BASIC ENGINEERING SCIENCE (APPLIED CHEMISTRY)

Date: 24.12.2015  Marks: 50  Time: 10 am to 1 pm

Instructions:
1. Attempt THREE questions out of which Q1 is compulsory
2. Answer each next question on new page
3. Figure to the right indicate full marks
4. Illustrate your answers with sketches and flow chart wherever necessary
5. Use of non programmable electronic pocket calculator permissible
6. Mobile and any other communication devices are not allowed in exam hall
7. Assume suitable data wherever necessary

Q1 Answer any five
i. What is difference between isotopes & isobars?
ii. What is soft and hard water? Which are the impurities make soft water as hard water?
iii. Explain assumptions of Bohr's Atomic Model.
iv. Define acids and bases on the basis of Lewis theory.
v. Give distinguish test between aldehyde and ketone?
vi. Write electronic configuration of Cl and H.

Q2 Explain (Any three)

i. Normality
ii. Arrhenius theory of ionization
iii. Drawbacks of hard water for Industrial use
iv. Uses of aromatic compounds.

Q3 a. What are aliphatic and aromatic compounds? Give examples of each of them.

b. What is Inorganic compound? Explain uses of inorganic chemicals in textile industry

c. What are types of hardness of water and how it measure?

Q4 Give IUPAC name of
a) CH₃ - CH₂ - O - CH₃  b) CH₃ - CH₂ - CH₂ - COOH

b) CH₃ - CH₂ - OH  d) CH₃ - CH₃  e) CH₃ - CH = CH₂

b. Explain how will you prepare 1 N solution of NaOH. And also explain the use of NaOH in textile industry