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V.P. & R. P. T. P. SCIENCE COLLEGE

B. Sc. (Semester - V) Examination

INDUSTRIAL CHEMISTRY

30TH September 2016

COURSE NO: **US05CICH02** (UNIT PROCESS IN ORGANIC MANUFACTURE)

TIME: 11.00 TO 12.30 PM.

TOTAL MARKS – 25

Q.1 Answer the following MCQs. (03)

- Aromatic nitration is
 - Nucleophilic substitution reaction.
 - Electrophilic substitution reaction
 - Electrolysis reaction
 - Precipitation reaction
- In Barbet process mole of benzene per mole sulphuric acid is.....
 - 6-8 mole
 - 1-2 mole
 - 10-11 mole
 - 1-2 mole
- _____ is used as a catalyst in preparation of monochloroacetic acid.
 - Phosphorous trichloride
 - $AlCl_3$
 - $FeCl_3$
 - None of these.



Q.2 Answer the following short questions (ANY TWO) (04)

- Outline the function of H_2SO_4 in mixed acid.
- Enlist the various peroxide used as an oxidizing agents.
- Write a different catalysts used for Hydrogenation reaction.

Q.3 Discuss the manufacturing of Nitrobenzene by continuous process using fortified spent acid. (06)

OR

Q.3 Write manufacturing process for Aniline by Bechamp Reduction. (06)

Q.4 Write note on "Types of Oxidative reactions". (06)

OR

Q.4 Discuss the commercial manufacturing of Benzene sulfonic acid by Barbet Process. (06)

Q.5 Discuss the process for commercial manufacture of Chlorobenzene. (06)

OR

Q.5 Write a notes on Hardening of vegetable oil. (06)