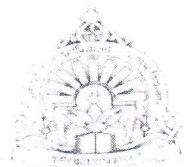


No of printed pages: 02

Seat No.:



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 1) External Examination - 2024
US01MACHE01 : GENERAL CHEMISTRY-I

Date: 19-11-2024, (TUESDAY)

Time: 11:00 AM to 1:30 PM

Total marks : 50

Note: Figures to the right indicate marks of the question.

Q-1 Write the most appropriate answer from the following multiple-choice questions. [10]

- (1) E1 mechanism follows _____ order kinetics.
(a) Zero (b) First
(c) Second (d) Third
- (2) General formula of alkene is _____.
(a) C_nH_{2n+2} (b) C_nH_{2n}
(c) C_nH_{2n-2} (d) C_nH_{2n-6}
- (3) _____ element has lowest ionization energy in the periodic table.
(a) Li (b) He
(c) Cs (d) H
- (4) The position of _____ element in modern periodic table stills a matter of dispute.
(a) Helium (b) Hydrogen
(c) Lithium (d) Carbon
- (5) SP^3 hybridization orbital has _____ % S- character.
(a) 75 (b) 50
(c) 25 (d) 0
- (6) For a solution at 298K, the sum of pH and pOH will be equal to
(a) zero (b) fourteen
(c) negative (d) infinity
- (7) If the solubility of Ag_2CrO_4 is 'S' mole per liter, its solubility product is
(a) S^2 (b) S^3
(c) $4S^3$ (d) $2S^3$
- (8) According to Lewis concept acid is
(a) proton donor (b) electron donor
(c) electrons acceptor (d) proton acceptor
- (9) The average value of the given set of data is called _____.
(a) mean (b) median
(c) standard deviation (d) All of these.
- (10) The precision of the result is also known as.....
(a) Accuracy (b) Error
(c) Reproducibility of result (d) All of these



Q-2 Discuss the long form of periodic table.

[10]

OR

Q-2 Define ionization energy. Discuss the factors affecting the magnitude of ionization energy.

[10]

Q-3 Define hydrolysis and derive the equation for the hydrolysis constant of a weak acid and strong base

[10]

OR

Q-3 Explain acid and base according to Arrhenius, Lowry-Bronsted and Lewis concept

[10]

Q-4 Explain kinetic and detail stepwise mechanism of E2 reaction

[10]

OR

Q-4 Give mechanism for free radical halogenation of alkane.

[10]

Q-5 What are the advantages and limitations of chemical and instrumental methods of analysis ?

[10]

OR

Q-5 What is sampling? Discuss sampling of solid, liquid and gas samples.

[10]

