

MANIPAL UNIVERSITY**THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2008****SUBJECT: HISTOPATHOLOGICAL TECHNIQUES**

Monday, June 16, 2008

Time: 3 Hrs.

Max. Marks: 80

✍ Answer ALL questions.

1. Answer the following.

- 1A. What is a Microtome? Mention the different types of microtome. Explain the parts and mode of operation of each microtome.
- 1B. Classify carbohydrates. Discuss reagent preparation and procedure for PAS staining. Add a note on Fixatives used for PAS staining.

(15×2 = 30 marks)

2. Write detailed notes on:

- 2A. Staining techniques used for collagen fibres.
- 2B. Fixation and cutting of small biopsies.
- 2C. Moulds used for embedding and technique of embedding.
- 2D. Metachromasia.
- 2E. Southgate's modification of Mayer's Mucicarmine stain.
- 2F. Microanatomical fixatives.
- 2G. Verhoeff's staining for Elastic fibres.

(5×7 = 35 marks)

3. Write short notes on:

- 3A. Physical theory of staining
- 3B. H & E staining
- 3C. Staining and Impregnation
- 3D. Picric acid containing fixatives
- 3E. Lubricants used for knife sharpening.

(3×5 = 15 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2008

SUBJECT: CYTOLOGY AND CYTOGENETICS

Tuesday, June 17, 2008

Time: 3 Hrs.

Max. Marks: 80

✍ Answer ALL questions. Draw diagram if necessary.

- 1A. Explain about cytological hormonal evaluation of female genital tract.
- 1B. Explain about normal cytology of urine.

(15×2 = 30 marks)

2. Write notes on:

- 2A. Mitosis
- 2B. FNAC
- 2C. Foreign bodies in sputum
- 2D. Cytocentrifuge preparation
- 2E. Preservation of fluid specimen
- 2F. Barr body
- 2G. PAS staining.

(5×7 = 35 marks)

3. Write briefly on:

- 3A. Squamous metaplasia
- 3B. Characteristics of cancer cell
- 3C. Carbowax fixative
- 3D. Collection of sputum for cytology
- 3E. Klinefelter's syndrome.

(3×5 = 15 marks)



MANIPAL UNIVERSITY**THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2008****SUBJECT: DIAGNOSTIC BACTERIOLOGY, PARASITOLOGY AND IMMUNOLOGY**

Wednesday, June 18, 2008

Time: 3 Hrs.

Max. Marks: 80

1. With the help of a neat labeled diagram explain the structure and functions of bacterial cell.
(6+4+5 = 15 marks)
2. Explain the morphology of the organism causing syphilis and add a note on the laboratory diagnosis of syphilis.
(3+12 = 15 marks)
3. Write short essay on:
 - 3A. Acquired immunity.
 - 3B. Bacterial growth curve.
 - 3C. Laboratory diagnosis of cholera.
 - 3D. Differences between T and B cells.
 - 3E. Working principle and uses of autoclave.
 - 3F. Classification of leprosy based on the immune status of individual.
 - 3G. Laboratory diagnosis of anthrax.(5×7 = 35 marks)
4. Write short notes on:
 - 4A. Nagler's test.
 - 4B. Giardiasis.
 - 4C. Casoni's test.
 - 4D. Cryptosporidiosis.
 - 4E. Enrichment medium.(3×5 = 15 marks)



MANIPAL UNIVERSITY**THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2008****SUBJECT: MYCOLOGY AND VIROLOGY**

Thursday, June 19, 2008

Time: 3 Hrs.

Max. Marks: 80

✍ Answer ALL questions. Draw diagrams if necessary.

1. Discuss the systemic mycosis and its lab diagnosis.

(15 marks)

2. Elaborate on Anti viral agents.

(15 marks)

3. Write detailed notes on:

3A. Scotch tape preparations of fungal colonies

3B. Detection of virus growth in cell cultures

3C. Fungal media

3D. Rabies

3E. Penicillosis

3F. Interferons

3G. Piedras

(5×7 = 35 marks)

4. Write Short notes on:

4A. Oppurtunistic fungi

4B. Negri bodies

4C. Rapid growers

4D. Hepatitis B virus

4E. Saprophytic fungi

(3×5 = 15 marks)



MANIPAL UNIVERSITY

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2008

SUBJECT: BIOSTATISTICS

Friday, June 20, 2008

Time: 3 Hrs.

Max. Marks: 80

1. Differentiate Research method and research methodology. (5 marks)

2. What is a hypothesis? Give two examples. (5 marks)

3. Explain Ratio and interval scales of measurement with example. (5 marks)

4. Differentiate Discrete and continuous variables with example. (5 marks)

5. Discuss the relative merits and demerits of Simple random sampling. (5 marks)

6. Following are the IQ (Stanford-Binet test) of 5 year old children.

122	128	116	94	98	71	121	71	91	93	100	108
82	91	81	94	96	110	90	116	76	74	104	102
77	89	110	114	99	88	117	102				

Construct a frequency distribution for the data with class interval 70-80, 80-90...etc. (5 marks)

7. Following table shows the incidence of Malaria in Udupi district in the last five years. Represent the data by an appropriate diagram and interpret.

Year	2002	2003	2004	2005	2006
Incidence of Malaria per 10 thousand population	2	5	9	6	6

(5 marks)

8. The following are the weights in kilograms of a group of 10 students.
51, 48, 64, 61, 66, 54, 42, 64, 60, 69. Compute mean and median. (5 marks)

9. Define and explain quartiles of a distribution. (5 marks)

10. Explain with sketch the properties of Normal distribution. (5 marks)

11. State the merits and demerits of Karl Pearson's Coefficient of Correlation. (5 marks)
12. Define health information system. Enumerate the uses of health information system. (5 marks)
13. Define Crude death rate and Infant mortality rate. (5 marks)
14. Differentiate the terms Incidence and Prevalence with example. (5 marks)
15. State the aims of epidemiology. Discuss the usefulness and limitations of Cross-sectional studies. (3+3+4 = 10 marks)

