Roll No. 049

GLOBAL INSTITUTE OF TECHNOLOGY

B. Tech. I Semester, II Mid Term Exam 2023

1FY2-03:Engineering Chemistry

Branch: Common For All Branches (Sec. A & B)

Date:01.03.2023; Day: Wednesday

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

Attempt all questions

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. **No supplementary sheet shall be issued in any case.**

Part A (Answer should be given up to 25 words only)
All questions are compulsory

Q.1 Define corrosion with example? (CO-3)
Q.2 Write the chemical composition and properties of soft glass. (CO-4)
Q.3 Zinc is more readily corroded, when coupled with copper than with lead. Why? (CO-3)
Q.4 Write the chemical name and formula of Aspirin? (CO-5)
Q.5 Define S_N1 reactions with example. (CO-5)
Q.6 Define viscosity and viscosity Index? (CO-4)
Q.7 What is pour and flash point? (CO-4)
Q.8 What is the role of gypsum in cement? (CO-4)
Q.9 What is oil gas and its properties. (CO-2)
Q.10 What is clinkers and its uses? (CO-4)

10x 2 = 20

Part B Analytical/Problem solving questions
Attempt all questions (word Limit 100)

Q.1 Write the preparation, properties and uses of Paracetamol. (CO-5)
Q.2 Describe the mechanism of Fluid film lubrication. (CO-4)
Q.3.Describe the manufacturing process of borosilicate glass. (CO-43)
Q.4. Describe the setting and hardening of Portland cement with chemical reactions. (CO-4)
Q.5 Calculate the volume of air required for complete combustion of $1m^3$ of gaseous fuel having the composition: CO= 48%, CH_4 = 8%, H_2 =40 %, C_2H_2=2%, Nitrogen= 1% and remaining ash. (CO-2)

5 x 4 =20

Part C (Descriptive/Analytical/Problem Solving/Design Question)
Attempt all questions

Q.1 Write the mechanism of dry corrosion with example. (CO-3)
Q.2 Describe the mechanism of nucleophilic addition in carbonyl compounds with examples. (CO-5)
Q.3Describe the process for the determination of flash and fire point of a lubricating oil. (CO-4)

3x 10 =30