

B. SC. CHEMISTRY EXAMINATION, 2022

(3rd Year, 6th Semester, CBCS, Supplementary)

CHEMISTRY

PAPER – DSE/CHEM/TH/04/A

INDUSTRIAL CHEMISTRY + ENVIRONMENTAL CHEMISTRY

Time : Two hours

Full Marks : 40

UNIT - 6041-I

Answer all the questions

1. (a) Define glass chemically. Mention some physical properties of glass.
Name some colouring agents of glass. 2+1+1
- (b) Discuss the chemical reactions that take place in the furnace during the manufacture of glass. 2
- (c) Write a short note on (*any one*) 3
 - (i) Setting of Cement
 - (ii) Annealing
- (d) Mention the raw materials for the manufacture of cement. 1

2. (a) Explain the various steps of Wacker process through catalytic cycle. 4
- (b) Explain why Vaska's compound fails to act as a hydrogenation catalyst. 2
- (c) Zeolites can act as the good acid catalysts in organic reactions. Justify. 2
- (d) Calculate oxygen balance of RDX and TNT. 2

3. (a) Mention carbon monoxide toxicity in human system. 5
- (b) Why is de-leaded petrol used in automobile engines? 5

4. (a) What will be the exact policy for the minimization of water pollution and how can it be implemented? 3
- (b) What are the drawbacks of extensive use of pesticides? 2
- (c) Give the names of few chelators that are used for the detoxification of different heavy metals. 2
- (d) Draw the different layer structure of Earth. Write the different parts of Lithosphere. 2+1