



RO-1546-R
First Year M.B.B.S. Examination
June – 2010
Biochemistry (Paper - II)

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

<p>नीचे दर्शाविए निशानीवाणी विगतो उत्तरवही पर अवश्य लખवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : First Year M.B.B.S.</p> <p>Name of the Subject : Biochemistry (Paper - 2)</p> <p>Subject Code No. : 1 5 4 6 Section No. (1, 2,.....): Nil</p>	<p>Seat No. : <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"><tr><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 15%;"></td></tr></table></p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; margin-top: 10px;">Student's Signature</div>						

- (2) Figures to the **right** indicate full marks.
(3) Draw diagrams where appropriate.

1 Discuss biochemical aspects of diabetes mellitus. 11

OR

1 Discuss replication, what are the various mechanisms for repair of DNA. 11

2 Read the following case and answer the questions : 10

A 45 year old male who is suffering from diabetes mellitus (DM) visited to OPD for routine check up. His fasting glucose level was 99 mg/dl, PP2BS was 130 mg/dl. Total cholesterol was 280 mg/dl (Normal range : 200-240 mg/dl) Triglycerides was 198 mg/dl (normal range 130-160 mg/dl) HbA_{1C} was 7.5% (normal range 3.5-5.5%). Physician prescribed statins and other medicines to control plasma glucose level he also advised him regular exercise, regular eye check up.

- (a) How statins help to treat hyperlipidemia ?
(b) What is the significance of HbA_{1C} ?
(c) Why diabetics are more prone to develop cataract ?
(d) Why uncontrolled diabetes mellitus leads to ketosis ?
(e) Why HDL cholesterol is "Good Cholesterol".

- 3** Write short note on : (any **three**) **9**
- (a) Phenyl ketonuria
 - (b) Transamination
 - (c) Characteristics of genetic codes
 - (d) Carnitine transporter
 - (e) Galactosemia.
- 4** Write notes on : (any **two**) **10**
- (a) Glycogenolysis
 - (b) PCR
 - (c) Post translation modification
 - (d) Urea cycle.
- 5** Comment on / justify in 2-3 sentences : (any **five**) **10**
- (a) Sodium fluoride used as preservative while collecting blood for glucose estimation.
 - (b) Replication is always semi conservative.
 - (c) Ciprofloxacin inhibit replication of bacterial DNA.
 - (d) Hemolysed serum is not suitable for serum potassium estimation.
 - (e) Muscle glycogen does not contribute in plasma glucose level.
 - (f) Human being can not digest cellulose.
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