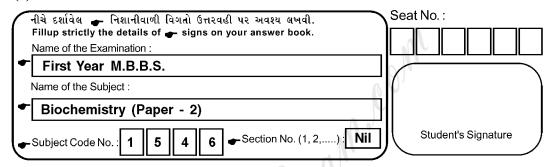


## RO-1546-R First Year M.B.B.S. Examination June - 2010 Biochemistry (Paper - II)

Time: 2 Hours [Total Marks: 50

## **Instructions**:

(1)



- (2) Figures to the **right** indicate full marks.
- (3) Draw diagrams where appropriate.
- 1 Discuss biochemical aspects of diabetes mellitus.

OR.

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- 1 Discuss replication, what are the various mechanisms for repair of DNA.
- 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 $_{\rm IC}$  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".

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- Write short note on: (any three)
  (a) Phenyl ketonuria
  (b) Transamination
  (c) Characteristics of genetic codes
  (d) Carnitine transporter
  (e) Galactosemia.
  Write notes on: (any two)
  10
- 4 Write notes on : (any two)

  (a) Glycogenolysis

  (b) PCR

  (c) Post translation modification

  (d) Urea cycle.
- Comment on / justify in 2-3 sentences : (any five)
  (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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