MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: HISTOPATHOLOGICAL TECHNIQUES

(COMMON FOR BOTH OLD AND NEW REGULATION)

Tuesday, June 08, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

✍ **Answer ALL questions.**

1. **Answer the following:**

1A. Define Decalcification. Discuss the different methods of decalcification and detection of end point by chemical method.

1B. What is collagen? Write the principle, procedure and reagent preparation for collagen staining methods.

$(15\times2 = 30 \text{ marks})$

2. **Write a detailed note on:**

2A. Staining and differentiation.

2B. Alumn haematoxylin.

2C. Frozen sections and rapid staining technique.

2D. Gomori's method for Haemosiderin demonstration.

2E. Adhesives.

2F. Microanatomical fixatives.

2G. Masson Fontana method for melanin.

$(5\times7 = 35 \text{ marks})$

3. **Write short notes on:**

3A. Post chromatization.

3B. Technique of mounting and properties of ideal mounting media.

3C. Metachromatic dyes.

3D. Oil Red O method for fat.

3E. Care of Microtome and microtome Knife.

$(3\times5 = 15 \text{ marks})$

MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: CYTOLOGY AND CYTOGENETICS

(COMMON FOR BOTH OLD AND NEW REGULATION)

Thursday, June 10, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

✍ **Answer ALL questions. Draw diagram if necessary.**

1A. Explain the cytology of Respiratory tract.

1B. Write in detail about morphological character of cancer cell.

(15×2 = 30 marks)

2. **Write notes on:**

2A. Cytology of normal urine.

2B. Normal cytology of endometrium.

2C. FNAC.

2D. Heterochromatin.

2E. Preparation of cell block by bacterial agar method.

2F. Exfoliative cytology.

2G. Flow cytometry.

(5×7 = 35 marks)

3. **Write briefly on:**

3A. Stratified squamous epithelia.

3B. Collection of sputum for cytology.

3C. Preservation of fluid specimen.

3D. Mailing of unstained smear.

3E. Destaining of slides.

(3×5 = 15 marks)

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MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: GENERAL BACTERIOLOGY, IMMUNOLOGY AND SYSTEMIC BACTERIOLOGY

(NEW REGULATION)

Saturday, June 12, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

✍ **Answer the following questions:**

1.   Define agglutination and precipitation reaction. Discuss in detail precipitation reactions.

(15 marks)

2.   Discuss the pathogenesis and laboratory diagnosis of pulmonary tuberculosis.

(15 marks)

3.   Write short essays on the following:

3A.   Bacterial conjugation.

3B.   Sterilization by filtration.

3C.   Classical pathway of complement activation.

3D.   Laboratory diagnosis of Enteric fever.

3E.   Pathogenesis of diphtheria.

(7×5 = 35 marks)

4.   Write short notes on:

4A.   Type II hypersensitivity

4B.   IgG

4C.   CAMP Test

4D.   Satellitism

4E.   Pathogenesis of bacillary dysentery.

(3×5 = 15 marks)

MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: DIAGNOSTIC BACTERIOLOGY, PARASITOLOGY AND IMMUNOLOGY

(OLD REGULATION)

Saturday, June 12, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

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1. List the various antigen-antibody reactions performed in the laboratory and discuss in detail agglutination reaction.

    (5+10 = 15 marks)

2. List the nematodes presenting the gastrointestinal tract and discuss the lifecycle, clinical manifestations and laboratory diagnosis of Ancylostoma duodenale.

    (3+12 = 15 marks)

3. **Write short essay on:**

3A. Bacterial growth curve.

3B. Bacillary dysentery.

3C. Laboratory diagnosis of V.cholerae.

3D. Syphilis.

3E. Laboratory diagnosis of Mycobacterium tuberculosis.

3F. Blood culture.

3G. Giardia lamblia.

    (5×7 = 35 marks)

4. **Write short notes on:**

4A. Flagella.

4B. Contributions of Robert Koch.

4C. Enrichment media.

4D. Coagulase test.

4E. E-test.

    (3×5 = 15 marks)

MANIPAL UNIVERSITY
THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010
SUBJECT: BIOSTATISTICS
(COMMON FOR BOTH OLD AND NEW REGULATION)
Tuesday, June 15, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

✍ **Answer ALL questions.**

1A. State the uses of Statistics in health science.
1B. Discuss about the various scales of measurement.

(5+5 = 10 marks)

2A. Describe the process of Simple random sampling using random number table. Enumerate the merits and demerits of simple random sampling.
2B. Differentiate histogram and bar diagram.

((4+2)+4 = 10 marks)

3A. What is the meaning of central tendency? Discuss the various measures of Central tendency.
3B. Describe the interpretation of Scatter diagram with sketches.

(6+4 = 10 marks)

4A. Explain the meaning of ratio and proportion with example.
4B. Define the health information system. List the components of health information system.

(4+6 = 10 marks)

5A. What is epidemiology? What are the aims of epidemiology?
5B. Write short note on case series design.

((2+3)+5 = 10 marks)

6.   **Write short note on:**

6A. Discrete and continuous variables.
6B. Inclusive and exclusive type class intervals.
6C. Normal distribution.
6D. Quartiles and percentiles.
6E. Characteristics of good hypothesis.
6F. Registration of vital events.

(5×6 = 30 marks)

MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: MYCOLOGY AND VIROLOGY

(OLD REGULATION)

Thursday, June 17, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

✍ **Answer all questions. Draw diagrams if necessary.**

1A.   Discuss the subcutaneous fungal infections and its laboratory diagnosis.

1B.   Elaborate on Transportation and Processing of virological specimens.

(15×2 = 30 marks)

2.   **Write detailed notes on:**

2A.   LPCB preparation.

2B.   AIDS.

2C.   Saprophytic fungi.

2D.   Influenza virus.

2E.   Fungal media.

2F.   Nucleic acid based tests for the detection of viral infections.

2G.   Penicillosis.

(5×7 = 35 marks)

3.   **Write short notes on:**

3A.   Oppurtunistic fungi.

3B.   Cytopathic effect.

3C.   Piedras.

3D.   Hepatitis B virus.

3E.   Rapid growers.

(3×5 = 15 marks)

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MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: MYCOLOGY, VIROLOGY AND PARASITOLOGY

(NEW REGULATION)

Thursday, June 17, 2010

Time: 14:00-17:00 Hrs.   Max. Marks: 80

✍   **Answer all Questions. Draw diagrams if necessary.**

1.   Classify mycoses with examples. Explain the laboratory diagnosis of fungal infections.

(15 marks)

2.   Describe the life cycle of Plasmodium species. Add a note on laboratory diagnosis of malaria.

(15 marks)

3.   Write detailed notes on the following:

3A.   Cultivation of viruses.

3B.   HIV.

3C.   Dermatophytes.

3D.   Entamoeba histolytica.

3E.   General features of cestodes.

3F.   Rabies.

3G.   Enterobius vermicularis.

$(5\times7 = 35$ marks)

4.   Write short notes on the following:

4A.   Viral replication

4B.   Giardiasis

4C.   Negri bodies

4D.   Trichuriasis

4E.   Floatation techniques for stool examination.

$(3\times5 = 15$ marks)