



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 3rd Semester Examination, 2020, held in 2021

**PHYACOR05T-PHYSIOLOGY (CC5)**  
**CIRCULATING BODY FLUIDS**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates are required to give their answers in their own words as far as practicable.  
All symbols are of usual significance.*

**Answer any five questions from the following**

8×5 = 40

1. (a) What is rouleaux formation? What is the fate of RBC after its life span? 1+1  
(b) Describe the different stages of erythropoiesis. 4  
(c) Define ESR. What is its normal value? 1+1
2. (a) Name one natural anticoagulant and three synthetic anticoagulants. 2  
(b) What are mast cells? What is their function? 2+1  
(c) How lymphocytes are produced in bone marrow? 3
3. (a) What is megaloblastic anemia? State the morphological changes of RBC in megaloblastic anemia. 1+2  
(b) Define and give the normal values of different blood indices. 3  
(c) Differentiate between adult haemoglobin and fetal haemoglobin. 2
4. (a) What is von Willebrand disease? 1  
(b) What are the hazards of mismatched blood transfusion? 2  
(c) What is cross-matching of blood? What is its importance? 2+1  
(d) What is H antigen? 2
5. (a) What are lymph nodes? Mention the locations. 1+1  
(b) Discuss the functions of plasma proteins. 4  
(c) What is plasmapheresis? 2
6. (a) Explain the intrinsic pathway of blood coagulation. 5  
(b) Define edema. What are causes for extracellular edema? 1+2
7. (a) Classify different types of immunoglobulins. 2  
(b) Describe the immunological basis of ABO blood grouping. 4  
(c) Why reticulocyte is called the immature red blood cell? 2

8. Write brief notes on the following:

- |                                 |   |
|---------------------------------|---|
| (a) Hemophilia                  | 2 |
| (b) Pernicious anemia           | 2 |
| (c) Transferrin                 | 2 |
| (d) Reticuloendothelial System. | 2 |

**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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