

FIRST M.B.B.S. DEGREE EXAMINATION, APRIL 2005 (28)
BIOCHEMISTRY—Paper II

Time : 2 Hours and 45 Minutes

Maximum : 45 Marks

Answer Section A-II and Section B in separate answer-books.

Draw diagrams wherever necessary.

Section A-II

II. What is the normal pH of blood ? Write the homeostatic mechanisms of maintaining normal pH under various physiological states. *normal pH of blood is 7.35-7.45. Homeostatic mechanisms: 1. Buffering capacity of blood. 2. Respiratory system. 3. Renal system.*

(1 + 9 = 10 marks)

III. Write notes on :

- (a) Regulation of pyrimidine biosynthesis.
- (b) Oncogenes.



(2 × 5 = 10 marks)

Section B

IV. Write brief answers :—

- (a) Orazaki fragments.
- (b) How is hnRNA converted to mature mRNA ?
- (c) Southern blot technique.
- (d) Test for bile pigments of urine.
- (e) Structure of Immunoglobulin.

(5 × 3 = 15 marks)

V. Write precise answers :

- (a) Define Anion gap. Mention 2 conditions when it is high.
- (b) Write the normal serum values of :
 (i) Na^+ ; (ii) K^+ ; (iii) Chloride ; and (iv) Bicarbonate.
- (c) Draw the structure of purine ring. Show the sources of Carbon and Nitrogen atoms on the purine face.
- (d) Define point mutation. Give one example.
- (e) Define A : G ratio. Write two conditions in which the A.G ratio is reversed.

(5 × 2 = 10 marks)