Reg. No.										

MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: HISTOPATHOLOGICAL TECHNIQUES
(NEW REGULATION)

Thursday, June 08, 2017

Time: 10:00-13:00 Hrs. Max. Marks: 80

✍ **Answer ALL questions.**

1A. Define Dehydration. Discuss the dehydrating agents, their advantages and disadvantages. Describe the procedure for dehydration.

(2+5+4+4 = 15 marks)

1B. Describe the advantages and disadvantages of frozen sections. Discuss the technique of cutting frozen sections. Add a note on staining of frozen section.

(4+7+4 = 15 marks)

2. **Write detailed notes on:**

2A. Methods of decalcification
2B. Staining of collagen fibers
2C. Picric acid containing fixatives
2D. Mayer's mucicarmine stain for mucin
2E. Embedding tissue in paraffin wax
2F. Adhesives
2G. Honing and stropping

(5 marks × 7 = 35 marks)

3. **Write short note on:**

3A. Ehrlich's Haematoxylin
3B. Blueing
3C. Mordants
3D. Post chromatization
3E. Aldehyde fixatives

(3 marks × 5 = 15 marks)

Reg. No.										

MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: MYCOLOGY, VIROLOGY AND PARASITOLOGY
(NEW REGULATION)

Saturday, June 10, 2017

Time: 10:00-13:00 Hrs. Max. Marks: 80

- **Answer ALL questions.**
- **Draw diagrams if necessary.**

1. Describe the pathogenesis and laboratory diagnosis of HIV infection.

(7+8 = 15 marks)

2. Describe the life cycle, pathogenesis and lab diagnosis of Ascaris lumbricoides

(5+4+6 = 15 marks)

3. **Write briefly on the followings:**

3A. Antigenic structure and antigenic shifts and drifts in Influenza virus
3B. Pathogenesis and Laboratory diagnosis of Sporotrichosis
3C. Opportunistic infection caused by Pneumocystic jeroveci
3D. Morphology and lab diagnosis of Dracunculus medinensis
3E. Life cycle and pathogenesis of Anchylostoma duodenale
3F. Morphology and pathogenesis of Rabies
3G. Pathogenesis and lab diagnosis of Adenovirus

(5 marks × 7 = 35 marks)

4. **Write short notes on:**

4A. Trichomonas vaginalis
4B. QBC test
4C. Penicilliosis
4D. Tzanck smear
4E. Potato dextrose agar

(3 marks × 5 = 15 marks)

Reg. No.										

MANIPAL UNIVERSITY

THIRD SEMESTER B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: BLT 201: BASIC HEMATOLOGY AND CLINICAL PATHOLOGY

(2015 SCHEME)

Thursday, June 15, 2017

Time: 10.00-13.00 Hrs. Max. Marks: 80

✍ **Answer ALL questions.**

1A. Enumerate different methods of hemoglobin estimation. Discuss principle, procedure, normal level and clinical significance of Sahli's method.

1B. Mention different components of blood. Discuss different types of leucocytes.

1C. Discuss preparation of urine for microscopic examination. Add a note on different casts and any four crystals found in urine with clinical significance.

(10 marks × 3 = 30 marks)

2. **Write detailed notes on:**

2A. Principle, procedure, clinical significance of clot retraction

2B. Preparation of CSF for different types of cells and its clinical significance

2C. Principle, procedure, normal range and clinical significance of PCV by Wintrobe's method

2D. Romanowsky stain. Give two example, discuss any one

2E. Role of vascular components in hemostasis.

(6 marks × 5 = 30 marks)

3. **Write short notes on:**

3A. Principle of blood cell count using Coulter autoanalyser.

3B. Different abnormal structure of spermatozoa

3C. Crystals found in synovial fluid with clinical significance

3D. Indications and contraindications for bone marrow aspiration

3E. Intrinsic pathway of coagulation

(4 marks × 5 = 20 marks)

Reg. No.										

MANIPAL UNIVERSITY

THIRD SEMESTER B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: BLT 205: CLINICAL BIOCHEMISTRY – I

(2015 SCHEME)

Saturday, June 17, 2017

Time: 10.00-13.00 Hrs. Max. Marks: 80

✍ **Answer ALL questions.**

1A. What are the sources of blood glucose? Discuss regulation of blood glucose in our body.

1B. Define and classify lipoproteins. Discuss structure and separation of lipoproteins.

1C. Name enzymes of hepatocellular damage. Elaborate on Transaminases.

(10 marks × 3 = 30 marks)

2. **Write detailed notes on:**

2A. Enzymatic methods for blood glucose estimation

2B. Principle, requirements and clinical significance of protein electrophoresis

2C. Hyperlipoproteinemia

2D. Glucose tolerance test

2E. Different methods for estimation of cholesterol and triglycerides

(6 marks × 5 = 30 marks)

3. **Write short notes on:**

3A. Functions of albumin

3B. Alpha fetoproteins

3C. Effect of pH on enzyme activity

3D. IgG

3E. Glycated hemoglobin

(4 marks × 5 = 20 marks)

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MANIPAL UNIVERSITY

THIRD SEMESTER B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: BLT 209: IMMUNOHEMATOLOGY

(2015 SCHEME)

Tuesday, June 20, 2017

Time: 10.00-11.30 Hrs. Max. Marks: 40

✍ **Answer ALL questions.**

1. Define antibody. List the classes of immunoglobulin. Explain about basic structure of immunoglobulin.

(1+2+7 = 10 marks)

2. **Write detailed notes on the following:**

2A. Classical complement pathway
2B. ICT and its significance
2C. Reverse blood grouping
2D. HDN

(5 marks × 4 = 20 marks)

3. **Write short notes on the following:**

3A. Bombay blood group
3B. Major and Minor cross matching
3C. Lectins
3D. Kell blood group system
3E. Antigens of Rh blood group

(2 marks × 5 = 10 marks)

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MANIPAL UNIVERSITY

THIRD SEMESTER B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: BLT 213: IMMUNOLOGY

(2015 SCHEME)

Thursday, June 22, 2017

Time: 10.00-11.30 Hrs. Max. Marks: 40

Answer ALL questions.

1. Define immune response. Describe Humoral and cell mediated immune response.

(2+4+4 = 10 marks)

2. **Write detailed notes on:**

2A. Classical pathway of complement activation

2B. Erythroblastosis fetalis

2C. Organ specific autoimmune disorders

2D. DNA vaccines

(5 marks × 4 = 20 marks)

3. **Write short notes on:**

3A. Define and classify hypersensitivity reactions

3B. Discuss Phagocyte dysfunctional diseases

3C. Define Monoclonal antibody. Mention its uses.

3D. Write a note on Antigenic determinants

3E. Explain anatomical barriers of innate immunity

(2 marks × 5 = 10 marks)