

Internal Assessment of B. Sc. Semester-V, Chemistry (Hons.), .

- Candidates are required to give their answers in their own words as far as practicable.
- Answer all the questions.

CORE -XI

- Q 1. (i) What is difference between nucleosides and nucleotides ? [5]
- (ii) How can you synthesise the followings : [5]
(a) Adenine. (b) cytosine
- (iii) Discuss merrifield solid phase peptide synthesis. [5]

CORE -XII

- Q. 1. (i) What are the postulates of quantum mechanics ? [5]
- (ii) Derive energy expression for particle in 3D box. [10]
- OR
- Q. 2. (i) What are the selection rule of rotational spectroscopy ? [5]
- (ii) What is the effect of isotopic substitution on rotational spectrum ? [5]
- (iii) Discuss degree of freedom for polyatomic molecules. [5]

DSE -I

- Q 1. Detect anion in their mixture CO_3^{2-} and SO_3^{2-} [5]
- Q. 2. Estimate Cu^{2+} in copper sulphate solution. [10]

DSE-II

- Q. 1. (i) What is the basic principle of instrumentation for double beam instrument ? [15]
- OR
- Q. 2. (i) Determine molecular weight of carboxylic acid by silver salt method. [10]
- (ii) Write two chemical methods to confirm alcohol and aldehyde functional group [5]