1) The sum of all the oxidation states of sulphur atoms in $Na_2S_4O_6$ is

a) 4 b) 10
c) 6 d) 7

2) In Arrhenius equation for a certain reaction, the value of A and E (activation energy) are $4 \times 10^{10} s^{-1}$ and 100 kJ^{-1} mol respectively. If the reaction is of first order, at what temperature will its half-life period be 20 min?

a) 377.36 K b) 366 K
c) 311.34 K d) 200 K

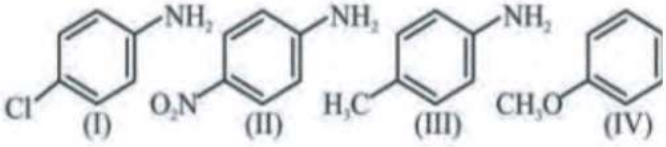
3) The complex ion which is diamagnetic and low spin complex among the following is/are

a) $[Co(H_2O)_6]^{3+}$ b) $[Co(NH_3)_6]^{3+}$
c) $[Fe(CN)_6]^{3-}$ d) $[Cr(H_2O)_6]^{3+}$

4) Which of the following pair of transition metal ions, have the same calculated values of magnetic moment?

a) Ti^{2+} and V^{2+} b) Fe^{2+} and Cu^{2+}
c) Cr^{2+} and Fe^{2+} d) Co^{2+} and Mn^{2+}

5) The correct order of increasing basic nature of the following bases is



a) II < IV < III < I b) II < I < III < IV
c) I < III < IV < II d) II < I < IV < III

6) The energy of second Bohr orbit of the hydrogen atom is –300 kJ mol^{-1}; hence the energy of fifth Bohr orbit would be

a) –41 kJ mol^{-1} b) –48 kJ mol^{-1}
c) –164 kJ mol^{-1} d) –82 kJ mol^{-1}

7) A 10% solution of cane sugar (molar mass 342) is isotonic with 2% solution of an unknown solute. The molar mass of unknown solute in g/mol is

a) 136.2 b) 171.2
c) 68.4 d) 34.2

8) From the following compounds which does not react with $PhSO_2Cl$?

a) $(C_2H_5)_3N$ b) $(CH_3)_3N$
c) $(CH_3)_2NH$ d) Both a) and b)

9) Arrange the osmotic pressure of 10% solution of glucose (I), NaCl (II), $BaCl_2$ (III) and $AlCl_3$ (IV) at the same temperature in the ascending order (Assume 100% ionisation of the electrolytes at this temperature)

a) I < III < II < IV b) III < I < II < IV
c) I < II < III < IV d) III < IV < I < II

10) Which of the following has O–O linkage?

a) CrO_5 b) $H_2S_2O_8$
c) $H_2S_2O_3$ d) Both a) and b)

11) For the reaction,

$2NO_2(g) \rightleftharpoons 2NO(g) + O_2(g)$, $K_C = 3.6 \times 10^{-10}$ at 185°C. the value of K_C for the reaction

$NO(g) + \frac{1}{2}O_2(g) \rightleftharpoons NO_2(g)$ is;

a) 0.9×10^6 b) 1.9×10^6
c) 7.5×10^2 d) 5.27×10^4

12) NO reacts with O_2 to form NO_2. When 20 g of NO_2 is formed during the reaction, the mass of O_2 consumed is

a) 1.90 g b) 5.0 g
c) 6.95 g d) 13.9 g

13) 10 litre of water contains 10^{-8} mole H+ ions. Degree of ionisation of water is

a) 1.8×10^{-9}% b) 0.8×10^{-9}%
c) 3.6×10^{-9}% d) 3.6×10^{-7}%

14) How much of sulphur is present in an organic compound if 0.59 g of the compound gave 1.20 g of $BaSO_4$ on analysis?

a) 10% b) 15%
c) 20% d) 27.93%

15) Which of the following species is paramagnetic in nature?

a) N_2^+ b) O_2
c) O_2^{2-} d) Both a) and b)

Answer Key for 21-04-2025 NEET MODEL QUESTION PAPER - PHYSICS

Q	37	38	39	40	41	42
A	C	C	C	D	B	A
Q	43	44	45	46	47	48
A	A	D	C	C	D	C

– தொடரும்