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RO-1546

First Year M.B.B.S. Examination

June — 2010

Biochemistry (Paper - II)

Time : 2 Hours]

[Total Marks : 50

Instructions

(1)

Fillup strictly the details of 4, signs on your answer book. Name of the Examination : First Year M.B.B.S. Name of the Subject : Biochemistry (Paper - 2) Seat Code No. : 5 4 6 up-Section No. (1, 2,) : Nil		Seat No. : 11111111111111111111 Student's Signature
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(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.

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

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[Contd...

- 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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