



Name :
Roll No. :
Invigilator's Signature :

CS/B. OPTM/SEM-1/BO-102/2011-12

2011

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 × 1 = 10

- i) QRS complex of ECG represents
 - a) atrial depolarization
 - b) atrial repolarization
 - c) ventricular depolarization
 - d) ventricular repolarization.

- ii) If RBC is kept in hypertonic solution, the cells get shrunken. This is called
 - a) crenation
 - b) hemolysis
 - c) shrinking of RBC
 - d) hypo RBC.

1055

[Turn over



- iii) Abnormal low platelet count causes the disease
 - a) thrombocytosis
 - b) purpura/thrombocytopenia
 - c) Anemia
 - d) none of these.

- iv) Dragging of solute molecules, during movement of solvent, in one direction is known as
 - a) osmosis
 - b) solvent drag
 - c) diffusion
 - d) none of these.

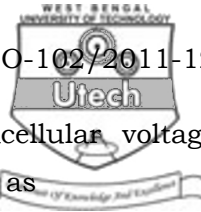
- v) Stiffening of body muscles after death is known as
 - a) Rigor mortis
 - b) Convulsion
 - c) Tremor
 - d) none of these.

- vi) Iron present in Haemoglobin is in form.
 - a) Ferric
 - b) Ferrous
 - c) Ferro-alloy
 - d) none of these.

- vii) Christmas disease is deficiency of
 - a) clotting factor V
 - b) clotting factor X
 - c) clotting factor IX
 - d) clotting factor VIII.

- viii) Pulmonary vein carries
 - a) oxygenated blood
 - b) deoxygenated blood
 - c) mixed blood.

- ix) Synaptic vesicle contains
 - a) Acetyl choline
 - b) Dopamine
 - c) Histamine
 - d) all of these.



- x) Depolarisation of cells when the intracellular voltage reaches -60 mV from -90 mV is known as
- a) action potential b) electrical potential
c) reflex action d) none of these.
- xi) Universal blood donor is a person with
- a) blood group A b) blood group B
c) blood group AB d) blood group O.

GROUP - B

(Short Answer Type Questions)

Write short notes on any *three* of the following. $3 \times 5 = 15$

2. Ultrastructure of artery & vein
3. Thalassaemia
4. Electrophoresis
5. Neuromuscular junction.

GROUP - C

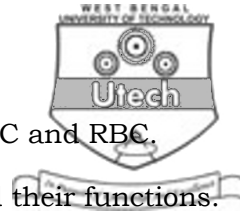
(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

6. a) Define Sterling's law. Describe the mechanism of cardiac muscle contraction.
b) Explain cardiac cycle. 7 + 8
7. a) Draw a labelled diagram showing the different parts of kidney.
b) Explain counter-current system of urine concentration.

7 + 8

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8. a) Bring out the differences between WBC and RBC.
b) Discuss the classification of WBC and their functions.

5 + 10

9. a) What is diffusion ? Describe Fick's Law of Diffusion.
b) What is Donnan-Gibbs effect.
c) Discuss briefly on Radioisotopes and their applications.

5 + 5 + 5

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