

**Department Of Biochemistry**  
Government Medical College  
Bhavnagar

# Introduction Include

- Instruction of Departmental Work
- Staff & Teacher
- Teaching Pattern – Theory & Practical
- Exam Patter
- Paper Style
- Marks Pattern
- Resources
  - Book
  - Website

# Introduction of Work

- Under-Graduate Teaching
- Post-Graduate Teaching
- Clinical Biochemistry Laboratory
- Research Laboratory

# UG Practical Laboratory Room



# Demostration Room



# Clinical Biochemistry Laboratory

- Under Central Laboratory
- Sir T Hospital – Civil Hospital , Bhavnagar







# Fully Automated Biochemistry Analyzer

- RFT
  - Creatinine
  - Urea
- LFT
  - Billirubin
  - ALT
  - ALP
  - Total Protein
  - Albumin
- FBS & PP2BS



**Beer - Lambert Law**



# Fully Automated Biochemistry Analyzer



# Fully Automated Immunology Analyzer

- Thyroid Profile – TSH , T3, T4
- LH , FSH, Estrogen , Progesterone
- Vitamin-D
- Vitamin-12
- CRP
- Ferritin
- Covid Antibody

**CLIA – ELISA - RIA**



# Electrolyte Analyzer

- Sodium
- Potassium
- Chloride
- Lithium



**Ion Selective Electrode (ISE)**

# Accredited Since 2010



ISO 15189:2012  
Medical laboratories



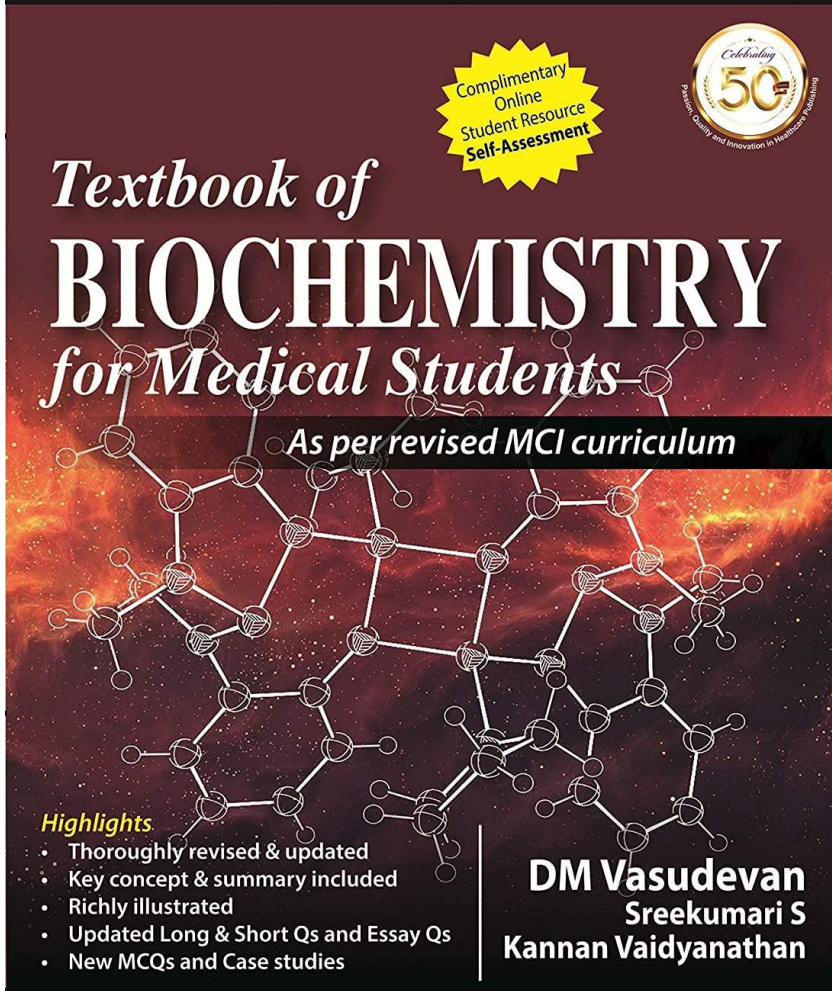


# Staff & Teacher

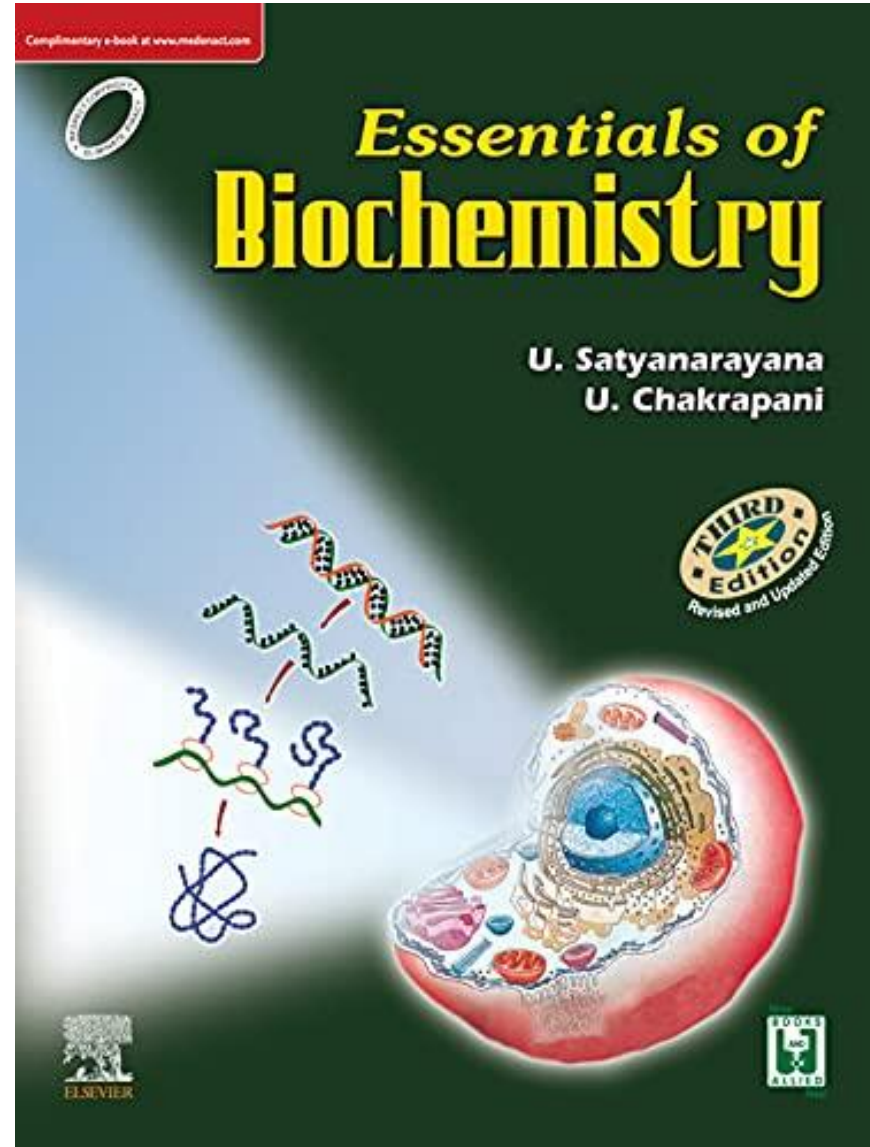
- Head & Professor - 1
- Associate Professor - 1
- Assistant Professor - 1
- Tutor - 3
- PG – Students - 3

# Books

For detailed information on biochemistry books, visit our website [www.jaypeebrothers.com](http://www.jaypeebrothers.com), for detailed information on biochemistry books



