

# PARTICULARS OF THE STUDENT



Name:

Roll/ ID No:  Batch:

Group:  Session:

Father's name:.....

Mother's name:.....

Guardian's contact number:.....

Student's contact number:.....

Present address:.....

.....  
.....

Permanent address:.....

.....

## **Previous Academic Records**

GPA in SSC: ..... GPA in HSC: .....

Admission test score: ..... Merit score: .....

## DEPARTMENT OF BIOCHEMISTRY

### CARD NO- 1. BIOPHYSICS AND BIO MOLECULES

Students name:		Roll no:	
Session:	Batch:	Group:	
Date of starting:		Date of ending:	

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Introduction of biochemistry, acid, base, pH, pK, buffer, Henderson- Hasselbalch equation, P <sup>H</sup> Scale. Law of Mass action, Gibbs - Donan membrane equilibrium.			
2	Solutions, crystalloid, colloid, dialysis and isotopes.			
3	Carbohydrates.			
4	Lipids and Fatly acid's, Phospholipid, Cholesterol.			
5	Amino Acids and Protein.			
6	Enzymes, coenzymes, cofactors, isoenzymes.			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			

## DEPARTMENT OF BIOCHEMISTRY

### CARD NO- 2. FOOD, NUTRITION AND VITAMINS

Students name:		Roll no:	
Session:	Batch:	Group:	
Date of starting:		Date of ending:	

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Basic concepts of Nutrient, food, diet, balanced diet, essential dietary components, total calorie calculation, DRI, RDA, MR, BMR, BMI, SDA.			
2	Dietary fibers, nutritional importance of carbohydrate, lipid & protein, glycemic index of food.			
3	Minerals (macro & micro), trace elements, common nutritional disorders, PEM, BMI. obesity, iron metabolism and its deficiency, iodine deficiency (Goitre) night blindness.			
4	Water soluble vitamins.			
5	Fat soluble vitamins.			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			

## DEPARTMENT OF BIOCHEMISTRY

### Card No- 3. Digestion, absorption, bioenergetics and metabolism

Students name:	Roll no:		
Session:	Batch:	Group:	
Date of starting:	Date of ending:		

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Digestive juices, local hormone of GIT, digestion & absorption of carbohydrate, lipid, protein.			
2	Bioenergetics: biological oxidation, high energy phosphates, oxidative phosphorylation, respiratory chain. Metabolism: definition, phases, anabolism, catabolism			
3	Carbohydrate metabolism: a) Glycolysis, fate of pyruvate, TCA cycle, b) HMP pathway, gluconeogenesis, glycogenesis, glycogenolysis, blood glucose regulation. Cori cycle, glucose homeostasis, glucostatic functions of liver, Cori Cycle.			
4	Lipid metabolism: a) Blood Lipids, Lipolysis, Beta-oxidation of fatty acid, fate of Acetyl-CoA. b) ketone bodies, ketosis & its pathogenesis. c) Lipoproteins & their metabolism, Cholesterol metabolism, Eicosanoids.			
5	Protein metabolism: Amino acid pool, Nitrogen balance, Protein turnover Transamination, Deamination, Source & fate of amino acid and ammonia, ammonia intoxication, Urea cycle, Pathway of protein metabolism.			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			

## DEPARTMENT OF BIOCHEMISTRY

### Card No- 4. Renal biochemistry, body fluid, electrolytes & acid based balance

Students name:	Roll no:		
Session:	Batch:	Group:	
Date of starting:	Date of ending:		

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Renal biochemistry: GFR, Plasma load, tubular load, TM, renal threshold, plasma clearance, osmolar clearance, free water clearance, acidification of urine. Role of kidney in water electrolyte and Acid base balance. Abnormal constituents in urine with normal urine volume and obligatory urine volume, Explain limiting P <sup>H</sup> of urine.			
2	Body fluid: Body fluid compartments & Composition. Daily water intake & output, water turnover, body fluid volume regulation, volume disorders and diuresis, Water intoxication			
3	Acid-Base Balance: origin of acids & bases, maintenance of static blood P <sup>H</sup> . Acid base disorders, their compensation & correction, anion gap and base excess, ABG Analysis.			
4	Serum Electrolytes: Serum electrolytes & their reference ranges. Functions, regulations, hypo & hyper states of serum [Na <sup>+</sup> ], [K <sup>+</sup> ], [Ca <sup>++</sup> ], [PO <sub>4</sub> <sup>-</sup> ] & [Mg <sup>++</sup> ].			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			

## DEPARTMENT OF BIOCHEMISTRY

### CARD NO- 5. CLINICAL BIOCHEMISTRY AND CLINICAL ENDOCRINOLOGY

Students name:		Roll no:	
Session:	Batch:	Group:	
Date of starting:		Date of ending:	

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Clinical biochemistry: Conventional Units, Conversion factor. SI units, Laboratory hazards, Sample collection, Photometry.			
2	Clinical enzymology, lipid profiles of blood, Dyslipoproteinemias, Cardiac marker.			
3	Diagnosis of diabetes mellitus. GDM, OGTT, IGT, IFG and HbA <sub>1c</sub> . Hypoglycaemia.			
4	Biosynthesis of Thyroid hormone, Thyroid disorder. Thyroid function tests and interpretation.			
5	Commonly done LFT. Jaundice. Bilirubin Metabolism.			
6	Proteinuria, Microalbuminuria. Renal function tests and interpretation.			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			

**DEPARTMENT OF BIOCHEMISTRY**  
**Card No- 6. Fundamental of molecular biology and genetics**

Students name:		Roll no:	
Session:	Batch:	Group:	
Date of starting:		Date of ending:	

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Basic concept of molecular biology. Nucleic acids, Nucleosides, Nucleotides, DNA, RNA, DNA organization, Cell cycle.			
2	The central dogma, Genome, Gene, Genetic code, Codon, Mutation, mutagens, Genotype, Phenotype, trait, allele.			
3	Replication, Transcription and post transcriptional modification.			
4	Translation and post translational modification.			
5	Medical Biotechnology, RFLP. Recombinant DNA technology, PCR, Cloning.			
6	Genetic Disorders.			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			

**DEPARTMENT OF BIOCHEMISTRY**  
**PRACTICAL BIOCHEMISTRY**

Students name:	Roll no:	
Session:	Batch:	Group:
Date of starting:	Date of ending:	

Sl.	Name of item	Marks Obtained	Date of Exam	Remarks & Signature
1	Identification of laboratory glass wares and equipment. Common mishaps & Medical ethics.			
2	Preparation of solutions.			
3	Photometric estimation, demonstration of technique, calculation and interpretation of result.			
4	Blood glucose estimation.			
5	Serum cholesterol estimation.			
6	Serum urea.			
7	Serum creatinine.			
8	Serum total protein.			
9	Serum bilirubin.			
10	Urinalysis : Determination of normal and abnormal constituents of urine and their clinical significance			

No. of attendance in the class of the card		Out of	
Marks obtained (Average)	Total:	Percentage:	
Remarks			
Signature of the Lecturer			
Signature of Head of the Department			