D 11294 (Pages : 1 + 2 = 3) Name.....

Reg. No.....

FIRST M.B.B.S. PROFESSIONAL DEGREE EXAMINATION, FEBRUARY 2011

BIOCHEMISTRY—Paper II

(New Scheme)

Time : Three Hours Maximum : 50 Marks

Answer Sections A and B in **separate** *answer-books.*
Draw diagrams wherever necessary.
Question III *MCQs should be answered first in the response sheet provided.*

Section A

I. Name the antioxidant vitamins. Write the process of lipid peroxidation. Discuss biological role and deficiency manifestations of Vitamin C.

(1 + 3 + 6 = 10 marks)

II. Discuss the following :—

(a) Regulation of gene expression in prokaryotes.

(b) Porphyrias.

(2 × 5 = 10 marks)

III. Multiple Choice Questions–(10 Numbers Response sheet attached). (10 × ½ = 5 marks)

Section B

IV. Write briefly on :

(a) Blood buffers.

(b) Nucleotide analogues used as anti cancerous agents.

(c) DNA repair mechanisms.

(d) Restriction endonucleases.

(e) Salient features of B-DNA.

(5 × 3 = 15 marks)

V. Write short notes on :

(a) Conjugation reactions of detoxification.

(b) Albumin Globulin ratio.

(c) Beer-Lambert's law.

(d) Gene therapy.

(e) Radiation hazards.

(5 × 2 = 10 marks)

III. MULTIPLE CHOICE QUESTIONS

BIOCHEMISTRY—Paper II

Time : 10 Minutes

Maximum : 5 Marks

Note.—(1) *Do not write anything on the question paper.*

(2) *Write your register number on the answer-sheet provided.*

(3) *Select the* **appropriate answer** *and encircle the alphabet against each question in the answer-sheet provided.*

(4) *In the answer-sheet enter the total number of your answers in the appropriate box provided.*

(5) *Each question carries ½ mark.*

1. The vector of choice for incorporating 40 Kb DNA is :

   (A) Cosmid. (B) Plasmid.
   (C) Bacteriophage. (D) pBR 322.

2. Carcinoma caused by Epstein Barr virus is :

   (A) Hepatoma. (B) Burkitt's Lymphoma.
   (C) Neuroblastoma. (D) Carcinoma of cervix.

3. Bradshaw's test may be positive for :

   (A) Wilson's disease. (B) Multiple myeloma.
   (C) Oasthouse syndrome. (D) Zelweger syndrome.

4. Kernicterus develops when the bilirubin level exceeds :

   (A) 10 mg/dl. (B) 4 mg/dl.
   (C) 20 mg/dl. (D) 5 mg/dl.

5. Creatine clearance test is used to assess :

   (A) Renal plasma flow. (B) Glomerular filtration rate.
   (C) Reabsorption of water. (D) Tubular function.

6. Amino acid required for the conversion of IMP to GMP :

   (A) Glycine. (B) Glutamine.
   (C) Aspartic acid. (D) Glutamic acid.

7. Increased carbohydate consumption increases the dietary requirement for :

   (A) Thymine. (B) Riboflavin.
   (C) Pyridoxine. (D) Folic acid.

8. Copper containing enzyme is :

   (A) Catalase.
   (B) Tyrosinase.
   (C) Carboxy peptidase.
   (D) Xanthine oxidase.

9. Nucleotides serves as the following except :

   (A) High energy compound.
   (B) Component of co-enzyme.
   (C) Physiological mediators.
   (D) Component of phospholipids.

10. The technique used to detect RNA is :

   (A) Southern blot technique.
   (B) Northern blot technique.
   (C) Western blot technique.
   (D) ELISA technique.

(10 × ½ = 5 marks)