

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Winter Examination-2021

Subject Name: Advanced Chemistry

Subject Code: 5SC03ADC1

Branch: Chemistry

Semester: III

Date: 16/12/2021

Time: 02:30 PM To 05:30 PM

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.

SECTION – I

- Q-1 Attempt the Following questions. (07)**
- Define: Nanochemistry 01
 - Define: Auxochrome and Chromophore. 01
 - Explain the terms **aergel** and **xerogel**. 01
 - What is the meaning of sensation of color? 01
 - What are the uses of carbon nanotubes? 01
 - Write any two names of triphenyl methane dye. 01
 - Draw the chemical structure of Eosin. 01

- Q-2 Attempt all questions (14)**
- Explain: Ball milling top-down process for the synthesis of nanomaterials. 07
 - Discuss about the synthesis of Rosaniline. 07

OR

- Q-2 Attempt all questions (14)**
- Discuss about the synthesis and applications of aniline yellow. 05
 - Write a note on synthesis and uses of crystal violet. 05
 - Discuss about the synthesis and applications of methyl red. 04

- Q-3 Attempt all questions (14)**
- Write a note on phase transfer catalyst. 06
 - Write a note on Alizarin. 08

OR

- Q-3 Attempt all questions (14)**
- Write a note on intellectual property rights. 07
 - Discuss about the principles of green chemistry. 07



SECTION – II

- Q-4 Attempt the Following all questions. (07)**
- a. Define: Green Chemistry. 01
 - b. What is Trademark? 01
 - c. Write the full names of QSPR and QSAR. 01
 - d. What is an intellectual property? And give any three examples. 02
 - e. Write a green procedure for the synthesis of adipic acid. 02

- Q-5 Attempt all questions (14)**
- a. Explain any one bottom-up process for the synthesis of nanomaterials. 07
 - b. Write about the applications of nanomaterials. 07

OR

- Q-5 Attempt all questions (14)**
- a. Discuss about the uses of chemoinformatics. 07
 - b. Write a note on green synthesis of Ibuprofen. 07

- Q-6 Attempt all questions (14)**
- a. Write a note on green synthesis of polycarbonate. 07
 - b. Write about the applications of computer in chemistry 07

OR

- Q-6 Attempt all questions (14)**
- a. Write a note on computational chemistry. 07
 - b. What is nanoparticles? And Discuss about the classification of nanomaterials. 07

