

S.B. Roll No.....

**APPLIED CHEMISTRY-I**  
**1<sup>st</sup> Exam/Common/6052/Feb'2021**  
**(For 2018 Batch onwards)**

**Duration: 1.15 Hrs.**

**M.Marks:25**

**SECTION-A**

**Q1. Attempt any five questions.**

**5x3=15**

- i. Calculate the percentage composition of various elements in NaOH.  
(Atomic mass of Na = 23, O = 16, H = 1)
- ii. What are thermochemical equations?
- iii. State and explain Pauli's exclusion principle.
- iv. What do you understand by hard water and soft water?
- v. What are buffer solutions and its types?
- vi. Define molarity, molality and normality.
- vii. Differentiate between temporary and permanent hardness of water.
- viii. What should be the qualities of drinking water?
- ix. State Faraday's first law of electrolysis.
- x. Give the IUPAC name of a)  $\text{CH}_3\text{-CH}_3$  b)  $\text{CH}_3\text{-CH}_2\text{-OH}$  c)  $\text{CH}_3\text{-CH=CH}_2$

**SECTION-B**

**Attempt any one question.**

**1x10=10**

- Q2.** a) What is catenation?  
b) What are functional groups?
- Q3.** a) Differentiate between primary and secondary cells.  
b) Explain applications of electrolysis.
- Q4.** What are the industrial and domestic disadvantages of hard water?
- Q5.** a) Explain pH scale.  
b) Differentiate between sigma and pi bonds.
- Q6.** Name and explain the four quantum numbers.