

Reg. No.

**MANIPAL UNIVERSITY**  
**SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2013**  
**SUBJECT: CLINICAL BIOCHEMISTRY**

Monday, June 10, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

**Answer ALL questions. Draw diagrams wherever necessary.**

- 1A. Write indications for liver function tests. Discuss standard LFT.
  - 1B. Define and classify enzymes. Write a note on factors affecting enzyme activity.
  - 1C. Describe the mechanism of regulation of blood sugar level. Add a note on diabetes mellitus.
- (10×3 = 30 marks)

**2. Write detailed notes on:**

- 2A. Sodium potassium pump
- 2B. Creatinine clearance test
- 2C. Glucosuria
- 2D. HbF
- 2E. Immunoglobulin

(6×5 = 30 marks)

**3. Write short notes on:**

- 3A. Sickle cell trait
- 3B. Vanden Bergh reaction
- 3C. Respiratory alkalosis
- 3D. Ceruloplasmin
- 3E. Transaminases

(4×5 = 20 marks)



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**SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2013**

**SUBJECT: HAEMATOLOGY AND CLINICAL PATHOLOGY**

Wednesday, June 12, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL questions. Draw diagrams wherever necessary.**

- 1A. Describe the structure of hemoglobin. Describe the standard method used for estimation of hemoglobin.
- 1B. Enumerate various method of blood collection. Discuss venipuncture.
- 1C. Define and classify anaemia. Discuss the laboratory diagnosis of megaloblastic anemia due to vitamin B<sub>12</sub> deficiency.

(10×3 = 30 marks)

2. **Write detailed notes on:**

- 2A. Constituents of blood
- 2B. Bleeding time
- 2C. Iron deficiency anaemia
- 2D. LE cell preparation
- 2E. Urine collection

(6×5 = 30 marks)

3. **Write short notes on:**

- 3A. Poikilocytosis
- 3B. Rothera's test
- 3C. Hemoglobin degradation
- 3D. Lymphocytes
- 3E. Prothrombin time

(4×5 = 20 marks)



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**SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2013**  
**SUBJECT: IMMUNOHAEMATOLOGY**

Friday, June 14, 2013

Time: 10:00-11.30 Hrs.

Max. Marks: 40

 **Answer ALL the questions.**

1. Explain about ABO blood grouping procedures.

(10 marks)

2. **Write notes on:**

2A. Coomb's cross match

2B. Types of blood donors

2C. MNSs blood group system

2D. Exchange transfusion

2E. Platelet antigen

2F. ELISA

(5×6 = 30 marks)

