CHEMISTRY TEST ANSWERSHEET CLASS XI (OCTOBER 2023)

Q NO	CHAPTER	HEADING OF QUESTION	CORRECT ANSWER	EXPLAINATION	% OF STUDENTS ATTEMPTED CORRECTLY
01	CLASSIFICATION OF ELEMENTS & PERIODICITY	A well stoppered thermos flask contains some ice cubes. This is an example of	C	It is an isolated system	68.55
02	CLASSIFICATION OF ELEMENTS & PERIODICITY	Considering entropy(S) thermodynamic parameters the criteria for the spontaneity of any process is:	A	The criteria for the spontaneity of any process is $\triangle S$ system + $\triangle S$ surroundings > 0	65.60
03	CLASSIFICATION OF ELEMENTS & PERIODICITY	What is the entropy change (in JK-1 mol-1) when 1 mole of ice is converted into water at 0°C? (The enthalpy change for the conversion of ice to liquid water is 6.0 kJ mol-1 at 0°C)	D	Solution: The entropy change; ds = dqrev /T ⇒ ds = 6000J mol-1 / 273K ⇒ ds = 21.978JK-1 mol-1	79.10
04	CLASSIFICATION OF ELEMENTS & PERIODICITY	Assertion : Enthalpy of formation of graphite is zero but of diamond it is not zero. Reason : Enthalpy of formation of the most stable allotrope is taken as zero.	A	Graphite is the most stable form.	74.10
05	CLASSIFICATION OF ELEMENTS & PERIODICITY	Assertion : Spontaneous process is an irreversible process and may be reversed by some external agency. Reason : Decrease in enthalpy is a contributory factor for spontaneity.	B	Spontaneous process moves in forward direction and can be reversed by external force application	65.20
06	CHEMICAL BONDING AND MOLECULAR STRUCTURE	Assertion : Decrease in free energy causes spontaneous reaction. Reason : Spontaneous reactions are invariable exothermic reactions.	C	Exothermic reactions are spontaneous at low temperature but becomes non-spontaneous at high temperature.	72.30
07	CHEMICAL BONDING AND MOLECULAR STRUCTURE	Assertion : Entropy of system increases for a spontaneous reaction. Reason : Enthalpy of reaction always decreases for spontaneous reaction.	A	$\triangle S$ is +ve and $\triangle H$ is –ve for a spontaneous reaction at all temperatures.	71.10
08	CHEMICAL BONDING AND MOLECULAR STRUCTURE	One mole of which will have the highest Entropy	B	Measure of randomness is called Entropy and as Hydrogen is in gaseous phase will have the maximum randomness	47.30
09	CHEMICAL BONDING AND MOLECULAR STRUCTURE	One gram of sample of NH_4NO_3 is decomposed in a bomb calorimeter. The temperature of the calorimeter increases by 6.12 K. The heat capacity of the system is 1.23 kj/deg. What is the molar heat of decomposition of NH_4NO_3?	D	-602 KJ/MOLE	58.20
10	CHEMICAL BONDING AND MOLECULAR STRUCTURE	Internal energy does not include	D	Gravitational Pull is offered by Earth	54.90