

2018

CBCS

1st Semester

INDUSTRIAL CHEMISTRY

PAPER—C1T

(Vocational)

Full Marks : 60

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group—A

1. Answer any 15 questions : 15×2
- (a) Write down important characteristics of Starch.
- (b) Give one example each of nitramines and nitramides.

(Turn Over)

- (c) What is cellulose oxalate ? How it is obtained ?
- (d) How cellulose acetate may be prepared ? Write uses of it.
- (e) With example explain the substitution halogenation.
- (f) How acetic acid is manufactured. Give its uses.
- (g) Define the term sulfonation with example.
- (h) How can you prepare ethanol from waste sulphate liquor ?
- (i) Explain the term "Acidolysis".
- (j) Define the term "Ammonolysis with examples.
- (k) Explain the term "Isosynthesis" with example.
- (l) What do you mean by hardening of vegetable oil.
- (m) What is mined acid ? State its uses.
- (n) Define dehydration process with two examples.
- (o) What is nitrate ester ? Give some applications.

- (p) Define alkali hydrolysis with examples.
- (q) Mention essential features of catalytic hydrogenation.
- (r) Discuss the use of chlorine dioxide.

Group—B

Answer any *two* questions :

2×15

2. (a) Discuss the role of nitrous acid in nitration process with suitable examples. 5
- (b) Discuss the Kinetics of Nitration process. 5
- (c) Discuss with clear sketch and reactions the production of nitrobenzene. 5
3. (a) Discuss about different chlorinating agents used in industry. 5
- (b) With heat flow diagram describe the preparation of chlorobenzene process. 5
- (c) Discuss the kinetics and thermodynamics of sulphonation reaction. 5

4. (a) Describe preparation of benzene sulphonic acid with clear sketch. 5
- (b) Describe the process of sulphonation of naphthalene. 5
- (c) With a flow diagram describe the manufacturing process of chloral. 5
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