

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY

Winter Examination-2022

Subject Name : Industrial Analytical Chemistry

Subject Code : 5SC03IAC1

Branch: M.Sc. (Chemistry)

Semester: 3

Date: 21/11/2022

Time: 11:00 To 02:00

Marks: 70

Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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SECTION – I**Q-1 Attempt the Following questions. (07)**

- | | | |
|----|---|----|
| A. | What are known as automatic instruments? | 01 |
| B. | Define food analysis | 01 |
| C. | What do you mean by on-line analysis? | 01 |
| D. | What is called continuous instruments? | 01 |
| E. | Define dispersion coefficient | 01 |
| F. | _____ Method is use to identify Cotton Seed oil in olive oil. | 01 |
| G. | What is saponification value? | 01 |

Q-2 Attempt all questions (14)

- | | | |
|---|--|----|
| A | Discuss the principle and instrument of flow injection analysis. | 08 |
| B | Explain instruments used and feed-back mechanism in automated process control. | 06 |

OR**Q-2 Attempt all questions (14)**

- | | | |
|---|--|----|
| A | Discuss difference between discrete and continuous instruments. | 05 |
| B | Write a note on process Analytical chemistry (PAC). | 05 |
| C | Discuss any two factors affecting dispersion in flow injection analysis. | 04 |

Q-3 Attempt all questions (14)

- | | | |
|---|---|----|
| A | Explain the Kjeldahl's method for the determination of protein content in food. | 05 |
| B | Discuss the six major constituents in food analysis. | 05 |
| C | Write a note on the determination of starch and cane sugar from milk sample. | 04 |



OR

- Q-3 Attempt all questions (14)**
- A** Discuss Bidwell sterling method for determining water content in food products. **05**
- B** Discuss the methods for the determination of vitamin A and C. **05**
- C** Discuss nutritional labeling in detail. **04**

SECTION – II

- Q-4 Attempt the Following questions. (07)**

- A.** Write the full form of TFM and NPK. **01**
- B.** What do you mean by eutrophication? **01**
- C.** Give the structure of DDT. **01**
- D.** Give the wavelength of determination of Aldrin. **01**
- E.** Define pesticides **01**
- F.** What is known as anti-diabetic drug? **01**
- G.** Define the term surfactant **01**

- Q-5 Attempt all questions (14)**
- A** Discuss the classification of fertilizers in detail. **07**
- B** Write a note on analysis of: (i) Dieldrin and (ii) Malathion. **07**

OR

- Q-5 Attempt all questions**
- A** Write a note on adverse effects of fertilizers. **07**
- B** Give the classification of detergents in detail. **07**

- Q-6 Attempt all questions (14)**
- A** Explain the analysis of anti-malarial drugs with one example. **07**
- B** Discuss the analysis of anticancer drugs with one example. **07**

OR

- Q-6 Attempt all Questions**
- A** Explain in detail the heavy metal analysis in pharmaceutical industry. **07**
- B** Discuss analysis of anti T.B. drug with one example. **07**