**NINTH EDITION**





Lippincott

Illustrated Reviews

# Biochemistry

South Asian Edition

Denise R. Ferrier

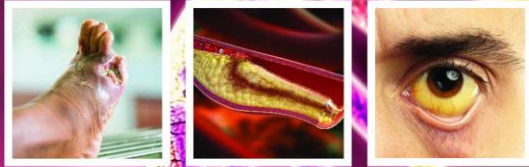
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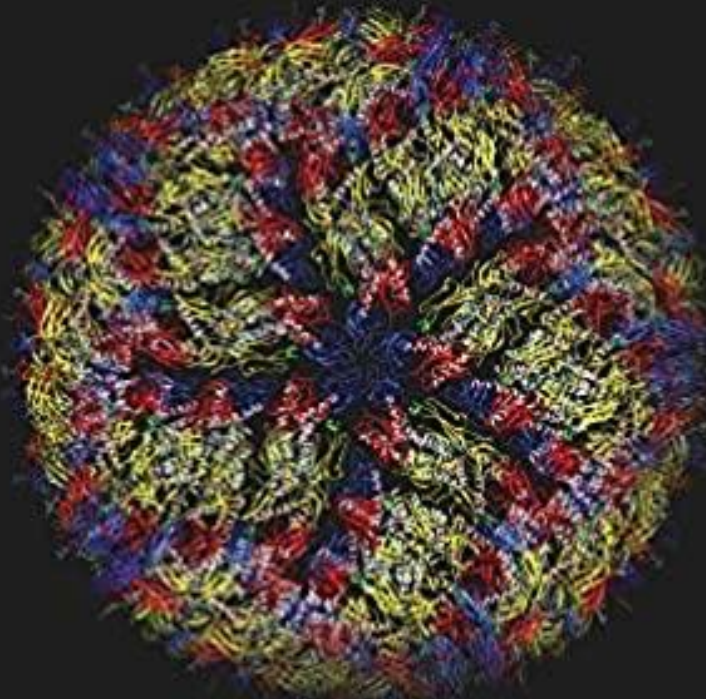
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As per the Indian Competency-Based Medical Curriculum

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31ST EDITION

# HARPER'S ILLUSTRATED BIOCHEMISTRY

Mc  
Graw  
Hill  
Education

**LANGE**

# Resources

Website :

[www.drpiyushtailor.com](http://www.drpiyushtailor.com)

- Previous Year Paper
- Model Question
- Lectures
- Justification Books
- Case & Discussion

11:15 LTE

Dr Piyush Tailor ☰

Trace / start [[ start ]]

☰ Sidebar

Dr Piyush B. Tailor

Be Human - Be Part of Change

Lectures

- Biochemistry
- Medical Laboratory Technician
- Medicine

Model Questions

- Biochemistry
- Medicine
- Optometry

Question Papers

- MBBS Biochemistry
- BPT Biochemistry
- MLT All Subject

Training Module

- Moodle Module

Accreditation Process

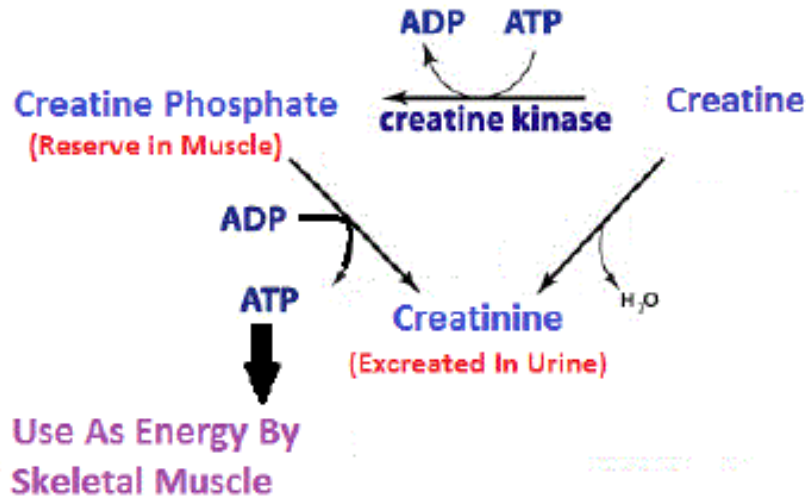


# Teaching Pattern

- Three Lectures in week
- Demonstration of Practical thrice in week
- Practical thrice in week
- Small Group Discussion
- Case Discussion – Early Clinical Exposure

