

PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	A frictionless heat engine can be 100% efficient only if its exhaust temperature is	A. Equal to the input temperature B. Less than the input temperature C. $0 ⁰C$ D. 0 K
2	The specific heat of liquid	A. Decreases with temperature B. Increases with temperature C. Remains constant with change in temperature D. Increases with pressure
3	Which of the following is standard scale of temperature	A. Mercury scale B. Platinum resistance scale C. Gas scale D. Alcohol scale
4	The base unit of temperature in SI is	A. Fahrenheit B. Celsius C. Kelvin D. Rankine
5	What is the internal energy of a mono atomic ideal gas.	A. Potential only B. Parity kinetic and parity potential C. Kinetic only D. Neither kinetic nor potential
6	When the temperature of a body is equal to that of the surrounding then the body appears	A. Dull black B. Red hot C. In thermal equilibrium D. To be cold
7	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
8	At absolute zero of temperature.	A. The molecular energy is zero B. Molecules have translational K.E C. Molecules have rotational K.E. D. Molecules have maximum energy
9	Thermal conduction in metals differs from thermal conduction in insulators,. The reasons for this is that , in metals heat can be transported by.	A. Electrons B. Lattice vibrations C. Photons D. Positive ions
10	The door of an operating refrigerator in a closed room is opened after sometime the temperature of the room will be	A. Lowered B. Raised C. Unaffected D. Become zero
11	What is a measure of the total energy of a thermodynamics system.	A. Entropy B. Enthalpy C. Randomness D. Chaos theory
12	Why freezer a refrigerator is located in the top section	A. Motor is not affected B. Heat gained from environment is less C. The entire chamber of freezer is cooled quickly D. Heat gained from environment is more
13	The specific heat of a substance is a function of its	A. mass B. Weight C. Volume D. Molecular structure
14	Which of the following is a clinical thermometer.	A. Gas thermometer B. Mercury thermometer C. Alcohol thermometer D. Radiation thermometer

15	The temperature of 1 kg of hydrogen gas is the same as that of 1 kg of helium gas if.	<p>A. The gases have the same internal energy</p> <p>B. The gas molecules occupy equal volumes</p> <p>C. The gas molecules have the same root mean square speed</p> <p>D. The gas molecules have same mean translational K.E.</p>
16	Mean free path of gas molecules is inversely proportional to its	<p>A. Volume</p> <p>B. Pressure</p> <p>C. Temperature</p> <p>D. Size</p>
17	Mean free path in a gas is the	<p>A. Distance travelled by a molecule before hitting a wall</p> <p>B. Average distance travelled by a molecule in one second</p> <p>C. Average distance travelled between molecules between any two successive collisions</p> <p>D. Root mean square velocity</p>
18	Gas exert pressure on walls of the vessel because gas molecules.	<p>A. Posses momentum</p> <p>B. Have finite volume</p> <p>C. Collide with each other</p> <p>D. Obey gas laws</p>
19	A Carnot engine has the same efficiency between (i) 100 K and 500 K and ii) T and 900 K What will be T.	<p>A. 90 K</p> <p>B. 100 K</p> <p>C. 180 K</p> <p>D. 200 K</p>
20	To which law of thermodynamics, the concept of temperature is related to.	<p>A. Zeroth law</p> <p>B. First law</p> <p>C. Second law</p> <p>D. Third law</p>