Enrollment No. _____

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot

Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION NOVEMBER 2018

B.Sc. Industrial Chemistry

16UICCC20 – HEAVY CHEMICALS

Duration of Exam – 3 hrs ***Semester – V*** ***Max. Marks – 70***

Part A (10x1= 10 marks)

Answer **ALL** questions

1. Elaborate the word 'Heavy Chemical' in brief.
2. Nelson cell is also known as_____
3. Give raw materials required for manufacturing of super phosphate.
4. Write minimum two industrial uses of carbon black.
5. Give molecular formula of Borax.
6. Raney nickel is also known as_____
7. Write any two properties of propargyl alcohol.
8. M.M.A. is stands for what?
9. Vinyl chloride is produced from _____& _____
10. Benzene is starting material used for production of resorcinol. True/False?

Part B (5x5= 25 marks)

Answer **ALL** questions

11a. Explain Bosch & Harber process for manufacturing of ammonia.

OR

11b. Discuss Diaphragm cell with neat diagram.

12a. Discuss production of triple superphosphate with diagram.

OR

12b. Explain manufacturing of synthetic graphite with schematic figure.

13a. Discuss production of HF using fluorine cell.

OR

13b. Write a short note on Raney Nickel catalyst.

14a. Discuss manufacturing of glycerol via spent lye with diagram.

OR

14b. Explain production of sorbitol with block diagram.

15a. Discuss manufacturing of formaldehyde with neat diagram.

OR

15b. Explain production of phenol via cumene process.

<u>Part C</u> (5x7= 35 marks)

Answer **<u>ALL</u>** questions

16a. Explain production of ammonium sulphate with neat diagram.

OR

16b. Describe Mercury cathode cell with neat diagram.

17a. Explain manufacturing of phosphoric acid with schematic diagram.

OR

17b. Discuss production of calcium carbide in detail.

18a. Explain manufacturing of boric acid with block diagram.

OR

18b. Give a detailed account of Palladium catalyst.

19a. Explain Fischer & Tropsch process with neat diagram.

OR

19b. Write a detailed note on zeolite.

20a. Explain manufacturing of acetylene with neat diagram.

OR

20b. Discuss production of phthalic anhydride in detail.