



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 1st Semester Examination, 2018

FNTACOR02T-FOOD AND NUTRITION (CC2)

PHYSIOLOGY IN NUTRITION

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

GROUP-A

1. Answer any *ten* questions from the following: 1×10 = 10
- State the location and one function of ribosome in a eukaryotic cell.
 - What are megakaryocytes?
 - What is insensible perspiration?
 - What do you mean by tidal volume?
 - State the significance of pulse pressure.
 - State the difference between plasma and serum.
 - What is Bohr effect?
 - State the location and function of Macula densa.
 - State the Starling's Law of Heart.
 - What is refractory period?
 - What is P-R interval in an electrocardiogram?
 - What is intercalated disc?
 - What is G.F.R?

GROUP-B

2. Answer any *four* questions from the following: 5×4 = 20
- Discuss the role of counter current system in the formation of human urine. 5
 - Describe the structure of skeletal muscle and smooth muscle with diagram. 5
 - What is ABO system in human blood? Discuss the significance of 'D' antigen in erythroblastosis fetalis. 2+3

- (d) Describe the role of 'chloride shift' in the transport of carbon dioxide from tissue to lung. 5
- (e) Define cardiac output by mentioning its normal value. Describe the heart sounds in cardiac cycle by mentioning their reasons. 1+4
- (f) Describe the intrinsic pathways of blood coagulation. State the name of two anticoagulants. 4+1

GROUP-C

3. Answer any *one* question from the following: 10×1 = 10
- (a) What is Einthoven's triangle? 2+4+4
- Delineate an electrocardiogram of a normal healthy human as obtained with limb leads.
- Describe the structure of normal adult haemoglobin.
- (b) Mention the pH value of blood and urine. 2+8
- Discuss how kidney regulates the pH of blood.

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