



# Rajiv Gandhi University of Health Sciences

**M.D. Degree Examination – NOV 2016**

[Time: 3 Hours]

[Max. Marks: 100]

## BIOCHEMISTRY

### **PAPER – I (Revised Scheme)**

**Q.P. CODE: 7315**

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

#### **LONG ESSAYS**

**2 X 20 = 40 Marks**

1. Describe the working principles and applications of various types of Electrophoresis
2. Illustrate the structure of a typical cell membrane. Explain the factors which affect its fluidity. Describe the various mechanisms of transport of molecules across the cell membrane and their regulation

#### **SHORT ESSAYS**

**6 X 10 = 60 Marks**

3. PCR (Polymerase Chain Reaction)
4. Protein folding
5. Composition and organization of collagens
6. Glycated proteins and their measurement
7. DNA fingerprinting
8. Endogenous opioid peptides

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**BIOCHEMISTRY**

**PAPER – II (Revised Scheme)**

**Q.P. CODE : 7316**

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

**LONG ESSAY**

**2 X 20 = 40 Marks**

1. Describe translation in eukaryotes. Add a note on posttranslational modifications.
2. Explain urea cycle and its various disorders

**SHORT ESSAY**

**6 X 10 = 60 Marks**

3. Proteomics
4. Cystinuria
5. Sphingolipidosis
6. Lipotropic factors
7. Ketogenesis
8. Biologically important products obtained from glutamate

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## BIOCHEMISTRY

PAPER – III (Revised Scheme)

**Q.P. CODE: 7317**

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

### LONG ESSAY

**2 X 20 = 40 Marks**

1. Explain the classification of enzymes with suitable examples. Discuss the clinical importance of enzymes in detail with suitable examples.
2. What are free radicals? Discuss their role in health and disease

### SHORT ESSAY

**6 X 10 = 60 Marks**

3. Absorption of iron and its importance
4. Mechanism of action of Hormones
5. Water and electrolyte Balance
6. Biochemical alterations in obesity
7. Photochemistry of vision
8. Balanced diet

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## BIOCHEMISTRY

PAPER – IV (Revised Scheme)

**Q.P. CODE: 7318**

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

### LONG ESSAYS

**2 X 20 = 40 Marks**

1. Describe the role of the kidney in the maintenance of acid base balance in the body. Reason out the acid base disorders likely to be found in salicylate poisoning stating the alterations in parameters. Add a note on paradoxical aciduria.
2. Describe the molecular defects and laboratory diagnosis of different types of porphyrias. Add a note on porphyrins in cancer phototherapy.

### SHORT ESSAYS

**6 X 10 = 60 Marks**

3. Congenital hyperbilirubinemias.
4. Prion diseases.
5. Quality Assurance Program in the laboratory.
6. Auto immunity.
7. Role of Lipoproteins in Atherosclerosis.
8. Insulin resistance and its measurement.

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