PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	In which given process does the system always return to the original thermodynamic state.	A. Cyclic B. Adiabatic C. isothermal D. Isobaric
2	A fixed mass of an ideal gas absorbs 1000 J of heat and expands under a constant pressure of 20 kPa from a volume of 25 x 10-3 m3 to a volume 50 x 10-3 The change internal energy of the gas is.	A. 500 J B. 1000 J C. -1000 J D. Zero
3	Which of the following is the ideal gas equation.	A. PV -n RT B. P/V = n RT C. V/P = nR/T D. PV = T/nR
4	If temperature of the sink is decreased the efficiency of a Carnot engine	A. Increases B. Decreases C. Remains constant D. First increases and thend ecreases
5	The mechanical equivalent of heat	A. Has the same dimension as heat B. Has the same dimension as work C. Has the same dimensions as energy D. Is dimensionless
6	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
7	How do solar heat and light reach the Earth.	A. By radiation B. By convection C. By conduction D. By conduction and convection
8	Which of the following thermometers is the most suitable for measuring rapidly varying temperature.	A. Thermocouple thermometer B. Mercury in glass thermometer C. Alcohol in glass thermometer D. Platinum resistance thermometer
9	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^oC
10	Law of increase of entropy is a result of	A. First law of thermodynamics B. Second law of thermodynamics C. Third law of thermodynamics D. Zeroth law of thermodynamics
11	Difference between the molar heat capacity constant pressure and that a constant volume is equal to	A. Root mean square velocity B. Mean free path C. Boltzmann's constant D. Universal gas constant
12	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
13	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
14	The kinetic molecular model of matter describe matter an being made up of molecules in continuous.	A. Vibratory motion B. Random motion C. rotatory motion D. Linear motion
15	What is the SI unit for thermal conductivity.	A. W m-1 K-1 B. W m-2 k-2 C. W m-3 k-1

		D. J kg -1 k-1
16	How solid hydrogen is obtained.	A. By cascade process B. By joule kelvin effect C. By adiabatic expansion D. Lowering temperature below melting point
17	Woolen clothing a effective in keeping us warm because.	A. An trapped int he wool acts as an insulator B. Heat loss by convection and radiation is prevented C. Wool is bad traciator and good absorber of heat D. Wool can retain high temperatures
18	Mean free path of gas molecules is inversely proportional to its	A. Volume B. Pressure C. Temperature D. Size
19	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%
20	Which temperature is the absolute measure of temperature.	A. Thermodynamic temperature B. Freezing point C. Boiling point D. Absolute zero