

Reg. No.

**MANIPAL UNIVERSITY**  
**SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2016**  
**SUBJECT: CLINICAL BIOCHEMISTRY**

Wednesday, June 15, 2016

Time: 10:00-13:00 Hrs.

Max. Marks: 80

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

- 1A. Define and classify diabetes mellitus. Discuss symptoms and complications of it.
- 1B. Define and classify enzymes. Write a note on factors affecting enzyme activity.
- 1C. Elaborate on standard liver function tests.

(10 marks × 3 = 30 marks)

**2. Write detailed notes on:**

- 2A. Plasma proteins
- 2B. Isoenzymes
- 2C. Glucosuria
- 2D. Cholesterol
- 2E. Transaminases

(6 marks × 5 = 30 marks)

**3. Write short notes on:**

- 3A. Lactate dehydrogenase
- 3B. Water intoxication
- 3C. Sickle cell trait
- 3D. Clearance test
- 3E. HDL

(4 marks × 5 = 20 marks)



Reg. No.									
----------	--	--	--	--	--	--	--	--	--

**MANIPAL UNIVERSITY**  
**SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2016**  
**SUBJECT: HAEMATOLOGY AND CLINICAL PATHOLOGY**

Friday, June 17, 2016

Time: 10:00-13:00 Hrs.

Max. Marks: 80

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

- 1A. Discuss in brief the principle, procedure, normal values and clinical significance of PCV.
- 1B. Define and classify anaemia. Describe etiology, clinical features, and laboratory diagnosis of hemolytic anaemia.
- 1C. Elaborate semen analysis. Add a note on morphology of spermatozoa.

(10 marks × 3 = 30 marks)

**2. Write detailed notes on:**

- 2A. Differential count
- 2B. AML
- 2C. Myelopoiesis
- 2D. Total WBC count
- 2E. Hemophilia

(6 marks × 5 = 30 marks)

**3. Write short notes on:**

- 3A. Spherocytes
- 3B. Benedict's test
- 3C. Bleeding time
- 3D. Bone marrow aspiration
- 3E. Perl's reaction

(4 marks × 5 = 20 marks)



Reg. No.									
----------	--	--	--	--	--	--	--	--	--

**MANIPAL UNIVERSITY**  
**SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2016**  
**SUBJECT: IMMUNOHAEMATOLOGY**

Monday, June 20, 2016

Time: 10:00-11.30 Hrs.

Max. Marks: 40

---

☞ **Answer ALL the questions. Draw diagram wherever necessary.**

1. List the transfusion transmitted diseases. Write about lab investigations for transfusion transmitted diseases.

(3+7 = 10 marks)

2. **Write detailed notes on:**

- 2A. Rh (D) hemolytic disease of newborn
- 2B. Antiglobulin tests
- 2C. Plasma pheresis and application of plasma pheresis in clinical medicine
- 2D. Acute transfusion reactions
- 2E. Donor selection

(6 marks × 5 = 30 marks)

