

PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	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
2	Which thermometer is called spirit thermometer	A. Alcohol thermometer B. Mercury in glass thermometer C. Gas thermometer D. Radiation thermometer
3	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
4	The ratio of Universal gas constant and Avogadro's number is called.	A. Equilibrium constant B. Velocity constant C. Boltzmann's constant D. Gravitational constant
5	Certain gases are called permanent gases because.	A. They cannot be liquefied B. They are perfect gases C. The critical temperatures are low D. their boiling points are low
6	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
7	The gas thermometer is taken as the primary standard because.	A. Thermometers are easily reproducible B. Readings can be accurately taken C. No correction is necessary D. It produces the thermodynamic scale
8	Which of the following is a thermodynamic potential	A. Internal energy B. Enthalpy C. Gibbs free energy D. All of these
9	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
10	Identify the irreversible process	A. Explosion of a bomb B. Slow expansion of a gas C. Slow compression of a gas D. Slow compression of an elastic spring
11	Specific heat of different substances varies because of	A. Same number of molecules in unit mass B. Different number of molecules in unit mass C. Different K.E. of molecules in unit mass D. Same K.E. of molecules in unit mass
12	A perfect gas is one whose	A. Molecules are massless B. Molecules are energetic C. Molecules are perfectly elastic D. Molecules are at rest
13	The phenomenon of Brownian motion shows that	A. Molecules exist and can be seen as bright dots moving about B. Molecules move about randomly at high speeds C. Smoke particles behave as molecules D. Smoke particles are not molecules

		D. Smoke particles can be used as models of air molecules.
14	What is a measure of the total energy of a thermodynamics system.	A. Entropy B. Enthalpy C. Randomness D. Chaos theory
15	The product of mass and specific heat of a substance is called.	A. Latent heat B. Water equivalent C. Atomic heat D. Heat capacity
16	The actual gas can behave like an ideal gas at	A. Low density and high pressure B. High density and high pressure C. Low density and low pressure D. High density and low pressure
17	A heat engine with 100% efficiency would have to.	A. Do no work B. Be at uniform temperature C. Use no heat D. Discharge of 0 ^o /sup>C
18	Mean free path of gas molecules is inversely proportional to its.	A. Weight B. Temperature C. Pressure D. Volume
19	Gas exert pressure on walls of the vessel because gas molecules.	A. Posses momentum B. Have finite volume C. Collide with each other D. Obey gas laws
20	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