

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2005**SUBJECT: MICROBIOLOGY**

Tuesday, June 14, 2005

Time: 3 Hrs.

Max. Marks: 80

☞ Answer all questions

1. Describe the laboratory diagnosis and prophylaxis of *Corynebacterium diphtheriae*.
(8+7 = 15 marks)

2. Define and classify immunity. Explain innate immunity.
(2+3+10 = 15 marks)

3. Explain the pathogenesis and laboratory diagnosis of Enteric fever.
(5+10 = 15 marks)

4. Write short notes on:
 - 4A. Laboratory diagnosis of HIV infection
 - 4B. *Entamoeba histolytica*
 - 4C. VDRL test.(5×3 = 15 marks)

5. Write briefly on:
 - 5A. Gram's staining
 - 5B. Classification of Streptococci
 - 5C. Candidiasis
 - 5D. Elek's gel precipitation test.(5×4 = 20 marks)



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THIRD YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2005**SUBJECT: RESEARCH METHODOLOGY AND STATISTICS**

Wednesday, June 15, 2005

Time: 3 Hrs.

Max. Marks: 80

Answer all the questions.

- 1A. Discuss the role of Biostatistics in health care delivery system.
- 1B. What are the various types of variables in research? Give examples for each.
(5+5 = 10 marks)
2. Define sampling. What are the advantages of probability sampling? Briefly discuss the various types of probability sampling methods.
(1+2+7 = 10 marks)
- 3A. What is central tendency? Mention the measures of central tendency with merits and demerits.
(1+3+3 = 7 marks)
- 3B. In a study of depressed patients, it was found that the age at onset of depression for those in dysfunctional families was normally distributed with a mean of 30 years and a standard deviation of 9 years. If a depressed person is selected at random from a dysfunctional family, find the probability that the patient was
i) more than 21 years ii. Between 21 and 48 years.
(3 marks)
4. Define health information system. What are its uses? Mention the sources of health information system.
(1+3+6 = 10 marks)
5. Write short essays on:
(5×8 = 40 marks)
- 5A. Scales of measurement.
- 5B. Basic concepts of research.
- 5C. Role of diagrammatic presentation of data.
- 5D. Normal distribution.
- 5E. Concept of health and diseases.
- 5F. Hospital Statistics.
- 5G. Descriptive Epidemiological methods.
- 5H. Correlation with scatter diagram.



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THIRD YEAR B. Sc. M.L.T. DEGREE EXAMINATION – JUNE 2005

SUBJECT: PATHOLOGY

Thursday, June 16, 2005

Time: 3 Hrs.

Max. Marks: 80

Answer all questions.

1. Classify fixatives and discuss the role of potassium dichromate as a fixative.

(20 marks)

2. Discuss the preparation and procedure of mucin stains.

(20 marks)

3. Write short notes on:

3A. Microtome knives.

3B. Role of xylene as a clearing agent.

3C. D.P.X.

3D. Paraffin wax.

3E. Ripening.

3F. Stock solution of Eosin.

(10+10+5+5+5+5 = 40 marks)

