# PPSC Physics Chapter 3 Thermal Properties of Matter

| Sr | Questions | Answers Choice |
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| 1 | When a fluid in a cylinder expands through a distance 'd' against a piston of area 'A' which is exerting a constant pressure 'P' the work done is equal by. | A. PAD<br>B. PA/d<br>C. Pd/A<br>D. Pd/A2 |
| 2 | When ever a system is made to complete a cyclic process the work done during the complete cycle. | A. Is zero<br>B. Is negative<br>C. Is positive<br>D. Depends upon the path followed |
| 3 | The ratio between the energy dissipated in some process and the heat that appears as a result is the | A. Specific heat<br>B. Mechanical equivalent of heat<br>C. Kilocalories<br>D. Triple point |
| 4 | The process in which no heat enters or leaves the system is called. | A. Isdobaric<br>B. Isochoric<br>C. Isothermal<br>D. Adiabatic |
| 5 | The number of molecules or atoms in a specific volume of a gas is independent of their | A. Volume<br>B. Pressure<br>C. Size<br>D. Temperature |
| 6 | Which law states that two given samples of an ideal gas at the same temperature pressure and volume contain the same number of molecules. | A. Charles law<br>B. Avogadro's<br>C. Boyles law<br>D. Boizmann law |
| 7 | How many calories of heat are required to evaporate completely 1 g of ice at 0 $^{O}$C | A. 480 calories<br>B. 720 calories<br>C. 940 calories<br>D. 1170 calories |
| 8 | The change in entropy for any reversible cycle is identically | A. Infinite<br>B. Positive<br>C. Negative<br>D. Zero |
| 9 | The term used for heat capacity per unit mass is. | A. Latent heat<br>B. Specific heat<br>C. Energy density<br>D. Specific energy |
| 10 | What is a thermal properly of a material that determines the quantity of energy required to change the phase of a unit mass of that substance. | A. Specific heat<br>B. Latent heat<br>C. Internal energy<br>D. Specific energy |
| 11 | On which parameter internal energy of an ideal gas depends upon. | A. Volume<br>B. Mass<br>C. Pressure<br>D. Temperature |
| 12 | Most cooking involves | A. Adiabatic process<br>B. Isothermal process<br>C. Isobaric process<br>D. Isochoric process |
| 13 | A 4 kJ mass of copper of specific heat capacity of 400 J kg-1k-1 is heated for 160 s by a heater of power 200 W what is the rise in temperature. | A. 10 K<br>B. 16 K<br>C. 100 K<br>D. 160 K |
| 14 | A cup of coffee at 80 $^{O}$C is left to cool to 30 oc if the heat capacity of the cup and coffee is 2.0 kJ k-1 how much heat is released during the cooling. | A. 0.04 kJ<br>B. 100 KJ<br>C. 60 kJ<br>D. 160 kJ |
| 15 | The specific heat capacity of a substance is the amount of heat required to. | A. Raise its temperature by 1 K<br>B. Raise the temperature of 1 kg of the substance by 1 K<br>C. Melt 1 kg of the substance |

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| | | D. Boil 1 kg of the substance |
| 16 | When heat a supplied to a metallic sphere which one of the following changes will occur. | A. the mass of the sphere increases<br>B. The volume of the sphere increases<br>C. The density of the sphere increases<br>D. The internal energy of the sphere increases |
| 17 | In which thermodynamic process enthalpy of the system remains constant. | A. Isenthalpic process<br>B. Isolated process<br>C. Isobaric process<br>D. Isochoric process |
| 18 | Which kind of thermodynamic process is defined as with no heat transfer into or out of a system i.e. Q =0 | A. Isobaric process<br>B. Isochoric process<br>C. Isothermal process<br>D. Adiabatic process |
| 19 | If a gas does 10 J of external work white expanding then the change in internal energy is equal to. | A. 0 J<br>B. 10 J<br>C. -10 J<br>D. 100 J |
| 20 | On what factor the internal energy of a thermodynamic system depend upon. | A. History<br>B. State<br>C. Process<br>D. Surroundings |