

## PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	The pressure of a gas is directly proportion 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	If the pressure of a gas is doubled, then its thermal conductivity will	A. Increases B. Decreases C. Remain constant D. Be zero
3	Which of the following has negative specific heat	A. Ne B. CO <sub>2</sub> C. O <sub>2</sub> D. Saturated vapours
4	The expression $PV/KT$ represents.	A. Number of moles of the gas B. Number of molecules in the gas C. Total mass of the gas D. Density of the gas
5	The efficiency of a diesel engine is about	A. 15% to 35 % B. 35% to 40% C. 45% to 65% D. 50% to 65 %
6	Heat cannot be transferred from a colder to a hotter region unless work is done. This is the statement of.	A. First law of thermodynamics B. Second law of thermodynamics C. Third law of thermodynamics D. Zeroth law of thermodynamics
7	On increasing the temperature of source efficiency of Carnot engine.	A. Increase B. Decrease C. First increases and then decreases D. Does not change
8	The efficiency of Carnot engine is	A. Less than one B. Zero C. Greater than one D. Infinite
9	What is the necessary condition for Boyle's law to hold good.	A. Isothermal B. Adiabatic C. Isobaric D. Isochoric
10	The specific heat of a substance is a function of its	A. mass B. Weight C. Volume D. Molecular structure
11	If temperature on Celsius scale is 50 °C the temperature on Fahrenheit scale will be.	A. 102 °F B. 108 °F C. 112 °F D. 122 °F
12	When the temperature of source and sink of a heat engine become equal the entropy change will be.	A. Zero B. Maximum C. Minimum D. Negative
13	Thermodynamics deals with	A. Isolated systems B. The interactions among various parts of the system C. The microscopic behavior of a system D. The interactions between system and surrounding
14	The coefficient of expansion of a gas is	A. $\frac{3}{2} RT$ B. Independent of temperature C. $\frac{1}{T}$ D. $\frac{1}{2T}$

14	The internal energy of monoatomic gas is.	C. In the form of K.E. D. Partially kinetic and partially potential
15	The mechanical equivalent of heat is.	A. Physical quantity B. Constant C. Conversion factor D. Zero
16	An ice making machine extracts energy at the rate of 500 W The specific latent heat of fusion of ice is 300 kJ kg <sup>-1</sup> . How long does it take to freeze 2 kg of water at 0 °C.	A. 120 s B. 150 s C. 1200 s D. 1500 s
17	If the temperature of the source and sink are increased by same amount the efficiency of the engine.	A. Increases B. Decreases C. Remains unchanged D. May increase or decrease
18	Woolen clothing is effective in keeping us warm because.	A. An trapped in the wool acts as an insulator B. Heat loss by convection and radiation is prevented C. Wool is a bad conductor and good absorber of heat D. Wool can retain high temperatures
19	Most cooking involves	A. Adiabatic process B. Isothermal process C. Isobaric process D. Isochoric process
20	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