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Roll No._____ to be filled in by the candidate.

(For all sessions)

Paper Code	6	4	8	3

Chemistry (Objective Type)

Time: 20 Minutes **Marks: 17**

NOTE: Write answers to the questions on objective answer sheet provided. Four possible answers A,B,C & D to each question are given.Which answer you consider correct, fill the corresponding circle A,B,C or D given in front of each question with Marker or pen ink on the answer sheet provided.

1.1. For which system does the equilibrium constant,Kc has units of(concentration)$^{-1}$?

(A) $N_2 + 3H_2 \rightleftharpoons 2NH_3$ (B) $H_2 + I_2 \rightleftharpoons 2HI$

(C) $2NO_2 \rightleftharpoons N_2O_4$ (D) $2HF \rightleftharpoons H_2 + F_2$

2. 18g of glucose is dissolved in 90g of water.The relative lowering of vapour pressure is equal to:
(A) 1/5 (B) 5.1 (C) 1/51 (D) 6.0

3. Stronger the oxidizing agent,greater is the:
(A) Odixation potential (B) Reduction potential (C) Redox potential (D) E.M.F of cell

4. If the rate equation of a reaction: 2A+B ⟶ Products is, rate=K[A]^2[B], and A is present in large excess,then order of reaction is:
(A) 1 (B) 2 (C) 3 (D) 4

5. Isotopes differ in:
(A) properties which depend upon mass (B) arrangement of electrons in orbitals
(C) chemical properties (D) their behaviour in electromagnetic field.

6. Number of isotopes of Tin is/are:
(A) one (B) eleven (C) fifteen (D) eighteen

7. Solvent extraction method is a particularly useful technique for separation when the product to be separated is:
(A) non-volatile or thermally unstable (B) volatile or thermally stable
(C) non-volatile or thermally stable (D) volatile or thermally unstable

8. Pressure remaining constant,at which temperature the volume of a gas will become twice of what it is at 0°C.
(A) 546 °C (B) 200 °C (C) 546 K (D) 273 K

9. The partial pressure of oxygen in the lungs is:
(A) 100 torr (B) 116 torr (C) 150 torr (D) 159 torr

10. When water Freezes at 0°C, its density decreases due to:
(A) Cubic structure of ice (B) Empty spaces present in the structure of ice
(C) Change of bond lengths (D) Change of bond angle

11. Which one of the following is an example of cubic system?
(A) Diamond (B) Borax (C) Iodine (D) Graphite

12. Brackett series lie in the region:
(A) U.V (B) I.R (C) Visible (D) X-Ray

13. Bohr model of atom is contradicted by:
(A) Plank's quantum theory (B) dual nature of matter
(C) Heisenberg's uncertainity principle (D) Newton theory

14. The number of bonds in nitrogen molecule is:
(A) one σ and one π (B) one σ and two π (C) three σ (sigma) only (D) two σ and one π

15. The covalent radius of Cl-atom is:
(A) 99.4 pm (B) 80 pm (C) 70 pm (D) 66.4 pm

16. One calorie is equivalent to:
(A) 0.4184J (B) 4.184J (C) 41.84J (D) 418.4J

17. pH value of vinegar is:
(A) 1.1 (B) 2.0 (C) 2.8 (D) 3.5