

MANIPAL UNIVERSITY**SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2010****SUBJECT: PATHOLOGY AND MICROBIOLOGY**

Monday, June 07, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

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

SECTION – 'A' : PATHOLOGY : 40 MARKS

1. Define thrombosis. What are the factors affecting thrombosis. Mention the fate of a thrombus.
(2+3+3 = 8 marks)
2. Describe the classification and clinical features of leukemia.
(4+3 = 7 marks)
3. **Write short notes on:**
 - 3A. Emphysema.
 - 3B. Complications of diabetes mellitus.
 - 3C. Spread of tumors.
 - 3D. Secondary tuberculosis.
 - 3E. Healing by primary intention.(5×5 = 25 marks)

SECTION – 'B' : MICROBIOLOGY : 40 MARKS

4. Define and classify sterilization. Explain methods of dry heat sterilization.
(1+2+5 = 8 marks)
5. Enumerate organisms causing urinary tract infections. Describe the laboratory diagnosis of UTI.
(3+4 = 7 marks)
6. **Write short notes on any FIVE:**
 - 6A. Candidiasis
 - 6B. Bacterial flagella
 - 6C. Prophylaxis of Poliomyelitis
 - 6D. Gas gangrene
 - 6E. VDRL test
 - 6F. AIDS(5×5 = 25 marks)



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MANIPAL UNIVERSITY

SECOND YEAR B. Sc. R.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: RESPIRATORY DISEASE PROCESS

Wednesday, June 09, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

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

1. Classify persistent asthma and describe its stepwise management.

(16 marks)

2. Describe the risk factors, diagnosis and management of small cell carcinoma of lung.

(16 marks)

3. **Write short notes on:**

3A. Ventilator associated pneumonia.

3B. Management of ARDS.

3C. Chronic bronchitis.

3D. Asbestosis.

3E. Management of pneumothorax.

3F. Diagnostic techniques in Pulmonary Tuberculosis.

(8×6 = 48 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. Sc. R.T. DEGREE EXAMINATION – JUNE 2010****SUBJECT: DIAGNOSTIC TECHNIQUES**

Friday, June 11, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

✍ **Answer to the question and avoid padding of answers.**

1. Describe the method used to measure the ability of the lungs to transfer gases across the alveolar- capillary membrane. Write an algorithm for systematically assessing basic pulmonary function test results.

(8+8 = 16 marks)

2. Draw a labeled diagram of a normal electrocardiogram (ECG) and explain the normal intervals and segments. What are the components of 12 lead ECG.

(8+8 = 16 marks)

3. **Write short notes on:**

3A. Preanalytical errors associated with arterial blood sampling.

(8 marks)

3B. Radiological features of pulmonary edema and pneumonia.

(8 marks)

3C. Common routes of central venous catheterization and give two complications of each.

(8 marks)

3D. Define and give the significance of FVC, FEV₁, FEF₂₀₀₋₁₂₀₀, FEV₁/FVC.

(8 marks)

3E. Causes and treatment of metabolic acidosis.

(8 marks)

3F. Causes and ECG changes of:

i) Ventricular tachycardia.

ii) Bradycardia.

(4+4 = 8 marks)



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MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: APPLIED CARDIOPULMONARY ANATOMY AND PHYSIOLOGY

Tuesday, June 15, 2010

Time: 14:00-15:30 Hrs.

Max. Marks: 40

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

1. Describe the regulation of breathing in the body.

(16 marks)

2. Write short notes on:

2A. Terminal respiratory unit.

2B. Systemic circulation.

2C. Equation of motion for respiratory system.

(8×3 = 24 marks)



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MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2010

SUBJECT: RESPIRATORY THERAPY SCIENCE II

Thursday June 17, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

1. Describe how you will perform a preliminary assessment of the patient and the patient – ventilator system after establishing positive pressure mechanical ventilation in a patient with respiratory failure. Enumerate the physiologic goals and specific clinical objectives of ventilatory support.

(6+5+5 = 16 marks)

2. Describe how ventilatory support is used in the management of each of the following three conditions

2A. Closed head injury

2B. Flail chest

2C. Obstructive lung disease

(4+6+6 = 16 marks)

3. **Write short notes on:**

3A. Causes of ventilator dependence.

3B. Classification of ventilators according to control scheme.

3C. Parameters to monitor before, during and immediately after a tracheostomy.

3D. Work of breathing.

3E. Mandatory Minute Ventilation (MMV).

3F. Renal effects of positive pressure ventilation.

(8×6 = 48 marks)

