

HEMATOLOGY
PAPER-I

HEMAT/J/18/48/I

Time: 3 hours
Max. Marks:100

IMPORTANT INSTRUCTIONS

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. a) Briefly outline iron metabolism. 4+2+2+2
b) Write about the role of hepcidin in iron absorption.
c) Clinical presentation of hereditary hemochromatosis.
d) Genetic basis of hereditary hemochromatosis
2. Red cell membrane disorders: 4+3+3
a) Pathogenesis
b) Diagnostic algorithm of investigations.
c) Management of these disorders.
3. Automated blood cell counters: 4+3+3
a) Describe the principle of the instruments.
b) What are the advantages of automation?
c) What are the difficulties encountered for accurate platelet counts?
4. Epstein Barr virus infection: 5+5
a) Associated hematological conditions.
b) How should monitoring and management be done in a patient with active clinical infection?
5. Hematologic clonal disorders: 5+5
a) How can clonality be established?
b) Describe conditions associated with benign proliferations of large granular lymphocytes.
6. Inherited bleeding disorders: 3+4+3
a) Enumerate common clinical conditions encountered.
b) Investigations to be carried out in such a patient.
c) Which are the clinical conditions where the screening coagulogram is normal?
7. Polycythemia in a 30-year-old male: 5+5
a) Describe the diagnostic approach.
b) Which are the hematological conditions which need to be considered?

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8. Hydroxyurea therapy: 5+5
a) Describe the haematological conditions where it is used.
b) Mechanism of action in these situations.
9. Non transfusion dependent thalassemias: 5+5
a) Which are the conditions included?
b) How is iron overload managed in such patients?
10. HLA typing: 4+3+3
a) Describe the importance of HLA typing.
b) Which are the techniques being currently used?
c) What are the strategies adopted to find a compatible match if no donor is available in the family?
