



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(AUTONOMOUS) (Grant-in-aid)

Affiliated to Sardar Patel University

VALLABH VIDHYANAGAR-388120

Bachelor of Science (Semester-II) External Examination -2025

US01MICHE01 : BASIC CHEMISTRY II



Dt.: 09-04-2025 Wednesday

Time: 2:00PM -3.30 PM

Total Marks: 25

Q-1 Multiple choice question

5

(1) The rate of SN^2 reaction mechanism depend upon the concentration of
(a) Substrate (b) Nucliphile (c) solvent (d) both (a)&(b)

(2) How many Possible isomeric structure of C_3H_7Cl
(a) 01 (b) 02 (c) 4 (d) None of all

(3) Which of the following compound used as Anesthesia
(a) Chloroform (b) Ethyl Chloride (c) Bromo ethane (d) Glycerin

(4) What are the bond angle of Octa hedral shape

(a) 180° (b) 90° (c) 120° (d) 45°

(5) PCl_5 has ----- geometry

(a) Square Planar (b) Trigonal bipyramid (c) Tetra hedral (d) Linear

Que=2

10

(A) Draw the possible isomeric structure of C_4H_9Cl and give their IUPAC name And Classify them in to 1° , 2° & 3° Chloride

(B) Give limitation – addition reaction mechanism for Neocliophilic aromatic substitution via benzyne intermediate

OR

Que=2

10

(a) Discuss details reaction mechanism of mono Chlorination of benzene

(b) Why hydrolysis of P-Nitro acetanilide is prefer to basic media, but not in acidic media

Que=3

10

(C) Explain Octate rules in details with suitable example

(D) Describe molecular orbital diagram treatment of N_2 and CN molecules and also calculate bond Oder of them

OR

Que=3

10

(C) Discuss Sidgwick –powell theory, and explain shape of Ammonia and H_2O molecules

(D) List different type of molecular orbital and explain why F_2 molecule is diamagnetic