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18/06/2018.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

POSTGRADUATE DIPLOMA IN CLINICAL HAEMATOLOGY
EXAMINATION – JUNE 2018

Date: 18th June 2018 **Time:** 1.00 p.m. – 4.00 p.m.

Answer **four (04)** questions only.
Answer each question **in a separate book.**
All questions carry equal marks.

PAPER I - ESSAY

1. Discuss the pathophysiology, diagnosis, complications, risk stratification and principles of treatment in essential thrombocythemia. (100 marks)

2. A 4-year-old boy with severe haemophilia A has developed inhibitors. Describe the genetic basis, clinical presentation, laboratory confirmation of inhibitors and outline the management options available for this patient. (100 marks)

3. Write short notes on

   3.1. type 1 haemochromatosis (30 marks)

   3.2. diagnosis of haemophagocytic syndrome (30 marks)

   3.3. haematological manifestations in renal disease (40 marks)

4. Discuss complement mediated haemolytic anaemias giving examples and mechanism of haemolysis in each of them. (100 marks)

5. Discuss pathogenesis, diagnosis, clinical staging and prognostic factors of chronic lymphocytic leukaemia. (100 marks)

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POSTGRADUATE DIPLOMA IN CLINICAL HAEMATOLOGY
EXAMINATION - JUNE 2018

Date: 19th June 2018 **Time:** 9.00 a.m. – 12.00 noon

Answer **six (06)** questions only.
Answer each question **in a separate book.**
All questions carry equal marks.

PAPER II
STRUCTURED ESSAY QUESTIONS (SEQ)

1. Briefly discuss how you would select red cells for transfusion in following conditions.

   1.1. Warm autoimmune haemolytic anaemia. (40 marks)

   1.2. Immediate post-transplant period for a recipient of an ABO mismatched haemopoietic stem cell transplant. (30 marks)

   1.3. Alloimmune haemolytic anaemia in foetus and new born. (30 marks)

2.

   2.1. List major entities of acute myeloid leukemia (AML) and related neoplasms according to 2016 revised WHO classification. (30 marks)

   2.2. According to 2016 revised WHO classification, what are the newly introduced two provisional entities of acute myeloid leukemia under AML with recurrent genetic abnormalities? (10 marks)

   2.3. Briefly outline the prognostic risk groups of AML based on cytogenetic and molecular profile. (60 marks)

3.

   3.1. Outline the biochemical basis of megaloblastic anaemia. (20 marks)

   3.2. Briefly explain the tissue effects in cobalamin and folate deficiency. (30 marks)

   3.3. Briefly describe the findings of routine laboratory investigations in the above deficiency state (3.2). (30 marks)

   3.4. Outline the treatment of megaloblastic anaemia in cobalamin deficiency. (20 marks)

4. Assuring quality in preanalytical and analytical phase is a major responsibility of a haematologist.

   4.1. Discuss briefly how you would assure quality in preanalytical phase of prothrombin time (PT) testing. (50 marks)

   4.2. Discuss international sensitivity index (ISI) and its importance in PT testing. (20 marks)

   4.3. A laboratory finds a 3SD deviation of internal quality control (IQC) results for PT in automated testing. Outline how you would find the cause for this deviation. (30 marks)

5. Fanconi anaemia was suspected in a 5-year-old boy presented with persistent pancytopenia.

   5.1. Discuss the clinical features you would expect in this child. (25 marks)

   5.2. Briefly discuss the molecular basis of Fanconi anaemia. (25 marks)

   5.3. Discuss how you would investigate this child. (30 marks)

   5.4. List two other inherited marrow failure syndromes presenting with pancytopenia stating diagnostic test/s for each of them. (20 marks)

6. A patient who needed platelet transfusions was suspected of having platelet refractoriness.

   6.1. What is platelet refractoriness? (30 marks)

   6.2. List the causes of platelet refractoriness. (20 marks)

   6.3. What factors influence the quality of platelets in a platelet pack? (30 marks)

   6.4. State how you would assess the quality of a platelet pack. (20 marks)

7. A 45-year-old man presented with splenomegaly, portal vein thrombosis and a platelet count of 90×10^9/L.

   7.1. List the possible causes for this presentation. (35 marks)

   7.2. Briefly describe how you would investigate this patient. (35 marks)

   7.3. Briefly outline the management of this patient. (30 marks)