Enrollment No. _____

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous)
Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION APRIL – 2017

B.Voc. Chemical Technology

BVCT-202 – CHEMISTRY OF SURFACTANTS

Duration of Exam – 2.30 hrs ***Semester – II*** ***Max. Marks – 70***

Que. 1 (A) – Answer the following Questions **[10]**

1. Define: i) Surfactants ii) Surface tension
2. Enlist thermodynamic parameters in micellization.
3. Write the Langmuir Adsorption Isotherm equation.
4. What is the diffuse layer?
5. Explain temperature effect on CMC.
6. In cationic surfactant _____charge remains present in hydrophilic group.
7. In which condition surfactants cause looser packing at surface?
8. Define: i) CMC ii) Krafft Point
9. Enlist different applications of the surfactants.
10. Give the full form of i) LABs ii) SME

Que. 1 (B) – Answer the following Questions **[20]**

1. Explain HLB value in surfactants.
2. Enlist any two advantages and disadvantages of nonionic surfactants.
3. Describe Adamson electrical double layer model.
4. Give brief account of efficiency and effectiveness of the surfactant.
5. Write a short-note on dynamic surface tension reduction.
6. Describe the anionic surfactant containing sulfonic group.
7. Explain Adsorption Isotherm with equation.
8. Give brief account on application of surfactant in oil recovery.
9. Describe Zwitter ionic surfactant.
10. Describe factors affecting the value of the CMC in aqueous media?

Que. 2 Answer the following Questions (Any Four) **[20]**

1 Explain Cationic surfactant in detail.

2 Explain stern model for electrical double layer in detail.

3 Give brief introduction about critical micelle concentration.

4 Explain environmental effect of surfactants.

5 Write in brief about micelles structure and shape.

6 Explain the application of surfactants as wetting agents.

Que. 3 Answer the following Questions (Any Four) **[20]**

1 Describe the surfactants which are based upon renewable raw materials in detail.

2 Give full introduction about surfactants.

3 Explain liquid–liquid interfacial tension reduction.

4 Describe mechanism and aggregation of adsorption at solid liquid interface.

5 Explain the application of surfactants as Dispersive agents.

6 Explain the effect of thermodynamic parameters of surfactant in micelle formation.