

**T.Y.B.SC. SEM – V (CBCS - 2016 Course) ; SUMMER - 2019**

**SUBJECT : INDUSTRIAL CHEMISTRY – I**

**Day :** Saturday  
**Date :** 27/04/2019

**S-2019-0878**

**Time :** 11.00 A.M. To 02.00 P.M.  
**Max. Marks :** 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
  - 3) Draw neat labeled diagrams **WHEREVER** necessary.
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**Q.1** Attempt **ANY TWO** of the following : **(12)**

- a) Explain the manufacture of Nitric acid by Ostwald's process with flow sheet.
- b) Discuss in detail for the manufacture of sugar from beet root with flow sheet diagram.
- c) Describe the dry process for the manufacture of cement with the help of flow sheet.

**Q.2** Attempt **ANY TWO** of the following : **(12)**

- a) Discuss physico-chemical principles involved in the manufacture of Ammonia.
- b) Explain the process for Setting and Hardening of cement.
- c) Write a note on 'Triple Effect Evaporator'.

**Q.3** Attempt **ANY TWO** of the following : **(12)**

- a) What is small scale industry? Explain the process for the manufacture of gum paste and fountain pen ink.
- b) Explain manufacture of ammonia by Bosch Haber process with flow sheet.
- c) Give classification of Portland cement.

**Q.4** Attempt **ANY THREE** of the following : **(12)**

- a) Explain conversion, selectivity and yield with example.
- b) Explain Burning Operation in Portland cement manufacture.
- c) Discuss the process for the manufacture of Window Glass by pot furnace.
- d) Write a note on 'Compound Imbibition Process'.

**Q.5** Attempt **ANY FOUR** of the following : **(12)**

- a) Explain the method of separation of crystals.
- b) Discuss sulphitation process for the clarification of juice.
- c) Write chemical properties of glass.
- d) Explain manufacture of Window Glass by 'Colburn process'.
- e) Explain the process for the manufacture of chalk crayons.
- f) Write a note on 'Quality Control'.

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