P. S. SCIENCE & H. D. PATEL ARTS COLLEGE, KADI

Internal Examination

B. Sc. Semester - III **[Mark : 40**

6-10-2015] **Biotechnology : CC-BT-302** **[1-30 to 3-00**

Genetics and Analytical Techniques

Q.1. Attempted all question. **10**

(1) Define Wavelength.

(2) Functional group present in Molecule can be determined by _____ Spectroscopy.

(3) A vibrational mode is IR active if _____ of the molecule changes when the atoms displaced relative to one another.

(A) Polarizability (B) Dipole moment

(C) Magnetic moment (D) Angular momentum

(4) In NMR spectroscopy, Larmor precession frequency equation is expressed by _____.

(5) Write down the major application of X-ray difffraction spectoscopy.

(6) Define Genetics.

(7) Genotypic ratio of F2 generation if TTRR X ttrr.

(8) 15:1 ratio is example of _____.

(9) Type of Gene Mutation _____.

(10) Example of gene interaction _____.

Q.2. Attempted four questions. **20**

(1) Describe the working of atomic absorption spectrometer with labeled block diagram.

(2) Explain Paper chromatography in detail.

(3) Write down the Principles of Chromatography in brief.

(4) Describe dihybrid cross and explain Independence law of mendal.

(5) Explain mutation and types.

(6) Describe allic gene interation.

Q.3. Attenoted any one question. **10**

(1) Derive Beers & Lamberts law & write down its limitations & application of UV-Visible spectrometer.

(2) Expalin gene intraction, types and describe with example.