

2021

PHYSIOLOGY — HONOURS

Paper : CC-5

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer **any five** questions : 2×5
- (a) Name two maturation factors essential for the maturation of RBCs.
 - (b) What is autologous blood transfusion?
 - (c) What is thrombosis?
 - (d) What is H antigen? Mention the difference between A antigen and B antigen.
 - (e) What is the basic difference between haemophilia A and haemophilia B?
 - (f) Name any two vitamin K antagonists.
 - (g) What is the role of factor XIII in blood coagulation?
 - (h) Name two circulatory anticoagulants present in blood.
2. Write short notes on **any two** of the following : 5×2
- (a) Haemostasis
 - (b) Erythropoietin
 - (c) Thalassemia
 - (d) Erythroblastosis foetalis.

Answer **any three** questions.

3. (a) Discuss the factors which affect the synthesis of plasma proteins.
(b) Discuss about two conditions that may lead to decrease in the levels of plasma proteins.
(c) What is plasmapheresis? 4+4+2
4. (a) Name the different blood cell precursors.
(b) What are the two fundamental properties of stem cells?
(c) Discuss briefly about the different types of progenitor cells and the haemopoietic growth factors. 2+2+(3+3)

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5. (a) Explain the structure of haem with the help of a diagram.
(b) Discuss the process of biosynthesis of haem.
(c) Name the different derivatives of haemoglobin. 4+4+2
6. (a) Discuss the phagocytic functions of neutrophils and monocytes.
(b) What is eosinophilia?
(c) State the functions of eosinophils. (3+3)+1+3
7. (a) Discuss the role of vitamin K and calcium in blood coagulation.
(b) Describe the histological structure of spleen with a labelled diagram. (3+3)+(3+1)
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