

No Preview  
Available

Total No. of Question : [4]

Registration No. :

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**Programme Name : Bachelor of Chemical Engineering**  
**Regular S.Y.B.Tech. ESE ( A.Y. 2023-24) Sem. III Nov.2023**  
**III SEMESTER ( 2022 BATCH)**  
**201CHL202-Industrial and Engineering Chemistry-I (TH)**

Duration : [ 11:00 AM - 01:00 PM ]

Date : 23 Nov, 2023

Day : Thursday

Marks : 50

**Instructions :**

**1.Read questions carefully.**

(Q1) All Questions are compulsory [20.0]

(1.1) Derrive an expression for First order reaction kinetics [7.0]

**CO :- C202.1**

**Blooms Taxonomy :- Understand**

(1.2) Explain in brief properties and applications of phase transfer catalysts. [7.0]

**CO :- C202.2**

**Blooms Taxonomy :- Understand**

(1.3) Explain in brief phase diagram for one component systems (Water system) [6.0]

**CO :- C202.3**

**Blooms Taxonomy :- Understand**

(Q2) Attempt any two. [10.0]

(2.1) Define Organic reactions. Explain Addition, substitution reactions with one example. [5.0]

**CO :- C202.4**

**Blooms Taxonomy :- Understand**

(2.2) Define reactive intermediates. Expain formation and properties of Carbocation and Carbanion. [5.0]

**CO :- C202.4**

**Blooms Taxonomy :- Understand**

(2.3) Explain in brief Friedal Craft's reactions involving formation of Carbocation. [5.0]

**CO :- C202.4**

**Blooms Taxonomy :- Understand**

(Q3) Attempt any two. [10.0]

(3.1) Enlist any five qualities of good dye. [5.0]

**CO :- C202.5**

**Blooms Taxonomy :- Understand**

(3.2) Explain in brief chromosphere- auxochrome theory. [5.0]

**CO :- C202.5**

**Blooms Taxonomy :- Understand**

(3.3) Discuss in detail Diazotization. [5.0]

**CO :- C202.5**

**Blooms Taxonomy :- Understand**

(Q4) Attempt any two. [10.0]

(4.1) Define aromatic compounds. Explain classification of aromatic compounds. [5.0]

**CO :- C202.6**

**Blooms Taxonomy :- Understand**

(4.2) Explain in brief preparation of aromatic nitro compounds. [5.0]

**CO :- C202.6**

**Blooms Taxonomy :- Understand**

(4.3) Discuss in brief Nitration of nitrobenzene & its mechanism. [5.0]

**CO :- C202.6**

**Blooms Taxonomy :- Understand**

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