

2020

PHYSIOLOGY — HONOURS

Paper : SEC-A-1

(Haematological Techniques)

Full Marks : 80

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

1. Answer **any ten** questions :

2×10

- (a) What is PCV?
- (b) What is purpura?
- (c) Write two differences between Thalassaemia major and Thalassaemia minor.
- (d) What is C-reactive protein?
- (e) What is differential count?
- (f) What is erythroblastosis foetalis?
- (g) What is MCV?
- (h) What is glycemic index?
- (i) What is Haemoglobin A₂?
- (j) What are the primary sites for thrombopoietin production?
- (k) What is the significance of prothrombin time?
- (l) What is the significance of clotting time?

Group - B

2. Write short notes on **any four** :

5×4

- (a) ESR
- (b) Precautions of blood transfusion.
- (c) ABO blood group
- (d) Mean corpuscular Haemoglobin concentration
- (e) Significance of leucopenia and leucocytosis
- (f) Role of ghrelin in food intake.

Please Turn Over

Group - C

3. Answer *any four* questions :

- (a) What is glycated haemoglobin? What is its clinical significance? Describe a method for determination of haemoglobin in blood. 3+3+4
- (b) Discuss the different types of anaemia. What is the cause of sickle cell anaemia? 8+2
- (c) What is Arneth count? What is its significance? What is bleeding time? How is it determined? What is the physiological significance of bleeding time? 2+2+2+2+2
- (d) What is erythropoietin? How erythropoietin regulates erythropoiesis? What special features of fetal haemoglobin makes it functionally more efficient than adult haemoglobin? 2+5+3
- (e) (i) What is anticoagulant?
(ii) Name the most suitable anticoagulant used for preservation of blood in the blood bank and why?
(iii) Write any five hazards of blood transfusion. 1+(2+2)+5
- (f) (i) What is thrombocyte?
(ii) What do you mean by thrombopoiesis?
(iii) Describe the role of thrombopoietin in thrombopoiesis.
(iv) Why the nucleus is absent in mature RBC of human? 2+2+4+2
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