Name :	
Roll No. :	A Desire (Y Kanadada Rad Excland
Invigilator's Signature :	

CS/B.OPTM/SEM-1/BO-102/2009-10

2009

PHYSIOLOGY (GENERAL)

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) A deep notch is present at the medial border of the kidney, called
 - a) calyces b) renal pelvis
 - c) hilusd) medulla.
- ii) Tuft of capillary vessels which is surrounded by Bowman's capsule is known as
 - a) Glomerulus
 - b) Malphigian corpuscles
 - c) Loop of Henle
 - d) Juxtaglomerular apparatus.

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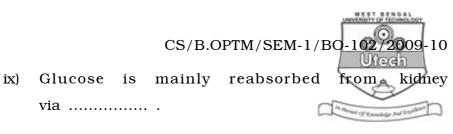
[Turn over

iii) Factor which converts prothrombin to thrombin is

b)

Thromboplastin

- a) Fibrinogen
- c) Platelets d) Fibrin.
- iv) Third sound of heart occurs when
 - a) Atrio-ventricular valves open
 - b) Atrio-ventricular valves close
 - c) Semilunar valves open
 - d) Semilunar valves close.
- v) Magnitude of current just sufficient to excite a nerve or muscle is known as
 - a) Chronaxie b) Tetanus
 - c) Rheobase d) Rigor mortis.
- vi) Normal volume of glomerular filtration is
 - a) 90 ml/min b) 125 ml/min
 - c) 200 ml/min d) none of these.
- vii) Pulmonary artery carries
 - a) oxygenated flood
 - b) deoxygenated flood
 - c) all of these
 - d) none of these.
- viii) Universal blood donor is a person having blood.
 - a) Group A b) Group B
 - c) Group AB d) Group O.



- a) Proximal tubule b) Loop of Hente
- c) Distal tubule d) All of these.
- x) Cells responsible for development of myelin sheath are called
 - a) Glial cells b) Ependymal cells
 - c) Schwann cells d) Satellite cells.
- xi) Blood coagulation factor IX is known as
 - a) Christmas factor
 - b) Stuart factor
 - c) Hageman factor
 - d) Labile factor.

GROUP – **B**

(Short Answer Type Questions)

Write short notes on any *three* of the following.

 $3 \times 5 = 15$

- 2. D.N.A.
- 3. Composition of urine.
- 4. Electrophoresis.
- 5. Thalassaemia.
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GROUP - C

Answer any three of the following.

(Long Answer Type Questions)

 $3 \times 15 = 45$

- 6. Describe briefly the structure of nephron with suitable diagram. What is counter current exchange system ? On the basis of location, classify the nephron present in human kidney. 8 + 4 + 3
- 7. Explain cardiac cycle along with heart sounds produced during different phases of the cycle. Discuss the regulatory factors of cardiac output. What is the significance of blood pressure ? 8 + 4 + 3
- Discuss the EC coupling of the muscle contraction. Explain
 All-or-None law and Einthoven's law.
 15
- 9. a) Describe the composition and functions of blood.
 - b) What is anaemia ? Discuss the different types of anaemia.
 8 + 7

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