



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE (AUTONOMOUS) (Grant-
in-Aid)
Affiliated to Sardar Patel University
VALLABH VIDYANAGAR-388120



Bachelor of Science (Semester 2) Internal Examination - 2025
US02MICHE01: Basic Chemistry-II

Date: 5th March 2025, Wednesday

Time: 12:45 PM to 1:45 PM

Total marks: 20

Q-1 Choose the most appropriate option.

(06)

- The rate of SN^2 reaction is depend upon?
a) Reagent (b) Electrophiles
(c) Substrate (d) Both (a) and (c)
- How many steps involve in SN^1 reaction mechanism?
(a) 2 (b) 3 (c) 1 (d) 0
- What is the bond angle in Methane?
(a) 180° (b) 90° (c) 120° (d) $109^\circ 28'$
- The most stable carbonion ion is?
(a) 2° (b) 3° (c) 1° (d) CH_3^+
- The shape of PCl_5 is_____?
(a) Trigonal by piramidal (b) Squire
(c) Tetrahedral (d) Linear
- How many lone pair of electron present on chlorine atom of HCl molecule?
(a) 1 (b) 3 (c) 2 (d) 0



Q-2. Give detail about reaction mechanism of Chloro benzene covert into aniline in presence of sodium amide in liq. Ammonia. **(07)**

Or

Q-2. Give details of reaction mechanism of SN^1 reaction and also mention different between SN^1 and SN^2 reaction mechanism. **(07)**

Q-3. Discuss sidgwick powel theory and also explain limitation of this theory. **(07)**

Or

Q-3 Describe molecular orbital treatment diagram of (1) N_2 molecule (2) O_2 molecule and calculate bond order of them **(07)**