

# Rajiv Gandhi University of Health Sciences, Karnataka

Post Graduate Degree Examination – APRIL/MAY 2015

49

Time: Three Hours

Max. Marks: 100 Marks

## MD BIOCHEMISTRY

(Bio-organic chemistry, biophysical chemistry and biochemical techniques)

### PAPER- I

(Revised Scheme)

Q. P. CODE: 7315

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

### LONG ESSAYS

2 x 20 = 40 Marks

1. Explain the process of DNA sequencing with its applications
2. Describe the different levels of structural organisation of proteins.

### SHORT ESSAYS

6 x 10 = 60 Marks

3. Explain the structure and function of biologically important peptides
4. Describe the structure and functions of Mucopolysaccharides
5. Explain the principle and applications of HPLC in medicine
6. Blotting techniques
7. Isoelectric focussing
8. Write the principle and applications of Enzyme linked immunosorbent assay (ELISA).

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## Rajiv Gandhi University of Health Sciences

M.D. Degree Examination – MAY 2015

50

[Time: 3 Hours]

[Max. Marks: 100]

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. Discuss Glycogen metabolism in detail. Add a note on glycogen storage disorders
2. Describe the metabolism of sulphur containing amino acids and explain in brief the disorders associated with their metabolism.

## SHORT ESSAY

6 X 10 = 60 Marks

3. Genetic code and its characteristics
4. Important products obtained from Tryptophan
5. Catabolism of Pyrimidine
6. Cholesterol transport and its clinical significance
7. Post translational modification of proteins
8. Electron transport chain

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**Rajiv Gandhi University of Health Sciences, Karnataka**  
Post Graduate Degree Examination – MAY 2015

51

**Time: Three Hours**

**Max. Marks: 100 Marks**

**MD BIOCHEMISTRY**  
**(Enzymes, Nutrition and specialized tissues)**  
**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 ESSAYS**

**2 x 20 = 40 Marks**

1. Describe in detail the process of signal transduction.
2. Describe the requirement, sources, metabolic functions and deficiency manifestations of thiamine, nicotinic acid, pyridoxine and biotin.

**SHORT ESSAYS**

**6 x 10 = 60 Marks**

3. Specific dynamic action of foodstuff.
4. Nitrogen balance.
5. Adaptive changes associated with starvation.
6. Allosteric enzymes.
7. Neurotransmitters.
8. Total parenteral nutrition.

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**Rajiv Gandhi University of Health Sciences, Karnataka**  
Post Graduate Degree Examination – MAY 2015

52

**Time: Three Hours****Max. Marks: 100 Marks**

**MD BIOCHEMISTRY**  
**(Clinical 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. Give an account of heme catabolism. What are porphyrias?
2. Describe the metabolism of catecholamines. Add a note on the diagnostic value of VMA estimation

**SHORT ESSAYS****6 x 10 = 60 Marks**

3. Lipoprotein (a).
4. Metabolic acidosis.
5. Hypercalcemia.
6. Oncogenes and tumour suppressor genes.
7. Antioxidants.
8. Hyperuricemia.

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