

SEMESTER IV
Allied Practicals II
BIO CHEMISTRY PRACTICALS

Instructional Hours: 45

Sub. Code : 15NDUAP01

Max Marks: CIA-20; ESE-30

Credits : 2

QUALITATIVE ANALYSIS:

- 1. Estimation of Simple sugars:** Glucose, Fructose, Pentose, Sucrose, Lactose and Starch.
- 2. Reactions of Aminoacids:** Tyrosine, Tryptophan, Histidine and Arginine.
- 3. Reactions of Proteins:** Solubility, Biuret and Millons reaction. Xanthoproteic test
Denaturation by heat, pH change, Precipitation by heavy metals and acidic reagents.
- 4. Reaction of lipids:** Solubility, Saponification: Acrolein test for unsaturation Liber mann
Buchard test for cholesterol.
- 5. Qualitative analysis of urine for pregnancy.**

QUANTITATIVE ESTIMATIONS:

1. Estimation of Urea.
2. Estimation of Glucose using Glucometer.
3. Detection of sugars in a mixture by ascending paper chromatography (Group Experiment).
- 4. Detection of lipids by TLC.**
5. Separation of Serum Proteins by Electrophoresis (Group Experiment).
6. Estimation of Glucose using glucometer.
7. Estimation of haemoglobin using haemoglobinometer.
8. Monitor of blood pressure using digital Bp apparatus.
9. Monitor of blood pressure using digital Bp apparatus.

SEMESTER II
Core Practical I
FOOD SCIENCE

Instructional Hours: 45
Max Marks: CIA-40; ESE-60

Sub. Code: 16NDUCP01
Credits : 2

S.No	Topic	Practicals
1	Food groups	Grouping of foods – Nutritive value of all foods
2	Measuring ingredients	Measuring raw ingredients.
3	Edible portion	Determination of percentage of edible portions
4	Microscopic Structure of Various Starches	Rice, Wheat, Corn, Ragi and potato starch identification
5	Physical and Chemical properties of Starch	To study the physical and chemical properties of Starch
6	Gelatinization of Starch	To study the physical and chemical properties of Starch
7	Cereals and Pulses cookery	Fine and coarse cereal cookery study the effect of hard water, soft water, sodium bicarbonate, vinegar and soaking, while cooking. Study the effect of germination of green gram and recipe preparation using germinated gram as main ingredient. Extruded product preparation
8	Millets	Value added products from millets
9	Vegetable and Fruits cookery	Effect of cooking time of vegetables Effect of different methods of cooking Effect of acid and alkali on vegetables Darkening of raw fruits and its prevention Blanching of vegetables
10	Sugar cookery	Various stages of sugar cookery.
11	Egg cookery	Effect of heat on Egg white and Yellow Effect of cooking time – boiling of egg. Whipping quality of egg white Poaching of eggs
12	Milk cookery	Boiling of milk – skim milk preparation. Khoa preparation – Ice – cream preparation
13	Beverages	Preparation of milk based & fruits based beverages
14	Meat cookery	To assess tenderness of meat using papaya and Ginger. Cooking time – meat and poultry – Recipe preparation using meat and poultry.

15	Fish Cookery	Cooking time assessment. Protein change during boiling and roasting.
16.	Weaning mix	Preparation of weaning mix

SEMESTER IV

Core Practical II

FOOD ANALYSIS AND QUALITY CONTROL

Instructional Hours: 45

Sub. Code: 15NDUCP02

Max Marks: CIA-40; ESE-60

Credits : 2

1. Determination of Moisture content in foods.
2. Estimation of Ash content in fruits and vegetables.
3. Estimation of Acid Insoluble ash.
4. Determination of Gluten content in wheat.
5. Estimation of Ascorbic acid content lime juice.
6. Estimation of Calcium content in milk.
7. Estimation of Iron.
8. Estimation of Total Phosphorus in any one fruit and vegetables
9. Estimation of Total Soluble Solid in fruits.
10. Determination of Fat content in foods using Butyrometer
11. Determination of Saponification value.
12. Determination of Iodine number.
13. Determination of Acid value.
14. Determination of pH value.
15. Adulteration tests for various food items.
16. Taste sensitivity tests.
17. Determination of salt content in water using salt meter.
18. To assess the thickness of the food products using penetrometer.

DEMONSTRATION

1. Protein estimation in any food using Kjeldhal Apparatus.
2. Estimation of Crude fibre in any food.

SEMESTER VI
Core Practical III
DIETETICS

Instructional Hours: 45

Sub. Code: 14NDUCP03

Max Marks: CIA-20; ESE-30

Credits : 2

1. Weights and measures of foods.
2. Formulation of standard balanced diets and standard food exchange table.
3. Calculation for i) Ideal body weight ii) Food portion table and iii) nutrients calculations.
4. Menu planning and the calculation for regular diet light diet full fluid diet, clear liquid diet and bland diet.
5. Diet for obesity under weight and anemic conditions, adolescent and expectant mothers.
6. Diet for diseases of gastro intestinal tract. i) Diarrhea. ii) Constipation iii) Peptic ulcer.
7. Diet for cardio vascular diseases i) atherosclerosis - middle age and old man
ii) Hypertension.
8. Diet for kidney diseases. i) nephritis ii) nephrosis iii) chronic renal failure.
9. Diet for diabetes mellitus i) Juvenile ii) adult diabetes iii) Diabetes with kidney disorder.
10. Diet in febrile conditions. i) Short duration – Typhoid ii) long duration – Tuberculosis.
11. Diet in liver disorders i) Jaundice ii) Viral hepatitis iii) Cirrhosis.
12. Dietary charts preparation for various disease conditions.
13. Diet for cancer.
14. Diet for AIDS.

SEMESTER VI
Core Practical IV
FOOD PRESERVATION

Instructional Hours: 45

Max Marks: CIA-40; ESE-60

Sub. Code: 14NDUCP04

Credits : 2

CONTENTS

1. Different methods of Food Preservation

a) Preservation by addition of Sugar:

Jam, Jelly, Squash, preserve, Marmalade, Toffees.

Use of Refractometer to assess the TSS.

b) Preservation by addition of Salt, Oil & spices:

Pickles, Sauces, Chutneys, Ketchup.

Oil Extraction using wooden chekku

c) Preservation by Dehydration:

Effect of pre-treatment for dehydration: Vathal, Vadagam.

d) Preparation of Bakery items:

Biscuits & cakes.

