

## JEE Main 31 January 2024 Shift 2 Answer Key Chemistry

Q.1: Find the work done by gas at temperature 300 kelvin, 5 moles of gas are expanded from 10 litre to 100 litre. .

A.1: 1500 R ln(10)

Q.2: Half life of a first order reaction is 36 hr. How many hours will be required for concentration of reactant to get reduced by 90%.

A.2: 120

Q.3: (Statement I:  $S_8$  disproportionate into  $H_2S_2O_3$  and  $S_2$  in alkaline medium and Statement II: CIO<sub>4</sub> undergoes disproportionation in acidic medium)

A.3: Statemnent 1 is correct and statement 2 is incorrect

Q.4: Among the given statement which of the following is correct:

Option 1:  $[NiCl_4]^{2-}$  diamagnetic,  $[Ni(CO)_4]$  - diamagnetic ||

Option 2:  $[Ni(CO)_4]$  - diamagnetic,  $[NICi_4]^{2-}$  - diamagnetic ||

Option 3:  $[NiCl_4]^{2-}$  paramagnetic,  $[Ni(CO)_4]$  - Paramagnetic ||

Option 4: [NiCl<sub>4</sub>]<sup>2-</sup> Paramagnetic, [NI(CO)<sub>4</sub>] - diamagnetic)

A.4: [Ni(CO)<sub>4</sub>] - diamagnetic, [NICi<sub>4</sub>]<sup>2-</sup> - diamagnetic  $\parallel$ 

Q.5: Among the given options which has the maximum ionic character

Option 1: KCL ||



Option 2: AgCl ||

Option 3: CaCl2 ||

Option 4: BaCl2 ||

A.5: KCL

Q.6: Among the given vitamins how many can be stored in the body (A, B<sub>1</sub>, B<sub>6</sub>, B<sub>12</sub>, C, D, E, & K) A.6: 5 (A, B12, D, E, K)

Q.7: For the order reaction A -> product. if troot2 = 120 min the time for 90 percent completion is?

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A.7: 396 minutes

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