

PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	Which of the following is the ideal gas equation.	A. $PV = nRT$ B. $P/V = nRT$ C. $V/P = nR/T$ D. $PV = T/nR$
2	In ideal gas equation $PV = nRT$, R is	A. Universal gas constant B. Avogadro's number C. Plank's constant D. Gravitational constant
3	In an isobaric process there is no.	A. Pressure change B. Internal energy change C. Heat exchanged D. volume change or work done
4	One calorie equals to	A. 1.2 J B. 2.2 J C. 3.2 J D. 4.2 J
5	Efficiency of a Carnot engine can never be 1 or 100% unless cold reservoir is at absolute temperature.	A. 0 K B. 100 K C. 273 K D. 373 K
6	The ratio between the energy dissipated in some process and the heat that appears as a result is the	A. Specific heat B. Mechanical equivalent of heat C. Kilocalories D. Triple point
7	The specific heat of a substance is a function of its	A. mass B. Weight C. Volume D. Molecular structure
8	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
9	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
10	When a liquid is heated retaining its liquid state then its molecules gain.	A. K.E. B. P.E C. Heat energy D. Chemical energy
11	The volume of a gas at constant pressure is directly proportional to the temperature as measured on the.	A. Celsius scale B. Kelvin scale C. Fahrenheit scale D. Baume scale
12	In which thermodynamic process enthalpy of the system remains constant.	A. Isenthalpic process B. Isolated process C. Isobaric process D. Isochoric process
13	During an adiabatic gas expansion the environment	A. Serves as a heat sink B. Serves as a heat source C. Must be at a higher temperature than the gas D. Does not have to participate
14	Real gases obey gas laws only at	A. Low pressure and high temperature B. High pressure and low temperature C. High pressure and high temperature D. Low pressure and low temperature

15	A 4 kJ mass of copper of specific heat capacity of $400 \text{ J kg}^{-1}\text{K}^{-1}$ is heated for 160 s by a heater of power 200 W what is the rise in temperature.	A. 10 K B. 16 K C. 100 K D. 160 K
16	A convection current is the movement of fluid caused by the change in.	A. Pressure B. Temperature C. Densities D. Volume
17	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
18	Gas exert pressure on walls of the vessel because gas molecules.	A. Possess momentum B. Have finite volume C. Collide with each other D. Obey gas laws
19	What happens to entropy in an irreversible cycle.	A. No gain in entropy B. No change in entropy C. Loss of entropy D. A net gain of entropy
20	Which of the following is an example of an irreversible process.	A. Isothermal and adiabatic process B. Melting of ice C. Work done against friction D. Peltier effect