

**Cork Institute of Technology**

**Masters in Biomedical Sciences - Award**

**(NFQ – Level 9)**

**Summer 2007**

**BM5007 – Advanced Haematology**

**(Time: 3 Hours)**

Dr G. Beastall  
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**Answer 4 Questions**

**Use a Separate Answer Book for Each Question**

**Question 1.** Describe the clinical presentation, molecular pathology and laboratory diagnosis of any two platelet disorders.

**Question 2.** Should the diagnosis of tropical diseases remain a daunting enigma in the modern Irish clinical laboratory? Outline a strategy as to how you would dispel these fears and aid in the methodology of diagnosis, paying particular reference to Plasmodium Infections.

**Question 3.** Discuss the applications of flow cytometry to Haematology.

**Question 4.** Write short notes on two of the following.

- a. Oncogenes and the mechanism by which they promote cell growth
- b. Clinical management of hematological malignancies.
- c. The management of severe Factor IX deficiency in a two year old boy
- d. The diagnosis and management of von Willebrand's disease.

**Question 5.** Thrombophilia screens can be significantly influenced by pre-analytical variables. Discuss how these variables may adversely affect the tests involved.

**Question 6.** Discuss the haematological challenges in relation to haemoglobinopathies, presented by the recent influx of emigrants from Southern Europe, Africa and Asia. What Laboratory Protocols would you put in place to deal with such challenges?