

16-08-11

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Paper Code : MBBS-105

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M.B.B.S.

1st Professional Examination, 2010-11

BIOCHEMISTRY-I

Time : 3 Hours]

[Max. Marks : 50

Note: Attempt all questions.

1. Draw the Replication fork. Describe in points the steps of [3+3
DNA replication, mentioning the enzymes and other +2
components involved.
2. Draw neat and well labelled diagrams only:
 - (a) Structure of Helical DNA [3
 - (b) Structure of the Immunoglobulin M [3
3. Draw and explain only as flow charts:
 - (a) Degradation of purine nucleotides [3
 - 7 (b) Wald's visual cycle [3
4. Write short notes on any **ten** of the following: [3×10=30
 - (a) Enumerate the liver function tests and mention the
significance of each
 - (b) Role of Antibiotics in inhibiting Protein Synthesis
 - (c) Glycogen metabolism and its regulation
 - (d) Polymerase Chain Reaction
 - 7 (e) Vitamins as antioxidants (f) Tumor suppressor genes
 - (g) Bence Jones proteins (h) Types of immunity
 - (i) Cytochrome P 450 (j) Silent mutations
 - (k) Alkaptonuria

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M.B.B.S.

1st Professional Examination, 2010-11

BIOCHEMISTRY-II

Time : 3 Hours]

[Max. Marks : 50

Note: Attempt all questions. Illustrate your answer with well labelled diagram, wherever required.

1. (a) Sketch diagram showing β -oxidation of fatty acids and calculate total ATP generated after complete oxidation of Palmitic acid. [3+2]
(b) Trace sequence of electron transport chain indicating sites of ATP synthesis. Name inhibitors of electron transport chain. [2+1.5 +1.5]
2. (a) Classify diabetes mellitus and add short answer on long term bio-chemical indices for diabetic control. [3+2]
(b) Enumerate metabolic fate of Phenylalanine and Tyrosine. [3+2]
3. (a) Classify hyperbillirubinemias and add a short note on congenital hyperbillirubinemias. [2+3]
(b) What is Porphyrria? Classify different types of porphyries indicating defective enzymes involved in it. [1+2 +2]
4. (a) Describe diagnostic and therapeutic applications of any three enzymes. [3+2]
(b) Describe the homeostasis of calcium and list the functions of Calcium. [3+2]
5. Write short notes on any four: [2.5×4=10]
 - (a) Glycogen storage diseases
 - (b) Hemoglobinopathies
 - (c) Lipoproteins
 - (d) Role of Bile salts in lipid absorption
 - (e) Balance Diet
