



**RO-1545-R**  
**First Year M.B.B.S. Examination**  
**June - 2010**  
**Biochemistry (Paper - I)**

Time : 2 Hours]

[Total Marks : 50

**Instructions :**

(1)

<p>नीचे दृशविवेक निशानीवाणी विगतो उत्तरवही पर अवश्य कर्जवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : <b>First Year M.B.B.S.</b></p> <p>Name of the Subject : <b>Biochemistry (Paper - 1)</b></p> <p>Subject Code No. : <b>1 5 4 5</b> Section No. (1, 2,.....): <b>Nil</b></p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; height: 60px; margin-top: 10px; display: flex; align-items: center; justify-content: center; padding: 10px;">Student's Signature</div>
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(2) Figures to the **right** indicate full marks.

(3) Draw diagrams where appropriate.

1 Write down different types of protein structures. How different structure of protein are stabilized ? 11

**OR**

1 Describe Heam synthesis and its regulation, enumerate porphyrias. 11

2 Read the following case and answer the following questions : 10

A three day old neonate was brought to pediatric nursery with yellow discoloration of sclera and skin. His total bilirubin was 9 mg/dl (Normal range : 0.1-1.0 mg/dl). Pediatrician diagnosed as a case of physiological jaundice. The patient was advised phototherapy and recovered in 24 hrs.

- (a) What is the cause of physiological jaundice ?
- (b) What is the difference between direct and indirect bilirubin ?
- (c) What is the role of phototherapy in this case ?
- (d) What are other causes of unconjugated hyperbilirubinemia ?
- (e) What type of hyperbilirubinemia is seen in obstructive jaundice ?

RO-1545]

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[Contd...

- 3** Write short notes on : (any **three**) **9**
- (a) Lysosomes and Peroxysomes
  - (b) ELISA
  - (c) Eicosanoids
  - (d) Applications of radioisotops in medicine
  - (e) Bile salts.
- 4** Write notes on : (any **two**) **10**
- (a) Functions of plasma proteins
  - (b) Mucopolysaccharides
  - (c) Electrophoresis
  - (d) Structure of collagen.
- 5** Comment on / justify in 2-3 sentences : (any **five**) **10**
- (a) Sucrose is a non-reducing disaccharide.
  - (b) HDL cholesterol is "Good cholesterol".
  - (c) Allopurinol is used in the treatment of gout.
  - (d) Denaturation of proteins in food is biologically advantageous.
  - (e) Glucose is required for the absorption of  $\text{Na}^+$ .
  - (f) Proline does not allow forming alpha helix.
  - (g) Selective COX2 inhibitors reduce gastric side effects of NSAIDS.
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