B.HARATHIAR UNIVERSITY, COIMBATORE
B.Sc. FOOD SCIENCE AND NUTRITION (colleges)
(Effective from the academic Year 2016-2017)

Note: The revised syllabus for the Core Paper II: semester I - CHEMISTRY OF FOODS furnished below be followed and there is no change in the existing scheme of examination and syllabi of remaining papers.

Semester I: Core Paper-II
CHEMISTRY OF FOODS
Hours of instruction / week: 3

Objectives:
To enable students to understand the chemical nature and reactions in foods

UNIT – I

UNIT –II
Colloidal system in foods – meaning, types, properties. Sols – meaning, types, properties: gels – meaning, type, properties, theory of gel formation, factors influencing gel formation.

UNIT – III

UNIT – IV
Water – forms and types of water, hydrogen bonding in water, water and ice properties, functions of water in food, intermediate moisture foods, water activity – definition, measurement and control of water activity, estimation of moisture in foods.

UNIT – V
Heat transfer operation in foods – conduction, convection, radiation, gelatinization, retrogradation, dextrinisation of starches, enzymatic and non enzymatic browning reaction in foods, rancidity – types and prevention.
Reference Books:
1. Food science, Chemistry and Experimental foods by M. Swaminathan.
2. Food Science by Norman N. Potter.
3. Experimental study of Foods by Griswold R.M.
4. Food Science by Helen Charley.
5. Foundation of Food Preparation by A.G. Peckam.
7. Food Fundamentals by MacWiliams, John Willy and son’s, New York.