

## PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	Andrews isothermal helps to measure	A. Boiling point B. Boyle's temperature C. Temperature of inversion D. Critical temperature
2	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. $2/3 KT$
3	Mean free path of gas molecules is inversely proportional to its.	A. Weight B. Temperature C. Pressure D. Volume
4	Which of the following is an example of irreversible process.	A. Melting of ice B. Work done against friction C. Peltier heating and cooling D. All isothermal and adiabatic changes
5	In the free expansion of a perfect gas there is no.	A. work done B. Heat exchanged C. Internal energy changed D. All of the above
6	Mean free path in a gas is the	A. Distance travelled by a molecule before hitting a wall B. Average distance travelled by a molecule in one second C. Average distance travelled between molecules between any two successive collisions D. Root mean square velocity
7	In which temperature range water decreases in volume with increasing temperature.	A. From $0^{\circ}\text{C}$ to $4^{\circ}\text{C}$ B. from $0^{\circ}\text{C}$ to $10^{\circ}\text{C}$ C. from $50^{\circ}\text{C}$ to $100^{\circ}\text{C}$ D. from $75^{\circ}\text{C}$ to $100^{\circ}\text{C}$
8	Which of the following is a clinical thermometer.	A. Gas thermometer B. Mercury thermometer C. Alcohol thermometer D. Radiation thermometer
9	Which statement about convection is correct.	A. Brownian motion is a form of convection B. Convection occurs only in gas C. Convection results from a density change D. Evaporation is a form of convection
10	A given quantity of an ideal gas is at pressure P and temperature T What is the isothermal bulk modulus of the gas.	A. $2/3 P$ B. $P$ C. $2P$ D. $3/2 P$
11	The ration $C_v/C_p = \gamma$ for a diatomic gas like air is	A. 1.29 B. 1.30 C. 1.40 D. 1.67
12	The temperature of 1 kg of hydrogen gas is the same as that of 1 kg of helium gas if.	A. The gases have the same internal energy B. The gas molecules occupy equal volumes C. The gas molecules have the same root mean square speed D. The gas molecules have same mean translational K.E.

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13	Most cooking involves	A. Adiabatic process B. Isothermal process <b>C. Isobaric process</b> D. Isochoric process
14	The base unit of temperature in SI is	A. Fahrenheit B. Celsius <b>C. Kelvin</b> D. Rankine
15	The process in which no heat enters or leaves the system is called.	A. Isobaric B. Isochoric C. Isothermal <b>D. Adiabatic</b>
16	Internal energy of a gas decreased when	A. It gains heat <b>B. Change in cycle</b> C. Change in adiabatic D. Change in reversible
17	The efficiency of Carnot engine is	A. Less than one B. Zero C. Greater than one D. Infinite
18	The gas thermometer is taken as the primary standard because.	A. Thermometers are easily reproducible B. Readings can be accurately taken C. No correction are necessary <b>D. It produces the thermodynamic scale</b>
19	What is a measure of the total energy of a thermodynamics system.	A. Entropy <b>B. Enthalpy</b> C. Randomness D. Chaos theory
20	A mercury in glass thermometer and thermocouple thermometer are both calibrated using the same fixed point of 0 °C and 100 °C when both temperature are used to measure the temperature of a body the temperature measured on both thermometers will be exactly the same	A. For all temperatures between 0 °C and 100 °C only <b>B. Only are the fixed points</b> C. For all temperatures at all times D. When converted to the Kelvin scale

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