FNP 409 NUTRITIONAL BIOCHEMISTRY

Course outcome:

- Describe techniques and instruments used in biochemical analysis of different biological samples.
- Use colorimetric techniques.
- Write down the study the blood analysis parameters.
- Analyze the urine samples using different qualitative and quantitative methods.

1) Techniques used in biochemical analysis
   a) Determination of pH in acids, alkalis and buffers using pH meter and indicators
   b) Colorimeters – use of colorimeter in UV and visual range, flame photometer, flourimeter (principle to be explained and demonstrated with one example for each)
   c) Separation techniques- chromatography- paper and Column. Centrifugation, electrophoresis and dialysis (one example for each may be demonstrated)
2) Blood analysis- enumeration of RBC & WBC. Blood glucose, serum albumin, globulin, phosphorous, calcium, cholesterol and urea.
3) Urine analysis- quantitative- sugar, albumin and microscopy

FNP 410 FOOD MICROBIOLOGY

Course outcome:

- Identify basic microbiological laboratory practice, culturing and handling of microbes.
- Isolate microorganisms from water and food sources.
- Identify by various staining techniques.
- Estimate total count in various food samples.

1) Preparation of bacterial smears, simple staining, differential staining, spore staining, staining of molds and yeast
2) Study of the microbiological quality of milk by MBR test.
3) Direct microscopic examination of foods.
4) Estimation of total microbial count of yeast and molds.
5) Estimation of total microbial bacterial plate count of food sample
6) Enumeration of Coliforms and indicator organisms (Most Probable Number)
7) Detection of Coliforms and indicator organisms by confirmed and completed tests, and using membrane filter techniques.
8) Estimation of total microbial count of (a) milk products (b) fruits and vegetable products (c) meat, fish and poultry products (d) canned foods.