

HEMATOLOGY
PAPER-III

HEMAT/J/18/48/III

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. Minimal residual disease (MRD): 5+5
 - a) What is the basis of MRD?
 - b) How does monitoring of MRD in acute leukemia guide the management?
2. Describe the uses of flow cytometry: 5+5
 - a) In benign haematological disorders.
 - b) In classifying chronic lymphoproliferative disorders.
3. Autologous stem cell transplantation: 3+3+4
 - a) Describe the procedure.
 - b) Enumerate differences from allogenic stem cell transplantation.
 - c) Clinical conditions where this procedure is being used.
4. Targeted therapies: 5+5
 - a) Which are the hematological conditions where it is in clinical use?
 - b) Describe monitoring of patients in any one condition in clinical use.
5. Next Generation Sequencing (NGS) for Acute Myeloid Leukemia: 5+5
 - a) Describe the advantages.
 - b) Which molecular changes have prognostic significance?
6. Non-Hodgkin's lymphoma (NHL): 4+4+2
 - a) Briefly classify the NHLs as per the WHO Classification 2016.
 - b) What are the diagnostic tests performed in a patient to stage the disease?
 - c) How is the management monitored on follow up?
7. Hemophilia A and B: 3+4+3
 - a) What is prophylactic therapy?
 - b) How is an acute major joint bleed managed?
 - c) Carrier detection in hemophilia A.

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| 8. | Secondary hematological malignancies:
a) Describe the conditions associated.
b) Prognosis and management issues which need to be addressed. | 5+5 |
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| 9. | Conditioning regimens for allogenic bone marrow transplantation:
a) Enumerate the differences between benign and malignant disorders.
b) Peripheral versus bone marrow harvesting. | 5+5 |
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| 10. | Chemotherapeutic drugs used in acute lymphoblastic leukemia (ALL):
a) Describe the principles of chemotherapeutic drugs being used in induction phase.
b) Describe the common toxicities encountered with drugs used in ALL induction. | 5+5 |
