

MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2012

SUBJECT: PATHOLOGY AND MICROBIOLOGY
(OLD REGULATION)

Monday, June 11, 2012

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. Discuss the aetiology, clinical features and basic investigations of iron deficiency anemia.
(3+2+3 = 8 marks)
2. Define bronchial asthma. Discuss the aetiology, types and clinical features of bronchial asthma.
(1+2+2+2 = 7 marks)
3. **Write short note on:**
 - 3A. Differences between benign and malignant tumours.
 - 3B. Aetiology, modes of infection and clinical features of AIDS.
 - 3C. Types and complications of diabetes mellitus.
 - 3D. Fate of a thrombus.
 - 3E. Pneumoconiosis.

(5×5 = 25 marks)

SECTION – 'B' : MICROBIOLOGY : 40 MARKS

4. Classify bacteria based on morphology. Discuss the structure of gram positive and gram negative bacterial cell wall with the help of a diagram.
(2+6 = 8 marks)
5. Enumerate the agents causing diarrhea. Discuss the laboratory diagnosis of enteric fever.
(2+5 = 7 marks)
6. **Write short notes on:**
 - 6A. Type I hypersensitivity reaction.
 - 6B. Chemical disinfectants.
 - 6C. Acquired immunity.
 - 6D. AIDS.
 - 6E. Laboratory diagnosis of UTI.

(5×5 = 25 marks)



MANIPAL UNIVERSITY**SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2012****SUBJECT: PATHOLOGY**

Monday, June 11, 2012

Time: 10:00-11:30 Hrs.

Max. Marks: 40

1. - Discuss the aetiology, clinical features and basic investigations of iron deficiency anemia.
(3+2+3 = 8 marks)

2. Define bronchial asthma. Discuss the aetiology, types and clinical features of bronchial asthma.
(1+2+2+2 = 7 marks)

3. **Write short note on:**
 - 3A. Differences between benign and malignant tumours.
 - 3B. Aetiology, modes of infection and clinical features of AIDS.
 - 3C. Types and complications of diabetes mellitus.
 - 3D. Fate of a thrombus.
 - 3E. Pneumoconiosis.

(5×5 = 25 marks)



MANIPAL UNIVERSITY**SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2012****SUBJECT: MICROBIOLOGY
(NEW REGULATION)**

Wednesday, June 13, 2012

Time: 10:00-11:30 Hrs.

Max. Marks: 40

☞ Answer all questions. Draw diagrams wherever appropriate:

1. Classify sterilization methods. Describe the working principle of autoclave with the help of a diagram.

(3+5 = 8 marks)

2. Enumerate the agents causing sexually transmitted diseases. Discuss the laboratory diagnosis of syphilis.

(3+4 = 7 marks)

3. Write short notes on:

3A. Bacterial cell wall.

3B. Innate immunity.

3C. Type I hypersensitivity reactions.

3D. Laboratory diagnosis of pulmonary tuberculosis.

3E. Immunoprophylaxis of rabies.

(5×5 = 25 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. Sc. R.T. DEGREE EXAMINATION – JUNE 2012****SUBJECT: RESPIRATORY DISEASE PROCESS**

Friday, June 15, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. Write the aetiology, pathophysiology, clinical features, diagnosis and anti-tubercular treatment along with other management for pulmonary Tuberculosis.
(2+4+2+2+6 = 16 marks)
2. Define Bronchiectasis and how does it differ from bronchial asthma. Elaborate your assessment and management as a respiratory therapist.
(2+2+4+8 = 16 marks)
3. **Write a note on the following:**
 - 3A. Coal workers pneumoconiosis.
 - 3B. Absorption Atelectasis.(4+4 = 8 marks)
4. Differentiate between partial and complete hanging.
(8 marks)
5. How will you differentiate between cardiogenic and non-cardiogenic pulmonary edema?
(8 marks)
6. Mention the sleep related disorders and explain any one in detail.
(2+6 = 8 marks)
7. Define pneumonia. Write the types, causes, clinical feature and diagnosis.
(8 marks)
8. Write a note on myasthenia gravis.
(8 marks)



MANIPAL UNIVERSITY**SECOND YEAR B. Sc. R.T. DEGREE EXAMINATION – JUNE 2012****SUBJECT: DIAGNOSTIC TECHNIQUES**

Monday, June 18, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

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

1. Define the term functional residual capacity (FRC). Describe two methods used to measure FRC in a spontaneously breathing patient. Mention the flowchart used for interpretation of pulmonary function tests.

(2+10+4 = 16 marks)

2. Explain in detail the conduction system of heart. With the help of a labeled diagram, describe the normal electrocardiogram. What is the normal rate of SA node and AV node?

(8+6+2 = 16 marks)

3. Write short notes:

- 3A. Radiographic characteristics of Atelectasis.
3B. Respiratory Acidosis.
3C. Sites of insertion of central venous catheter.
3D. Atrial flutter.
3E. Zeroing of PA catheter transducer.
3F. Different views of Chest X Ray.

(8×6 = 48 marks)



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MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2012

SUBJECT: APPLIED CARDIOPULMONARY ANATOMY AND PHYSIOLOGY

Wednesday, June 20, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. Explain the mechanics of breathing. Add a note on mechanics of exhalation.

(10+6 = 16 marks)

2. Write in brief the events of the cardiac cycle.

(16 marks)

3. Short Notes:

3A. Write short note on regulation of breathing.

3B. With diagram describe the movement of the ribs during breathing.

3C. Events during transition from intrauterine to extrauterine life.

3D. Explain anion gap its significance.

3E. Anatomy of larynx.

3F. Regulation of cardiac output.

(8×6 = 48 marks)



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MANIPAL UNIVERSITY

SECOND YEAR B.Sc. R.T. DEGREE EXAMINATION – JUNE 2012

SUBJECT: RESPIRATORY THERAPY SCIENCE II

Friday, June 22, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

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

1. What do you mean by the term positive end expiratory pressure? How do decide optimum PEEP for a patient? What are the effects of PEEP on different organ systems of the body?

(5+5+6 = 16 marks)

2. What is the criterion used for weaning patients from ventilator? Add note on spontaneous breathing trial.

(8+8 = 16 marks)

3. **Write short notes on:**

3A. Phase variables.

3B. Negative pressure ventilation.

3C. Types of respiratory failure.

3D. SIMV Vs P-SIMV.

3E. Trouble shooting high pressure alarm for a patient on ventilator.

3F. Initial settings for an intubated patient with acute asthma admitted in MICU.

(8×6 = 48 marks)