## BIOCHEMISTRY JUSTIFICATION

### 41. Creatine is use to improve performance of athletes



- Body has several ways to convert ADP back to ATP.
- This is the fastest method is to move the phosphate group of creatine phosphate to ADP , This yields ATP.
- Which is immediately available for muscular work .
- If creatine is supplied to athletes , it increase reserve store of creatine phosphate with action of enzyme creatine kinase.
- So, these high reserve creatine phosphate can provide immediate & fast energy, in form of ATP, during time of athletic performance for longer time.
- And help to improve athletic performance.

## Case 5

56 year male patient came in emergency with **alter-conciuosness** & **haemetemesis**. He was suffering from **chronic cirrhotic liver disease** due to **chronic alcoholism**. On examination, it was found that he has **edema** on both lower limb, fluid collection in peritoneal cavity (**Ascites**), yellowish discolouration of skin & sclera (**icterus**), with **hypotension** (decrease Blood Pressure). On blood investigation following was found.

### Case 5 - Investigation

- Blood Glucose : 50 mg%
- Serum Protein : 5.5 gm %
- Serm Albumin : 2.0 gm%
- Serum Ammonia : Very High
- Serum Total Billirubin : 20 mg%
- APTT – Test : 60 second
- APTT – Control : 30 second
- APTT – INR : 2
- Haemogloin : 6 gm%

First Year M.B.B.S. Preliminary Theory Examination - Batch (21-22)  
Biochemistry: Paper – I

Date : 16/11/2022

Time :3:00 Hours

Total Marks :100

Section – I

Q.1. Write justification on following (any eight)

2x8=16

1. Glycerol is used in enema.
2. Structure of proteoglycan is well suited for its function.
3. CK-MB is more specific marker than LDH and SGOT for diagnosis of myocardial infarction.
4. Alpha 1 anti-trypsin deficiency cause emphysema.
5. Collagen structure is affected in vitamin C deficiency.
6. In carcinoid tumour patient may suffer from deficiency of pellagra.
7. Glycine is optically inactive.
8. Eicosapentaenoic acid and docosahexanoic acids in food are good for health
9. UV radiation can cause Xeroderma pigmentosum (skin cancer).

Q.2 Write short note. (any four)

6x4=24

1. Biochemical explanation of lactose intolerance and it's management.
2. DNA repair mechanisms.
3. Functions & clinical uses of Prostaglandin – Eicosonides.
4. Types of Structure of proteins. Write primary structure with it's significance and examples.
5. Structure and functions of different Classes of immunoglobulins.

Section - II

Q 3 Write short notes. (any three)

4x3=12

1. Renal buffer mechanism with its type.
2. Post transcriptional modifications.
3. Folate trap.
4. Write types of enzyme inhibition. Explain any one inhibitor with one example.

Q 4 Write short notes. (any three)

6x3=18

1. Regulation of Iron absorption.
2. Write type of haemoglobin derivatives & it's related disorders & clinical features.
3. Write definition and significance of Glycemic index. Explain it with two examples of food item.
4. Functions of Albumin and its deficiency manifestations with mechanism.

Section - III

Q 5 Write detail on following. ( any two)

5x2=10

1. Write types & cause of jaundice. Give blood and urine examination finding to differentiate it's types.
2. Biochemical explanation of homeostasis changes in Calcium ,Parathyroid hormone & Vitamin D in chronic renal failure
3. Write characteristic of Genetic codon. Explain Wobbling phenomena in detail with it's advantage.

Q 6 Write short notes (any four)

5x4=20

1. Molecular basis & diagnosis of Sickle cell anaemia.
2. Types of RNA & Explain one RNA type in detail.
3. Role & clinical significant of Telomerase & Telomere.
4. Cardiac Markers and it's significance with time-line.
5. Acute phase proteins ( with 3 examples).