

PPSC Physics Chapter 3 Thermal Properties of Matter

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Sr	Questions	Answers Choice
1	The pressure of a gas is directly proportions to	A. Mean velocity of the molecules B. Mean square velocity of the molecules C. Root mean square velocity of the molecules D. Instantaneous velocity of the molecules
2	When heat a supplied to a metallic sphere which one of the following changes will occur.	A. the mass of the sphere increases B. The volume of the sphere increases C. The density of the sphere increases D. The internal energy of the sphere increases
3	Let at constant temperature the pressure of an ideal gas be doubled so that the new volume is.	A. Doubled the original volume B. Same as original volume C. Reduced to half the original volume D. Reduced to two times the original volume
4	The amount of heat needed per unit mass to raise the temperature of a system one degree at constant pressure is numerically aqual to	A. The specific heat B. The specific thermal energy C. The specific heat at constant pressure D. the internal energy of the gas
5	Which one of the following is an example of a reversible process.	A. Work done against friction B. Heat produced by current C. Melting of ice D. See back effect
6	A standard fixed point for calibrating a thermometer is.	A. Boiling point of water B. Melting point of ice C. Temperature of steam D. Triple point of water
7	By definition a gas is said to be have undergone adiabatic compressing when	A. No heat exchange occurs between the gas and its surroundings B. The gas is compressed quickly C. The gas is compressed slowly D. The temperature of the gas remains constant
8	If volume of the gas doubled without changing its temperature the pressure of the gas is	A. Reduced to half of original value B. Not changed C. Reduced to one fourth of original value D. Doubled
9	The ratio of specific heat capacity to motor heat capacity of a body	A. Is a universals cantante B. Depends upon the mass of the body C. Depends upon the molecular weight of the body D. Is dimensionless
10	How solid hydrogen is obtained.	A. By cascade process B. By joule kelvin effect C. By adiabatic expansion D. Lowering temperature below melting point
11	The gas temperature is increased from 27 $^{\rm o}{\rm C}$ to 127 $^{\rm o}{\rm C}$ What is the ratio of mean kinetic energies.	A. 3/4 B. 4/3 C. 9/10 D. 10/9
12	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

13	What is the average K.E. of gas molecules at temperature equal to K.	A. kt/3 B. 3/2 KT C. 1/2 KT D. 2/3 KT
14	If a gas does 10 J of external work white expanding then the change in internal energy is equal to.	A. 0 J B. 10 J C10 J D. 100 J
15	The product of mass and specific heat of a substance is called.	A. Latent heat B. Water equivalent C. Atomic heat D. Heat capacity
16	Which of the following gases has the maximum rms speed at STP.	A. O2 B. H2 C. N2 D. CO2
17	On which parameter, the heat capacity of a material depends upon.	A. Density of the material B. Specific heat of the material C. Temperature of the material D. Structure of the material
18	In order of a cyclic heat engine operating between two heat reservoirs to be as efficient as a Carnot engine. It must be.	A. A gas engine B. Adiabatic C. Reversible D. A refrigerator
19	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
20	Which one is the primary standard for temperature measurement.	A. Resistance thermometer B. Mercury in glass thermometer C. Constant volume gas thermomete D. Pyrometer