Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.Pharm (NEW)/SEM-2/PT-205/2010

2010
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) Non-nucleated blood cells are
      a) immature RBC b) mature RBC
      c) platelets d) both (b) and (c).

   ii) Which part of heart has fastest conduction ?
      a) AV node b) His bundle
      c) Purkinje fibre d) SA node.

   iii) Dyspnoea is
      a) painful respiration
      b) cheerful respiration
      c) funny respiration
      d) under water respiration.

   iv) Main characteristic of nephritic syndrome is
      a) marked urea excretion b) hypertension
      c) both of these d) none of these.

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v) Universal donors are individuals with blood group

a) A b) B

c) AB d) O.

vi) Hypokalaemia is a situation where blood concentration of which of the following ions is decreased ?

a) Calcium b) Chloride

c) Potassium d) Cobalt.

vii) Which of the following substances is released in excess quantity during excitement ?

a) Cortisone b) Serotonin

c) Adrenaline d) None of these.

viii) Urinary excretion rate depends on

a) Glomerular filtration rate

b) Tubular reabsorption

c) Tubular secretion rate

d) all of these.

ix) Electrocardiogram (E.C.G.) measures

a) Blood volume

b) E.S.R.

c) Electricity of blood

d) Electrical activity of heart.

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x) Packed cell volume is

a) the volume of red cells in 1 litre or 1 mm^3 of whole blood

b) the volume of red cells in 2 litres or 1 mm^3 of whole blood

c) The volume of red cells in 3 litres or 1 mm^3 of whole blood.

xi) Kupffer cells are present in

a) lungs b) pancreas

c) liver d) small intestine.

xii) Korotkov's sounds appear while measuring

a) BP b) Pulse

c) Cardiac output d) all of these.

xiii) Horse-shoe shaped nucleus of WBC seen in Leishmann stain smear is characteristic of

a) Neutrophil b) Eosinophil

c) Basophil d) all are correct.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. Describe briefly the structure of nephron.

3. What is a Spirogram ? Explain Vital Capacity, Tidal Volume and Inspiratory Reserve volume with their normal magnitudes. 2 + 1 + 1 + 1

4. What is glycosuria ? Write briefly about the composition of urine. 2 + 3

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5. What are the hormones of posterior pituitary gland ? Briefly discuss their functions.

6. What is normal life span of life of Red Blood Corpuscle ? What is the normal count ?

GROUP – C

(Long Answer Type Questions)

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

7. What is blood pressure ? Enumerate and discuss the factors concerned in maintaining the normal blood pressure. 2 + 13

8. a) Write about anatomical position and functions of thyroid gland.

   b) Write briefly about thyroid gland disorders. 2 + 8 + 5

9. Explain the mechanism of Respiration. Briefly enumerate the process of gaseous exchange during respiration. 10 + 5

10. What is the relation between cardiac output and heart rate ? How is rate of firing of SA node controlled ? Discuss in detail the events of Cardiac cycle. 2 + 3 + 10

11. Describe the anatomy of liver along with a neat labelled diagram. Write down the functions of the liver.

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