C. C_p- C_{v = 0} D. C_p- C_{v > R}
2	Triple point of water is	A. 273.16°F B. 372.16K C. 273.16°F D. 273.16
3	Rate of diffusion is	A. Faster in solids than in liquids and gases B. Faster in liquids than in solids and gases C. Equal to solids, liquids and gases D. Faster in gases than in liquids and solids
4	Pressure of a gas at constant volume is proportion to	A. Total energy of gas B. Average P.E to molecules C. Average K.E of molecules D. Total internal energy of gas
5	According to kinetic theory of gases, molecules of a gas behave like	A. Inelastic spheres B. Perfectly elastic rigid sphere C. Perfectly elastic non-rigid spheres D. Inelastic non-rigid spheres
6	10 c.c. each of oxygen and hydrogen are kept in separate flasks. Then which of the following relations is correct?	A. Each have same number of molecules B. Don't have same number of molecules C. Can't be predicted D. None
7	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
8	Brownian motion increases due to	A. Increase in size of Brownian particle B. Increase in temperature of medium C. Increase in density of medium D. Increase in viscosity of medium
9	If the ratio of densities of two gases is 1:4, then the ratio of their rates of diffusion into one another is	A. 2 : 1 B. 4 : 1 C. 1 : 4 D. 3 : 4
10	The volume of a gas will be double of what it is at 0°C (pressure remaining constant) at	A. 546 K B. 273 K C. 546°C D. 273°C
11	Energy gas behaves like an ideal gast at	A. High temperature and low pressure B. Low temperature and high pressure C. Both A and B D. None

12	R.M.S velocity of a particle is V at pressure P. If pressure increases by two times, then R.M.S velocity becomes	A. 2V B. 3V C. 0.5V D. V
13	Maximum density of H_2O is at the temperature	A. 32°F B. 39.2°F C. 42°F D. 4°F
14	At O° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
15	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly proportional to its temperature D. Inversely proportional to its temperature
16	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
17	Absolute temperature can be calculated by	A. Means squares velocity B. Motion of the molecule C. Both A and B D. None of these
18	Which of the following is not thermo dynamical function?	A. Enthalpy B. Work done C. Gibb's energy D. Internal energy
19	At constant volume temperature is increased. Then	A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collision will be in straight lines D. Collision will not change
20	The number of translation degress of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
21	Fidelity refers to	A. Reproduction of original sound B. Reproduction of original image C. Reproduction of music D. Reproduction of a CD from original copy
22	The loudness and pitch of a sound note depends on	A. Intensity and velocity B. Frequency and velocity C. Intensity and frequency D. Frequency and number of harmonic
23	The velocity of sound in air not effected by changes in	A. Moisture contents in air B. Temperature of air C. The atmosphere pressure D. The composition of air
24	The ratio of velocity of sound in air at 4 atm pressure and that at 1 atm pressure would be	A. 1 : 2 B. 4 : 1 C. 1 : 4 D. 2 : 1
25	It is possible to recognize a person by hearing his voice even if he is hidden behind a solid wall. This is due to the fact that his voice	A. Has a definite pitch B. Has a definite quality C. Has a definite capacity D. Can penetrate the wall
26	If two waves of length 50 cm and 51 cm produced 12 beats per second, the velocity of sound is	A. 360 m/s B. 306 m/s C. 331 m/s D. 340 ms
		A. 10 m

27	To hear a clear echo, the reflecting surface must be at a minimum distance of	A. 16 m B. 16.5 m C. 33 m D. 66 m
28	The speed of sound in a medium depends on	A. The elastic property but not on the inertia property B. The inertia property but not on the elastic property C. The elastic property as well as the inertia property D. Neither the elastic property nor the inertia property
29	When two waves with same frequency and constant phase difference phase difference interfere	A. There is a gain of energy B. There is a loss of energy C. The energy is redistributed and the distribution changes with time D. The energy is redistributed and the distribution remains constant with time
30	Which of the following changes at an antinode in a stationary wave?	A. Density only B. Pressure only C. Both pressure and density D. Neither pressure nor density