C 57997 (Pages : 1 + 2 = 3) Name.....

Reg. No.....

FIRST PROFESSIONAL M.B.B.S. DEGREE EXAMINATION, AUGUST 2009

(New Scheme)

PHYSIOLOGY—Paper I

[2008 admissions]

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). (10 × ½ = 5 marks)

II. Explain the factors regulating blood flow through tissues. (10 marks)

III. Give the physiological basis of :

(a) Sigmoid shape of oxygen dissociation curve.

(b) Change in oxygen carrying capacity in carbon monoxide poisoning.

(c) Gastro colic reflex.

(d) Polyuria and polydypsia in Diabetes Mellitus.

(e) Erythroblastosis foetalis.

(5 × 2 = 10 marks)

Section B

IV. (a) Explain the regulation of pancreatic juice secretion.

(b) Outline the fate of hydrogen ions in the renal tubular fluid.

(5 + 5 = 10 marks)

V. Write briefly on :

(a) Methods of heat loss.

(b) Renal clearance.

(c) Fibrinolytic system.

(d) Hering–Bruer reflex.

(e) Functions of colon.

(5 × 3 = 15 marks)

PHYSIOLOGY—Paper I

I. MULTIPLE CHOICE QUESTIONS

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

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

(3) *Select* **one** *most appropriate response and encircle the corresponding 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. Heparin is secreted by :

   (A) Platelets. (B) Plasma cells.

   (C) Mast cells. (D) Basophils.

2. Pulsatile flow is seen in the following vascular segments *except* :

   (A) Capillaries. (B) Arteries.

   (C) Aorta. (D) Arterioles.

3. The distending pressure in a blood vessel is equal to tension in the walls divided by :

   (A) Radius. (B) Length.

   (C) Diameter. (D) Thickness.

4. In nodal tissues Acety choline cause an increase in :

   (A) K^+ efflux. (B) Ca^{++} influx.

   (C) K^+ influx. (D) Na^+ efflux.

5. The chemoreceptors in carotid and aortic bodies are stimulated by :

   (A) Anaemia. (B) Alkalosis.

   (C) Cyanides. (D) Hypocapnea.

6. The dicrotic notch in arterial pulse trace coincides with :

   (A) Closure of mitral valve. (B) Closure of aortic valve.

   (C) Opening of mitral valve. (D) Opening of aortic valve.

7. Absorption of water is maximum in :

   (A) Jejunum. (B) Ileum.

   (C) Colon. (D) Caecum.

8. The renal threshold for glucose is venous plasma level of :

   (A) 300 mg/dl. (B) 300 mg/mt.

   (C) 180 mg/mt. (D) 180 mg/dl.

9. A patient with restrictive lung disease has :

   (A) Normal FEV_1 and lung compliance.

   (B) Low FEV_1 and increased lung compliance.

   (C) Low FEV_1 and lung compliance.

   (D) Normal FEV_1 and reduced lung compliance.

10. The decrease in oxygen affinity of haemoglobin when pH of blood falls is :

   (A) Bohr effect. (B) Haldane effect.

   (C) Heme-hem interaction. (D) Alkalosis.

(10 × ½ = 5 marks)

VII. Short answer questions :

1 List the common sediments seen in urine.

2 List 2 anticoagulants used in blood banking.

3 Define a granuloma.

4 What is the difference between selection and integrim ?

(4 × 1 = 4 marks)

VIII. Write short notes on :

1 Thromboembolism.

2 Steps in healing by second intention.

3 Autoimmune diseases.

(3 × 2 = 6 marks)