

PPSC Physics Chapter 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	Under steady state the temperature of a body	A. Increase's with time B. Decreases with time C. Does not change with time D. None of the above
2	A metallic rod is continuously heated at its two ends, The heat following through the rod does not depend upon.	A. Mass of the rod B. Area of cross section of the rod C. Temperature gradient between two ends D. Time for which heat flow through the rod
3	When a hot liquid is mixed with a cold liquid temperature of the mixture.	A. First decreases and then becomes constant B. First increases and then becomes constant C. Continuously decreases D. Is undefined for some time and then nearly becomes constant
4	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
5	How many calories of heat are required to evaporate completely 1 g of ice at 0 °C	A. 120 calories B. 520 calories C. 720 calories D. 920 calories
6	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 °C
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	What type of process is the Carnot's cycle.	A. Reversible B. Irreversible C. Neither reversible nor irreversible D. May be reversible or irreversible
9	The internal energy of monoatomic gas is.	A. $\frac{3}{2} RT$ B. Independent of temperature C. In the form of K.E. D. Partially kinetic and partially potential
10	The ideal thermal efficiency of a cyclic heat engine is limited by	A. Friction in the engine B. Amount of heat in the engine C. Difference between input temperature and output temperature. D. Amount of work
11	Which of the following should not change in isothermal operation.	A. Heat constant B. Volume C. Pressure D. Temperature
12	The ratio of specific heat capacity to molar heat capacity of a body	A. Is a universal constant B. Depends upon the mass of the body C. Depends upon the molecular weight of the body D. Is dimensionless
13	How much ice will melt by 50,000 J of heat.	A. 120 J B. 130 g C. 140 J D. 150 g

14	Which of the following pairs represent units of the same physical quantity.	A. Kelvin and joule B. Kelvin and calorie C. Newton and calorie D. Joule and calorie
15	The specific heat capacity of the body depends upon.	A. the heat given to it B. Mass of the body C. Temperature raised D. Material of the body
16	The behavior of the gases that can be easily liquefied is like that of the.	A. Triatomic gases B. Ideal gases C. Van der Waals gases D. Diatomic gases
17	Which thermodynamic law states that the entropy of a perfect system approaches zero.	A. Zeroth law of thermodynamics B. First law of thermodynamics C. Second law of thermodynamics D. Third law of thermodynamics
18	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
19	Two steam engines A and B have their sources at 900 K and 600 K and their sinks are at 450 K and 300 K respectively.	A. They are equally efficient B. A is less efficient than B C. A is more efficient than B D. Their efficiencies cannot be determined
20	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