

## MANIPAL UNIVERSITY

## SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2007

## SUBJECT: CLINICAL BIOCHEMISTRY

Thursday, June 07, 2007

Time: 3 Hrs.

Max. Marks: 80

✍ Answer all questions. Draw diagrams if necessary.

1. Elaborate on HbS and its detection. Briefly explain the sickle cell syndromes. (10 marks)
2. Describe the chemistry and functions of plasma proteins. Explain the quantitative determination of plasma proteins in detail. (10 marks)
3. Define enzyme. Discuss about the enzymes indicating hepatocellular damage. (10 marks)
4. Write detailed notes on:
  - 4A. Diabetes Mellitus.
  - 4B. Sex Hormones.
  - 4C. Respiratory regulation of pH.
  - 4D. Intravenous GTT.
  - 4E. Insulin clearance test.
  - 4F. Hyper lipoproteinemias.
  - 4G. Jaundice.(5×7 = 35 marks)
5. Write short notes on:
  - 5A. HDL cholesterol.
  - 5B. Gammaglobulins.
  - 5C. SGPT.
  - 5D. Beta HCG.
  - 5E. Respiratory alkalosis.(3×5 = 15 marks)



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## MANIPAL UNIVERSITY

SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: HAEMATOLOGY AND CLINICAL PATHOLOGY

Friday, June 08, 2007

Time: 3 Hrs.

Max. Marks: 80

✍ Answer all questions.

1. Describe the various methods of estimation of hemoglobin. Explain the standard method of estimation of hemoglobin with a note on the advantages of this method.

(6+6+3 = 15 marks)

2. Describe the physical examination of faeces. What is the principle and significance of occult blood test in faeces? What are the various methods of preparation of stool specimens for microscopy?

(4+5+6 = 15 marks)

3. Write short notes on:

- 3A. Precautions taken in the preanalytic phase of coagulation tests.  
3B. Wintrobe's tube and its uses.  
3C. Sperm count.  
3D. Composition and preparation of Leishman stain  
3E. Tests for proteins in urine

(6×5 = 30 marks)

4. Describe the principle, procedure and interpretation of the following test.

- 4A. Benedict's test.  
4B. Prothrombin time.  
4C. Osmotic fragility test.  
4D. LE cell phenomenon.

(5×4 = 20 marks)



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# MANIPAL UNIVERSITY

SECOND YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: IMMUNOHAEMATOLOGY

Saturday, June 09, 2007

Time: 1½ Hrs.

Max. Marks: 40

**Answer all questions.**

1. Write in detail about direct and indirect coombs test.

(10 marks)

2. Write short note on:

2A. Rh blood group system.

2B. Autologous blood transfusion.

2C. Processing of donor blood.

2D. Storage of blood.

2E. Complications of blood transfusion.

(6×5 = 30 marks)

