

**BACHELOR OF SCIENCE (CBCS - 2016 COURSE)**  
**T. Y. B Sc. Sem-V : WINTER :- 2021**  
**SUBJECT: CHEMISTRY : INDUSTRIAL CHEMISTRY-I**

Day : Saturday  
Date 29-01-2022

W-14943-2021

Time : 02:00 PM-05:00 PM  
Max. Marks: 60

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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**Q.1** Attempt **ANY TWO** of the following: **[12]**

- a) Describe Ostwald's process for the manufacture of nitric acid.
- b) Explain the process for the manufacture of glass by pot furnace.
- c) Write a note on "Burning Operations" in Portland cement manufacture.

**Q.2** Attempt **ANY TWO** of the following: **[12]**

- a) What is glass? State physical and chemical properties of glass.
- b) What is Small Scale Industry? Explain manufacture of Gum paste and chalk crayons.
- c) Write a note on "clarification of juice".

**Q.3** Attempt **ANY TWO** of the following: **[12]**

- a) Explain physico-chemical principles involved in the manufacture of ammonia.
- b) Describe the different raw materials used in the manufacture of glass.
- c) Explain : i) Quality control ii) Process control iii) Pollution control.

**Q.4** Attempt **ANY THREE** of the following: **[12]**

- a) Explain manufacture of window glass by Fourcault process.
- b) Give the chemical reactions involved in the furnace during manufacture of glass.
- c) Write a note on "Compound Imbibition Process.
- d) Explain unit process.

**Q.5** Attempt **ANY FOUR** of the following: **[12]**

- a) How are chemical reactions classified?
- b) Explain manufacture of fountain pen ink.
- c) Describe hardening of cement.
- d) Explain recovery of sugar from molasses.
- e) Write a note on special cement.
- f) Write a note on separation of crystals.

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