2019

MAJOR

1st Semester Examination

INDUSTRIAL CHEMISTRY

Paper—C 1-T

Full Marks : 60 Time : 3 Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

1. Answer any ten questions : 10×2=20

   (a) What is cellulose ester ? How is it obtained ?

   (b) What are nitramines and nitramides?

   (c) What is vinyl acetate? How is it obtained?

   (d) What is sulfation? Give one example.

   (e) Mention possible products of propane chlorination.

   (f) What is amination by reduction method ?

   (g) Describe thermodynamies of alcoholysis process.

[Turn Over]

(h) What is cellulose acetate? Give some applications.

(i) Compare batch and continuous process.

(j) Describe synthesis of urea from CO_2.

(k) With detailed reaction scheme convert acetanilide to p-nitroacetanilide.

(l) Write down the chemical mechanism of amination.

(m) With detailed reaction scheme, convert Acetylene to Esters.

(n) Write down the products obtained from strach.

(o) How oxalic acid can be prepared ?

2. Answer any four questions : $4 \times 5 = 20$

(a) Discuss the role of differnet sulfonating agents.

(b) Discuss various chemical and physical factors affecting an amination by reduction.

(c) Define alkane and give uses of any two alkanes.

(d) With clear sketch discuss the production of monochloroacetic acid.

(e) Discuss the mechanisms for liquid phase alkylations of hydrocarbons.

(f) Discuss the physical and chemical properties of oxalic acid. Write down it was.

Answer any two questions : 2×10=20

3. (a) With detailed reaction scheme, canvert isoeugenol to vanillin.

(b) Describe the synthesis of methanol from carbon monoxide and hydrogen with clear sketch.

(c) With sketch, discuss oxidation of ethylene to acetaldehyde. 2+4+4

4. (a) Explain different type of alkylation process.

(b) Using a heat flow sheet diagram describe manufacture of ethyl acetate by batch process. 3+7

5. (a) Discuss different alkylating agents with industrial application.

(b) Describe manufacture of aniline by reduction of nitro benzene using flow sheet diagram. 4+6

6. (a) With sketch, discuss alkylation of benzene to ethyl benzene.

   (b) Discuss about different animating agents used in industry

   (c) With detailed reaction scheme, convert benzene to dodecyl benzene. 5+3+2
