LNCT UNIVERSITY, BHOPAL

Enrolment No. ....

CS-101UC
B.TECH(CS / AIML) I & II SEMESTER
EXAMINATION [JUNE-2024]
ENGINEERING CHEMISTRY& LIFE SCIENCES

Maximum Marks: 70   **Time Allowed: 3Hours**

Note:- Attempt all questions internal choice are given.

(SECTION –A)

1. Short Answer Type Questions (Attempt Any Five)   [5x6=30]

i.   Write various units for expression of hardness of water and show their interrelationship.

ii. Calculate lime and soda needed for softening of 10^5 litres of water containing $MgSO_4$ = 12.0 mg/l; $Mg(HCO_3)_2$ = 14.6 mg/l; $CaCl_2$ = 22.2 mg/l; $NaCl$ = 5.85 mg/l.

iii. Define steam emulsion number .How it affect the quality of lubricant?

iv. Explain octane and cetane number of gasoline.

v.   What is meant by DNA fingerprinting? Write the main structural difference between DNA & RNA.

vi. Describe the terms D- & L- configuration used for sugars. Explain it with examples.

vii. Discuss Mendel's laws of inheritance. Which one of these laws is consider as most important and why?

(SECTION –B)

2 Long Answer Type Questions (Attempt Any Four).   [04x10=40]

i.   Discuss any two boiler troubles and what are their consequences? How these boiler troubles can be minimised?

ii. Describe the determination of flash and fire point by Pensky Martin's method. Draw neat and labeled diagram of apparatus.

iii. Discuss in brief the proximate analysis of coal and give its significance.

iv. Define lipids and classify them with suitable examples

v.   Describe the three main classes of genetic disorders and give an example of each.

vi. What is a Genetic Code? Explain various properties of genetic code.