



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 1st Semester Examination, 2021-22

**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.*

**Answer any four questions from the following**

10×4 = 40

1. (a) What is hemostasis? 3+3+4  
(b) Discuss the role of  $Ca^{2+}$  in blood coagulation.  
(c) Discuss the function of plasma protein.
2. (a) What is erythropoiesis? 4+4+2  
(b) Explain the role of vitamin B12 and folic acid in erythropoiesis.  
(c) What is ABO blood grouping?
3. What is cardiac index? Briefly describe the factors that affect cardiac output. 2+5+3  
Describe the measurement of cardiac output by applying Fick principle.
4. What is pulse pressure? Briefly describe the factors that affect blood pressure. 2+3+(2+3)  
Discuss the composition and functions of lymph.
5. What is residual volume? What is dead space? What is Haldane effect? Briefly 2+3+2+3  
describe the effect of 2, 3 BPG on Hb dissociation.
6. Answer any **five** questions: 2×5 = 10
  - (a) What is Arneht count?
  - (b) What is the significance of biconcave shape of RBC?
  - (c) What is ESR?
  - (d) What is hypertension?
  - (e) What is pacemaker?
  - (f) What is sinus arrhythmia?

7. Explain any *two* of the following: 5×2 = 10  
Fetal hemoglobin, heart block, abnormal heart sound
8. Distinguish between: 5+5  
(i) artery and vein (ii) systemic and pulmonary circulation.
9. State the anatomical features of conducting and respiratory zones in respiratory tract. 4+4+2  
Discuss the metabolic function of lung. What is mean pressure?

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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