MODEL QUESTIONS – CHEMISTRY

1. Half life of a first order reaction is 15min. The time required for completion of 87.5% of the reaction is
(1) 15 min (2) 30 min (3) 60 min (4) 45 min

2. Arrange the following in increasing order of their basic strength.
I) $C_2H_5NH_2$ II) $C_6H_5NH_2$ III) $C_6H_5CH_2NH_2$ IV) $(C_2H_5)_2NH$
(1) I < II < IV < III (2) II < III < I < IV
(3) I < IV < III < II (4) IV < I < III < II

3. Which of the following has least electron gain enthalpy?
(1) Sulphur (2) Chlorine (3) Flourine (4) Oxygen

4. Assertion (A): H_2O is liquid and H_2S is gas at room temperature
Reason (R) : Molecules of H_2O are highly associated through hydrogen bonding
The correct answer is:
(1) Both (A) and (R) are true and (R) is the correct explanation of (A)
(2) Both (A) and (R) are true and (R) is not the correct explanation of (A)
(3) (A) is true but (R) is not true
(4) (A) is not true but (R) is true

5. Match the following:

LIST I (Crystal System)	**LIST II (Axial Angle)**
(A) Cubic	(I) $\alpha = \beta = 90°; \gamma = 120°$
(B) Hexagonal	(II) $\alpha \neq \beta \neq \gamma \neq 90°$
(C) Monoclinic	(III) $\alpha = \beta = \gamma \neq 90°$
(D) Triclinic	(IV) $\alpha = \gamma = 90°; \beta \neq 90°$
	(V) $\alpha = \beta = \gamma = 90°$

The correct match is:
(1) A-V, B-I, C-III, D-IV
(2) A-IV, B-II, C-V, D-I
(3) A-V, B-I, C-IV, D-II
(4) A-IV, B-II, C-V, D-III

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