

09 DEC 2020

M.Sc. SEM-3 Examination December- 2020

Selected Topics-I

Paper code: 3489

Time: 1:30 Hours

Total Marks: 42

(1) All questions carry equal marks

(2) Attempt any three questions out of four

Q-1 What is Phase Transfer Catalyst? Discuss about the benefits of phase transfer catalysts in organic chemistry with suitable examples. Give the synthesis of (i) Synthesis of Ethylene oxide (ii) Synthesis of paracetamol (iii) Synthesis of Ibuprofen (Classic route & Hoechst route) 14

OR

Q-1 (A) Define the term "Detergent". Explain the mechanism of detergent with suitable illustration. 07

(B) What are differences between bio-soft and bio-hard detergents? Give the synthesis of ABS and LAS. 07

Q-2 Explain the ingredients and classification of explosives. Discuss nitro based explosives in details with suitable examples. 14

OR

Q-2 (A) Classify the types of pollution. Discuss the sources of air, water and soil pollution in detail. Give an account of primary and secondary treatment plants for water purification. 07

(B) Explain the gaseous air pollutants in detail. 07

Q-3 Discuss the chemistry of penicillin. 14

OR

Q-3 (A) What are macrolides and polypeptide antibiotics? Explain both in brief. 07

(B) Determine the structure of erythromycin by giving analytical evidences only. 07

Q-4 Give the types of dyes according to method of applications to the fiber and describe the basic dyes in details. Give preparation and applications of Alizarin and Fast sulphone black 14

OR

Q-4 (A) Describe various applications of dyes as indicators and reagents. Give synthesis of Phenolphthalein. 07

(B) Give an account of synthesis and applications of Alizarin and Amaranth. 07

નોંધ:

- પ્રશ્નપત્રનો સમય ૧.૩૦ કલાકનો રહેશે.
- પ્રશ્નપત્રમાં ૪ પ્રશ્નોમાંથી કોઈ પણ ત્રણ પ્રશ્નોના જવાબ આપવાનો રહેશે.
- દરેક પ્રશ્નના ગુણ એકસરખા (૧૪ માર્ક્સ) રહેશે. પ્રશ્નપત્ર કુલ ૪૨ માર્ક્સનું રહેશે.