# HEMATOLOGY

## PAPER-II

HEMAT/D/18/48/II

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 seven-year-old boy has been referred by the Department of Anesthesia for an Absolute Eosinophil Count > 2000/uL. He is awaiting surgery under general anesthesia.
   a) How would you try to diagnose the child?
   b) What would be your therapeutic options in managing this child?
   c) Mention the common causes of eosinophilia in children.          4+4+2

2. WHO classification of myeloid neoplasms (2016):
   a) Enumerate the changes made in comparison to the previous classification?
   b) Why were the changes made in the classification?
   c) What would be the impact of the change in day to day clinical practice?          4+4+2

3. Hemolytic transfusion reactions:
   a) What are the immediate steps to be taken when there is a transfusion reaction?
   b) How does the blood bank work-up to find the cause of the reaction?
   c) What are the newer technologies which aim to eliminate such reactions?          4+4+2

4. Hematopoietic stem cell harvesting:
   a) Compare peripheral blood and Bone marrow as stem cell source.
   b) Advantages and disadvantages of umbilical cord blood as source of stem cell.
   c) What do you do if there is an inadequate yield of stem cells?          4+3+3

P.T.O.

*POSSESSION/USE OF CELL PHONES OR ANY SUCH ELECTRONIC GADGETS IS NOT PERMITTED INSIDE THE EXAMINATION HALL.*

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5. Primary immune deficiencies with defects in neutrophil function:     3+4+3
   a) Enumerate at least 3 disorders with these characteristics describing their inheritance pattern.
   b) Etiopathogenesis of these disorders.
   c) Why are there differences in the clinical manifestations of these disorders?

6. Plasma cell neoplasms:     3+3+4
   a) Write the indication of treatment even in the absence of end-organ damage ie CRAB?
   b) How far would you investigate to establish monoclonality before initiation of treatment?
   c) Would you perform an autologous transplant upfront in the eligible patients? Justify with evidence.

7. Myelodysplastic syndromes:     3+4+3
   a) Are they a homogenous group of diseases? Justify.
   b) How do you choose your therapy for the different disorders within MDS?
   c) Is allogeneic stem cell transplant a viable option in this group of patients?

8. a) When do you suspect alloimmunisation in a transfusion dependent patient?     4+3+3
   b) How will you confirm your diagnosis?
   c) How will you manage such patient?

9. PET CT imaging in lymphomas:     4+3+3
   a) Should all patients diagnosed with lymphomas undergo a PET CT before initiation of treatment?
   b) Does interim PET CT help in modifying the treatment of Hodgkin's Lymphoma?
   c) Would the use of PET CT eliminate the need of bone marrow trephine biopsy in Non-Hodgkin's Lymphomas?

10. Novel agents in Chronic Lymphocytic Leukemia (CLL):     4+3+3
    a) How does the disease biology of CLL help in designing novel therapies?
    b) Are the novel agents better than the conventional immunochemotherapies?
    c) What are the usage restricting side effects of the novel agents as of today?

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