

2021

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) Mentioned the normal value of ESR for adult male and female.
- (b) Write the differences between leukocytosis and leukomia.
- (c) What is megaloblastic anaemia?
- (d) What is glycated haemoglobin?
- (e) State the clinical significance of C-peptide test.
- (f) Name one exogenous and one endogenous anticoagulant.
- (g) What is MCHC?
- (h) What is Prothrombin time?
- (i) Why do the red blood cells attain crescent shape in sickle cell anaemia?
- (j) Give the significance of the left shift of Arneht count.
- (k) What is the cause of eosinophilia?
- (l) Give the clinical significance of determination of MCV.

Group – B

2. Write short notes on *any four* :

5×4

- (a) Thalassaemia.
- (b) Bombay phenotype.
- (c) Erythroblastosis foetalis.
- (d) Precautions of blood transfusion.
- (e) Purpura
- (f) PCV

Please Turn Over

Group – C

Answer *any four* questions.

3. (a) Write the immunological basis of identification of ABO and Rh blood groups.
(b) What is the difference between adult haemoglobin and foetal haemoglobin? (4+4)+2
4. (a) What is clotting time? How is it determined?
(b) Write the differences between clotting time and bleeding time.
(c) State the clinical significance of determination of clotting time. (2+3)+2+3
5. (a) What is erythrocyte sedimentation rate? Name two methods of determination of erythrocyte sedimentation rate.
How can you determine it following any one of these methods?
(b) State the clinical significance of determination of C-reactive protein in blood. (2+2+4)+2
6. (a) State the principle of calculation differential leucocyte count.
(b) Discuss the method of determination of total erythrocyte count. Mention the basic formula of its calculation. 3+(5+2)
7. (a) How is erythropoietin secretion regulated?
(b) What are the functions of thrombopoietin?
(c) What is thrombocytopenia?
(d) What is Polycythemia? 4+3+1+2
8. (a) What is the source of ghrelin and leptin?
(b) How do they regulate appetite?
(c) Write the physiological significance of Glycemic index. (1+1)+6+2
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