Course Code	Course Title	C	H	I	E	T
17U3CAC3/ 17U5CAC3	**ANCILLARY CHEMISTRY – III** *(For II Bot, III Mat, III Phy and III Zoo)*	2	2	25	75	100

UNIT I VITAMINS 6 Hrs

Vitamins: Definition, classification, sources, function and deficiency of vitamins A, B-complex, C, D, E and K (structure and synthesis not expected).

UNIT II HARMONES 6 Hrs

Structure, Source and importance of Androsterone, Estrosterone, Estrone,Testosterone, Progesterone-thyroxin.

UNIT III AMINO ACIDS AND PROTEINS 6 Hrs

Amino acids – Definition, general methods of preparation, properties and uses – Glycine and Alanine.

Proteins – Definition, Classification, general properties – colour reactions and relationship of aminoacid with proteins.

UNIT IV NUCLEAR CHEMISTRY 6 Hrs

Fundamental particles: Nuclear isotopes, Isobars, Isotones and Isomers- Difference between chemical reactions and nuclear reactions - Group displacement law -Concept and applications of nuclear fission and fusion - Applications of radioactivity in medicine, agriculture and industry - as tracer elements in the investigation of reaction mechanism - carbon dating.

UNIT V PHOTOCHEMISTRY 6 Hrs

Introduction to photochemistry- Difference between thermal and photo chemical reaction statement of Grothuss-Draper Law, Stark-Einstein's Law, Quantum yield, Jablonski diagram- Phosphorescence, Fluorescence, Chemiluminescence - Definition with examples. Photosynthesis, Photosensitization.

Reference books:

1. Bhal, B.S. and ArunBahl, 2004, Advanced Organic Chemistry, S. Chand and Co. Ltd., New Delhi.
2. I.L. Finar, "Organic Chemistry", Vol. I and II, 6thedn., ELBS, Singapore, 1994.
3. Puri, B.R., Sharma, L.R. and Pathania, M.S., 2004 (41stEdn.), Principles of Physical Chemistry, S.N. Chand and Co., New Delhi.
4. Morrison, R.T., and Boyd, R.N., 1999, Organic Chemistry, Prentice-Hall of India, Pvt. Ltd., New Delhi.