PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	If the number of gas molecules in a cubical vessel is increase from N to 3 N then its pressure and total energy will be.	A. Half B. Three times C. Double D. Four times
2	Temperature of a gas is related to.	A. Total K.E. of the gas molecules B. The K.E. of the centre of mass of the gas C. The P.E. of the centre of mass of the gas D. Total K.E. of the molecules w.r.t the centre of mass of gas
3	Diffusion of gases occurs because the molecules of the	A. Gas present in a higher concentration exerts a high pressure B. Gases are different C. Gasses attract each other D. Gasses over about randomly
4	An inflated tyre suddenly bursts As a result of this temperature of the surrounding	A. Increases B. Descreases C. Remains constant D. May increase or decrease
5	An ice making machine extracts energy at the rate of 500 W The specific latent heat of fusion of ice is 300 kj kg-1. How long does it take to freeze 2 kg of water at 0 oC.	A. 120 s B. 150 s C. 1200 s D. 1500 s
6	Which of the following can be used visualize the third law thermodynamics	A. Light B. Heat C. Water D. All of these
7	A 4 kJ mass of copper of specific heat capacity of 400 J kg-1k-1 is heated for 160 s by a heater of power 200 W what is the rise in temperature.	A. 10 K B. 16 K C. 100 K D. 160 K
8	A heat engine with 100% efficiency would have to	A. Do no work B. Be at a uniform temperature C. Use no heat D. Discharge at 0 ^{o}C
9	Pressure of a gas depends upon	A. Only on the molecular speed B. Only on the speed of molecules on a unit volume C. Only on the mass of molecules D. Number of molecules mass and speed in a unit volume
10	The total gain in entropy of the working substance in a Carnot cycle is.	A. Positive B. Negative C. Infinite D. Constant
11	How many calories of heat are required to evaporate completely 1 g of ice at 0 ^{o}C	A. 480 calories B. 720 calories C. 940 calories D. 1170 calories
12	Which law states that two given samples of an ideal gas at the same temperature pressure and volume contain the same number of molecules.	A. Charles law B. Avogadro's C. Boyles law D. Boizmann law
13	If the specific latent heat of vaporization of oxygen is 214 kJ kg-1 how much heat will be absorbed when 3.0 kg of oxygen is boiled off at its boiling point.	A. 14 kJ B. 64 k J C. 140 kJ D. 642 k j
14	Which statement about heat convection is correct	A. Brownian motion is a form of convection B. Convection occurs only in gas C. Convection results from a density

14	Which statement about convection is correct.	C. Convection results from a density change D. Evaporation is a form of convection
15	The practical efficiency of a heat engine is	A. 25% to 30.5 % B. 35% to 45% C. 30% to 45% D. 15% to 25%
16	The Fahrenheit and Kelvin scales intersect at	A. 40 B. -40 C. 140 D. -140
17	The internal energy of monoatomic gas is.	A. 3/2 RT B. Independent of temperature C. In the form of K.E. D. Partially kinetic and partially potential
18	The actual gas can behave like an ideal gas at	A. Low density and high pressure B. High density and high pressure C. Low density and low pressure D. High density and low pressure
19	Temperature of a system remains constant in	A. Adiabatic process B. Isobaric process C. Isothermal process D. Isochoric process
20	In which temperature range water decreases in volume with increasing temperature.	A. From $0\,^{o}$C to $4\,^{o}$C B. from $0\,^{o}$C to $10\,^{o}$C C. from $50\,^{o}$C to $100\,^{o}$C D. from $75\,^{o}$C to $100\,^{o}$C