

SEMESTER	I	QP CODE	1911		REG NO.						
 P.R. GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA PG ODD SEMESTER END EXAMINATIONS-JULY-2021 M. Sc., : ORGANIC CHEMISTRY & ANALYTICAL CHEMISTRY PAPER 1: GENERAL CHEMISTRY											
DATE	26.07.2021	SESSION	FN	MAX. MARKS	75	TIME	3 HRS				

PART-A

Answer all the questions

(4x15=60 Marks)

1. a) What is meant by quantum mechanics and discuss the postulates of quantum mechanics

OR

- b) Explain the following

(i) Eigen values and Eigen functions (ii) Hermitian operator

2. a) Derive the wave equation for rigid rotor

OR

- b) Discuss about the particle in one dimensional box

3. a) Write the following

(i) Isotopic effect (ii) Second order stark effect and its applications in rotational spectra

OR

- b) Discuss about the following

(i) Overtones (ii) Fermi resonance (iii) Zero point energy in IR spectra

4. a) Write the classical and quantum mechanical explanations of Raman spectra

OR

- b) Discuss about the following

(i) Franck Condon principle (ii) Charge transfer spectra in electronic spectra