Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.PHARM/SEM-2/PT-205/2013

2013

PHYSIOLOGY

Time Allotted : 3 Hours *Full Marks* : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : $10 \times 1 = 10$

i) Glucose reabsorption takes place in the

a) Bowman's capsule

b) first half of the proximal tubule

c) distal tubule

d) none of these.

ii) Meltonin is secreted by

a) thyroid gland b) adrenal gland

c) peneal gland d) parathyroid gland.

iii) The pulmonary gas exchange takes place by

a) active transport b) filtration

c) diffusion d) osmosis.

iv) Which of the following substances is inactivated by the lungs ?

a) Serotonin b) Noradrenaline

c) Angiotensin I d) Bradykinin.

v) Non-nucleated blood cells are

a) mature RBC b) immature RBC

c) WBC d) both (a) and (b).

vi) Urinary excretion rate depends on

a) glomerular filtration rate

b) tubular reabsorption

c) tubular secretion rate

d) all of these.

vii) Hypokalaemia represents the decrease of which ions ?

a) Chloride b) Potassium

c) Iron d) Calcium.

viii) Blood pressure means

a) action potential × peripheral resistance

b) cardiac output × peripheral resistance

c) cardiac output × depolarization

d) action potential × hyperpolarization.

ix) Normal filtration pressure in renal glomerulus is

a) 6 mmHg b) 10 mmHg

c) 15 mmHg d) 20 mm Hg.

x) Which part of the heart has fastest impulse generation rate ?

a) SA node b) AV node

c) Bundle of His d) Purkinje fibre.

xi) Normal volume of respiratory dead space is

a) 500 ml b) 150 ml

c) 6000 ml d) 3100 ml.

xii) The optimum pH of oxygen containing blood is

a) 7·0 b) 7·3

c) 7·4 d) 7·5.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Write a short note on the parathyroid gland.

3. Describe the extrinsic prothrombin activation pathway of clotting with the help of flow chart.

4. What is E.C.G. ? What do you mean by PQRST ?

5. Describe briefly the structure of nephron.

6. Write a note on the conducting tissues of the heart.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. What are the organs of digestive system ? Write down the mechanism of gastric acid secretion. What are the functions of liver and stomach ? 3 + 7 + 5

8. Write in detail about the hormones secreted from anterior pituitary gland and posterior pituitary gland.

9. Define tidal volume, vital capacity, inspiratory reserve volume, expiratory reserve volume, residual volume with their normal value. What are the factors affecting pulmonary and systemic gas exchange ? Write briefly about oxygen-haemoglobin dissociation curve. 1 + 1 + 1 + 1 + 1 + 5 + 5

10. Write about various stages of Erythropoiesis. What is the fate of haemoglobin ? What is anemia ? 7 + 7 + 1

11. a) Define blood pressure. What do you mean by arterial pressure and pulse pressure ? What is the normal blood pressure ? What do you mean by hypertension ?

    b) How do insulin and glucagon regulate blood glucose level ? (1 + 4 + 1 + 2) + 7

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