D 11291 (Pages : 1 + 2 = 3) Name.....

Reg. No.....

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

PHYSIOLOGY—Paper I

(New Scheme)

Time : Three Hours Maximum : 50 Marks

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

Section A

I. Multiple Choice Questions. (Separate sheet attached). (5 marks)

II. Explain the cardiorespiratory adjustments at different levels of exercise. (10 marks)

III. Explain the physiological basis of the following :—

(a) Changes in intrapleural pressure during normal respiration.
(b) Maintenance of alveolar stability.
(c) Osmotic diuresis.
(d) Triple response.
(e) Prolongation of clotting time in liver damage.

(5 × 2 = 10 marks)

Section B

IV. (a) How does the kidneys produce hypertonic urine ?
(b) Define Law of Laplace. Give two applications of the law in the cardiovascular system.

(2 × 5 = 10 marks)

V. Write briefly on :

(a) Renal clearance.
(b) Micturition reflex.
(c) Normal ECG in Lead II.
(d) Functions of platelets.
(e) Hormones acting on renal tubule.

(5 × 3 = 15 marks)

D 11291

I. MULTIPLE CHOICE QUESTIONS

PHYSIOLOGY—Paper I

(New Scheme)

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. Plasma cells are transformed :

   (A) Monocytes. (B) T lymphocytes.

   (C) B lymphocytes. (D) Basophils.

2. The reticulum present in reticulocytes is :

   (A) DNA. (B) RNA.

   (C) Lipoproteins. (D) Hb.

3. A non-peptide paracrine stimulator of HCl is :

   (A) Gastrin. (B) Secretin.

   (C) Histamine. (D) Motilin.

4. Turbulent blood flows is produced by :

   (A) Increase in velocity of flow of blood.

   (B) Decrease in cardiac output.

   (C) Increase in viscosity of blood.

   (D) Increase in diameter of vessel.

5. Preload on myocardium depends on :

   (A) Stroke volume. (B) Diastolic pressure.

   (C) Aortic pressure. (D) EDV.

6. Distended hypotonic bladder occur in :

   (A) Transection of spinal cord. (B) Pudental nerve section.

   (C) Tabes dorsalis. (D) Pelvic nerve section.

7. A person breathing through a long tube shows a higher :

   (A) Tidal volume. (B) Respiratory rate.

   (C) Dead space. (D) Vital capacity.

8. The indicator of the concentration power of kidney is :

(A) Urinary sodium.
(B) Specific gravity of urine.
(C) Blood urea.
(D) Insulin clearance.

9. Iron is in ferric form in :

(A) Oxy Hb.
(B) Meth Hb.
(C) Reduced Hb.
(D) Carboxy Hb.

10. Gastric emptying is inhibited by :

(A) Vagotomy.
(B) Hypotonicity of chyme.
(C) Gastrin.
(D) Enterogastric reflex.

(10 × ½ = 5 marks)