

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name: Industrial Analytical Chemistry

Subject Code: 5SC03IAC1

Branch: M.Sc. (Chemistry)

Semester: 3

Date: 25/02/2020

Time: 02:30 To 05:30

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 do you mean by industrial analytical chemistry? 1
 - B Define process analytical chemistry 1
 - C Give name of major constituents present in different foods. 1
 - D What do you mean by automation in instrumentation? 1
 - E Why we need to analyze food? 1
 - F What is barfoed test? 1
 - G Give the examples of waterand fatsoluble vitamins. 1
- Q-2 Attempt all questions (14)**
- A Discuss the advantages and disadvantages of off-line,At-line and On-line analysis processes. 07
 - B Explain the continuous and discrete analyzers or automated and automatic sampling devices. 07
- OR**
- Q-2 Attempt all questions (14)**
- A Discuss the principle and instrumentation of flow injection analysis. 07
 - B Write a note on the feed-back mechanism with control loop. 07



- Q-3 Attempt all questions (14)**
- A Explain the Kjeldahl method for the determination of protein content in food. 05
 - B Write a note on nutritional labeling of food. 05
 - C Discuss the regulations and standards for food analysis. 04

OR

- Q-3 Attempt all questions (14)**
- A Explain saponification value in detail. 05
 - B Discuss the methods for the determination of vitamin A and C. 05
 - C Give the methods for the determination of starch and cane sugar from milk sample. 04

SECTION – II

- Q-4 Attempt the Following questions (07)**
- A Define pesticides 01
 - B What is called biofertilizer? 01
 - C How fertilizer impairs soil quality? 01
 - D Give the wavelength of determination of Dieldrin. 01
 - E What do you mean by organochlorine pesticides? 01
 - F Give the chemical formula of sodium stearate and oleate. 01
 - G What is known as eutrophication? 01

- Q-5 Attempt all questions (14)**
- A Discuss the classification of pesticides in detail. 07
 - B Explain the analysis of: (i) DDT and (ii) Parathion. 07

OR

- Q-5 Attempt all questions (14)**
- A Discuss the analysis of antimalarial drugs with one example. 07
 - B Write a note on analysis of: (i) Aldrin and (ii) BHC. 07

- Q-6 Attempt all questions (14)**
- A Explain the analysis of antidiabetic drugs with one example. 07
 - B Discuss the classification of detergents in detail. 07

OR

- Q-6 Attempt all questions (14)**
- A Explain in short heavy metal ion analysis in pharmaceuticals. 05
 - B Discuss the determination of potassium from fertilizers. 05
 - C Write a note on step wise industrial production of soap. 04

