Reg. No.										

MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2009

SUBJECT: PATHOLOGY AND MICROBIOLOGY

Monday, June 01, 2009

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

✍ **Answer SECTION – A and SECTION – B in TWO separate answer books.**

SECTION – 'A' : PATHOLOGY : 40 MARKS

1. Define and classify anemias. List the causes and clinical features of Vitamin B12 deficiency anemia.

(4+4 = 8 marks)

2. Define atheroma. Mention its common sites and predisposing factors. What are its complications?

(1+2+2+2 = 7 marks)

3. Write short notes on:

3A. Pathogenesis of septic shock.
3B. Morphology of lepromatous leprosy.
3C. Complications of diabetes mellitus.
3D. Process of healing by secondary intention.
3E. Bronchiectasis-causes, types and clinical features.

(5×5 = 25 marks)

SECTION – 'B' : MICROBIOLOGY : 40 MARKS

✍ **Answer all the questions. Draw diagrams wherever necessary.**

4. Describe the structure of bacterial cell.

(7 marks)

5. Define and classify hypersensitivity. Describe anaphylaxis.

(1+2+5 = 8 marks)

6. Write short notes on any **FIVE**:

6A. VDRL test.
6B. Hot air oven.
6C. Cryptococcus.
6D. Antibiotic sensitivity tests.
6E. Prophylaxis of poliomyelitis.
6F. Mantoux test.

(5×5 = 25 marks)

Reg. No.										

MANIPAL UNIVERSITY

SECOND YEAR B. Sc. R.T. DEGREE EXAMINATION – JUNE 2009

SUBJECT: RESPIRATORY DISEASE PROCESS

Tuesday, June 02, 2009

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

Answer all the questions. Draw diagrams wherever necessary.

1. What are the routes of transmission of SARS virus? Discuss the role of respiratory therapist during a SARS epidemic.

(4+12 = 16 marks)

2. Describe the predisposing factors, pathogenesis, diagnosis and management of ARDS.

(4+4+4+4 =16 marks)

3. Write short notes on:

3A. Nebulized drugs in COPD.

3B. Describe various methods of eliminating an ingested poison.

3C. Diagnosis of pulmonary embolism.

3D. Tuberculous effusion.

3E. Grading of dyspnoea.

3F. Coal worker's pneumoconiosis.

(8×6 = 48 marks)

Reg. No.										

MANIPAL UNIVERSITY

SECOND YEAR B. Sc. R.T. DEGREE EXAMINATION – JUNE 2009

SUBJECT: DIAGNOSTIC TECHNIQUES

Wednesday, June 03, 2009

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

- **All questions are compulsory.**
- **Draw diagrams wherever necessary.**

1. What do you mean by equal pressure point? What is the significance of equal pressure point? Describe the method to measure the ability of the lungs to transfer gases across alveolar capillary membrane.

(4+4+8 = 16 marks)

2. Draw a normal spirogram and define tidal volume and vital capacity. Mention two respiratory care manoeuvres to improve functional residual capacity. What is the significance of measuring FRC?

(4+4+4+4 = 16 marks)

3. Write short notes on:

3A. Measurement and significance of peak expiratory flow rate in respiratory care.
3B. Radiological features of pneumothorax and pulmonary oedema.
3C. Various waves seen in CVP tracing.
3D. Life threatening arrhythmias and their treatment.
3E. Technique and transportation of arterial blood gas sample.
3F. Different views on chest X-ray.

(8×6 = 48 marks)

Reg. No.										

MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2009

SUBJECT: APPLIED CARDIOPULMONARY ANATOMY AND PHYSIOLOGY

Thursday, June 04, 2009

Time: 10:00-11:30 Hrs. Max. Marks: 40

- **Answer to the point. Unnecessary padding of answers will be counterproductive.**
- **Draw diagrams wherever necessary.**

1. With the help of appropriate diagrams, give a detailed account of muscles of respiration.

(16 marks)

2. Write short notes on:

2A. Determinants of blood pressure.

2B. Oxygen dissociation curve.

2C. Metabolic acidosis.

(8×3 = 24 marks)

Reg. No.										

MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2009

SUBJECT: RESPIRATORY THERAPY SCIENCE II

Friday, June 05, 2009

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

1. With the help of a diagram, describe mean airway pressure. Why is it important to monitor the mean airway pressure? Enumerate the factors and describe the way in which each of these factors affect mean airway pressure.

(4+4+8 = 16 marks)

2. List the most important physical signs and laboratory investigations, which you would review repeatedly while weaning a patient from mechanical ventilator. Describe any one method of weaning in detail.

(4+4+8 =16 marks)

3. Write short notes on:

3A. Trigger sensitivity.

(8 marks)

3B. Auto PEEP.

(8 marks)

3C. Write the indications, complications and the technique used in Incentive spirometry.

(2+2+4 = 8 marks)

3D. Compare and contrast between PSV and CPAP modes of ventilation.

(8 marks)

3E. Describe briefly the Type I, Type II and Type III respiratory failure. Enumerate clinical signs of respiratory failure.

(8 marks)

3F. Threshold resistors.

(8 marks)