HEMATOLOGY

PAPER-III

Time: 3 hours HEMAT/J/20/48/III
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. Pre-operative bleeding assessment: 3+3+4
   a) How is a pre-operative patient to be evaluated for risk of bleeding?
   b) Limitations of screening coagulation tests.
   c) Describe the tool most used for bleeding assessment.

2. Polycythemia vera (PV): 4+3+3
   a) How will you work up a woman of 50 years of age, JAK2 negative with haemoglobin of 17g/dl?
   b) What is the utility of allele burden?
   c) What is the treatment recommendations for PV?

3. Ruxolinitib: 4+4+2
   a) What study led to its approval in primary myelofibrosis (PMF)?
   b) Discuss the dose modifications in patients being treated for PMF.
   c) When is it indicated in polycythemia vera?

4. COVID-19: 4+4+2
   a) What coagulation abnormalities do we see with COVID-19?
   b) How do these differ from Disseminated intravascular coagulation (DIC)?
   c) What prognostic tests/values have been found to be useful in prediction of hypercoagulable state?

5. Anti-coagulation in COVID-19: 3+3+4
   a) What are the current guidelines for thrombo-prophylaxis in moderate and severe COVID-19 patients?
   b) What recommendations are there for patients on ventilator in the ICU?
   c) Discuss evidence for or against extended prophylaxis very therapeutic anticoagulation.

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6. In acute myeloid leukemia discuss- 5+5
   a) Molecular risk stratification and methods for assessment of measurable minimal residual disease (MRD) assessments.
   b) Which molecular targets cannot be used for measurable residual disease assessment (MRD). Explain why?

7. a) How do patients with primary hemostatic defects present? 4+3+3
   b) Describe the platelet function reports in a patient of Glanzmann thrombasthenia? How will you confirm the diagnosis?
   c) How should such patients be managed? What complications are anticipated?

8. A 14-year-old boy receives induction therapy for B cell acute lymphoblastic leukemia. After induction, he has measurable residual disease(MRD) positive. 4+4+2
   a) Discuss what therapy options are now indicated for him?
   b) If he becomes MRD negative, what is the prognosis? On what factors does ALL prognosis depend?
   c) What should be the best therapy option now?

9. a) What novel non-factor haemophilia agent is approved for Hemophilia A? 3+3+4
   b) What is the recommended dose and mode of administration?
   c) How does this product work? How can it be monitored?

10. a) How do you risk stratify myelodysplastic syndrome? 4+3+3
    b) How do molecular mutations affect therapy choices?
    c) In a patient with low risk myelodysplastic syndrome, what options are there for treating anemia?

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