

PPSC Physics Topic 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	A diatomic gas contains only	A. Translational K.E. B. Rotational K.E. C. Vibrational K.E. D. All of these
2	A heat engine can develop efficiency equal to 100% if the temperature of the sink is	A. Less than that of source B. Equal to that of source C. 0 K D. 0 $^{\circ}$ C
3	If the specific latent heat of vaporization of oxygen is 214 kJ kg $^{-1}$ how much heat will be absorbed when 3.0 kg of oxygen is boiled off at its boiling point.	A. 14 kJ B. 64 kJ C. 140 kJ D. 642 kJ
4	Which of the following is standard scale of temperature	A. Mercury scale B. Platinum resistance scale C. Gas scale D. Alcohol scale
5	A given quantity of an ideal gas is at pressure P and temperature T What is the isothermal bulk modulus of the gas.	A. $2/3 P$ B. P C. $2P$ D. $3/2 P$
6	The specific heat of all gases increases with temperature at high temperature decreases at low temperature expectation is	A. Oxygen gas B. Nitrogen gas C. Mono atomic gas D. Dia atomic gas
7	Which of the following should not change in isothermal operation.	A. Heat constant B. Volume C. Pressure D. Temperature
8	Diffusion of gases occurs because the molecules of the	A. Gas present in a higher concentration exerts a high pressure B. Gases are different C. Gasses attract each other D. Gasses move about randomly
9	Which one of the following is an example of a reversible process.	A. Work done against friction B. Heat produced by current C. Melting of ice D. See back effect
10	The mechanical equivalent of heat is.	A. Physical quantity B. Constant C. Conversion factor D. Zero
11	Which one of the following gases posses maximum root mean square velocity.	A. Hydrogen B. Oxygen C. Nitrogen D. Carbon dioxide
12	The ratio of specific heat capacity to motor 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	What is the total entropy change during an reversible cycle.	A. Unity B. Infinite C. Zero D. Cannot be detected
14	The temperature which is the same in $^{\circ}$ C and $^{\circ}$ F is.	A. -20 B. -40 C. 20 D. 40 E. Perfectly elastic

15 According to kinetic theory of gases one assumes that the collisions between molecules are.
B. Perfectly inelastic
C. Partly elastic
D. Partly inelastic

16 Which thermometer is called sprint thermometer
A. Alcohol thermometer
B. Mercury in glass thermometer
C. Gas thermometer
D. Radiation thermometer

17 The thermal inertia of a thermodynamic system is known as its.
A. Entropy
B. Enthalpy
C. Isothermal conduction
D. Adiabatic conduction

18 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

19 The specific heat of a substance is a function of its
A. mass
B. Weight
C. Volume
D. <div>Molecular structure</div>

20 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