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**UNIVERSITY OF JAFFNA, SRI LANKA**  
**BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES**  
**FOURTH YEAR SECOND SEMESTER EXAMINATION – MARCH 2019**  
**MLSIH 4225 - IMMUNOHAEMATOLOGY**

**PAPER II**

**Date: 11.03.2019**

**Time: 2 ½ Hours**

**ANSWER ALL EIGHT QUESTIONS**

1.
  - 1.1. Write down the basic procedures for the investigation of a suspected immediate transfusion reaction. (20 Marks)
  - 1.2. Explain the reasons for “Mixed field” positive Direct Antiglobulin Test results in a delayed hemolytic transfusion reaction. (30 Marks)
  - 1.3. Name the non haemolytic delayed transfusion reactions. (20 Marks)
  - 1.4. Draw a chart for HIV testing of donor blood sample in a microbiology laboratory in blood service. (30 Marks)
  
2. Write short notes on,
  - 2.1. Frozen red cells. (25 Marks)
  - 2.2. Measurement of feto - maternal haemorrhage. (25 Marks)
  - 2.3. Leucoreduction. (25 marks)
  - 2.4. “Broad spectrum” Anti Human Globulin reagent. (25 Marks)
  
3.
  - 3.1. State the main reasons for in vivo mediated red cell destruction. (20 marks)
  - 3.2. List the types of Auto immune haemolytic anaemia (AIHA). (20 Marks)
  - 3.3. Mention the uses of Direct Antiglobulin Test (DAT) and its limitations. (30 marks)
  - 3.4. Briefly describe the important characteristics of paroxysmal cold haemoglobinuria. (30 Marks)
  
4.
  - 4.1. Define the terms “Quality Assurance” and “Quality Control” in blood bank. (40 marks)
  - 4.2. List the differences between internal and external quality schemes in blood bank. (20 Marks)

- 4.3. Mention the importance of “Standard Operating Procedures (SOP) in blood bank. (20 Marks)
- 4.4. Briefly describe the possible consequences of not following a particular SOP. (20 Marks)
- 5.
- 5.1. List the antigen present on the human platelets. (20 Marks)
- 5.2. Describe the Human Platelet Antigen(HPA) system. (30 Marks)
- 5.3. List the tests used for platelet typing. (20 marks)
- 5.4. What is meant by “post transfusion purpura”? (30 Marks)
- 6.
- 6.1. Define the HLA system. (20 marks)
- 6.2. Briefly describe the clinical importance of HLA antibodies and its formation. (20 marks)
- 6.3. Give the molecular techniques which are commonly used for HLA Typing. (20 marks)
- 6.4. Give the advantages of using molecular methods over serological typing methods for detecting HLA types. (20 Marks)
- 6.5. Mention the limitations of using molecular methods. (20 Marks)
7. Flowcytometry is very useful in the diagnosis of haematological disorders.
- 7.1. Describe the principle of flowcytometry. (40Marks).
- 7.2. Briefly outline how cell properties are evaluated by using flowcytometry. (20 Marks)
- 7.3. List the applications of flowcytometry. (20 Marks)
- 7.4. Briefly outline the sample quality required in flowcytometry. (20Marks)
8. Quality management in medical laboratories is very important to assure reliability of test results.
- 8.1. Briefly describe how would you assure the quality of the environment in haematology.(40Marks)
- 8.2. In a Haematologylaboratory, the management noted 20% samples received are in poor quality. Discuss “poor quality samples” in haematology. (30 Marks)
- 8.3. Briefly discuss on basic safety in a haematology laboratory. (30 Marks)