

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

B. Sc. (Semester - V) Examination

INDUSTRIAL CHEMISTRY

01<sup>st</sup> October 2013, Tuesday

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

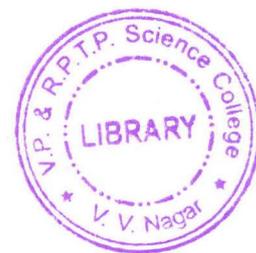
TIME: 3.30 TO 5.00 PM.

TOTAL MARKS – 30

Q.1 Answer the following Multiple Choice Questions.

(06)

- Which one of the following is a unit operation?  
A. Oxidation  
B. Coupling  
C. Electrolysis  
D. Non of these.
- A vortex type of agitation is done in  
A. Schimidnitration.  
B. Biazzi nitration.  
C. Both of them.  
D. None of them.
- Fuming Sulfuric acid is  
A.  $H_2SO_4+SO_3$   
B.  $H_2SO_4+H_2O$   
C.  $H_2SO_4+Cl$   
D. All of these
- Benzoyl Peroxide is obtained by reacting a  
A.  $2C_6H_5COCl+Na_2O_2$   
B.  $2C_6H_5CH_2Cl+Na_2O_2$   
C.  $2C_6H_5CH_2COCl+Na_2O_2$   
D.  $2SO_2Cl+Na_2O_2$
- $R-COOH+SOCl_2 \rightarrow ?$   
A.  $R-COCl$   
B.  $R-Cl$   
C.  $R-SO_3H$   
D. None of these
- \_\_\_\_\_ is used as a catalyst in preparation of monochloroacetic acid.  
A. Phosphorous trichloride  
B.  $AlCl_3$   
C.  $FeCl_3$   
D. None of these



Q.2 Answer the following short questions (Any Three)

(06)

- Write different functions of  $H_2SO_4$  in mixed acid.
- Give effects of nitrous acid on nitration.
- Define the terms Sulfonation and Sufochlorination.
- Write about chromic acid as an oxidizing agent.
- Outline the catalyst used for Hydrogenation reaction.
- Write mechanism for electrophilic substitution chlorination reaction.

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

(06)

OR

Q.3 Give manufacturing process for Aniline by Bechamp Reduction.

(06)

Q.4 Write commercial manufacture of Benzene sulfonic acid.

(06)

OR

Q.4 Give an account of different types of oxidizing agents and oxidative reaction.

(06)

Q.5 Write note on "Hardening of vegetable oil".

(06)

OR

Q.5 Discuss the commercial manufacture of Monochloroacetic acid.

(06)