Q1: 24 Feb (Shift 2) - Single Correct

Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Hydrogen is the most abundant element in the Universe, but it is not the most abundant gas in the troposphere.

Reason R : Hydrogen is the lightest element.

In the light of the above statements, choose the correct answer from the given below

(1) A is false but R is true

(2) Both A and R are true and R is the correct explanation of A

(3) A is true but R is false

(4) Both A and R are true but R is NOT the correct explanation of A

Q2: 25 Feb (Shift 1) - Single Correct

Which of the following equation depicts the oxidizing nature of H_2O_2?

(1) $Cl_2 + H_2O_2 \rightarrow 2HCl + O_2$

(2) $KlO_4 + H_2O_2 \rightarrow KlO_3 + H_2O + O_2$

(3) $2I^- + H_2O_2 + 2H^+ \rightarrow I_2 + 2H_2O$

(4) $I_2 + H_2O_2 + 2OH^- \rightarrow 2I^- + 2H2O + O_2$

Q3: 26 Feb (Shift 1) - Single Correct

Statement about heavy water are given below

A. Heavy water is used in exchange reactions for the study of reaction mechanisms

B. Heavy water is prepared by exhaustive electrolysis of water

C. Heavy water has higher boiling point than ordinary water

D. Viscosity of H_2O is greater than D_2O

(1) A and B only

(2) A and D only

(3) A, B and C only

(4) A and C only

Q4: 26 Feb (Shift 2) - Single Correct

Calgon is used for water treatment. Which of the following statement is NOT true about calgon?

(1) Calgon contains the 2^{nd} most abundant element by weight in the earth's crust.

(2) It is also known as Graham's salt.

(3) It is polymeric compound and is water soluble.

(4) It doesnot remove Cat ion by precipitation.

Q5: 26 Feb (Shift 2) - Single Correct

Which of the following forms of hydrogen emits low energy β^- particles?

(1) Proton H^+

(2) Deuterium ^2_1H

(3) Protium ^1_1H

(4) Tritium ^3_1H

Answer Key

Q1 (2) **Q2** (3) **Q3** (3) **Q4** (1)

Q5 (4)