

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0222]

**FEBRUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 2204

M.Sc. RESPIRATORY THERAPY

**FIRST YEAR (Candidates admitted from 2019-2020 & 2020-2021 onwards)
PAPER IV – EQUIPMENT IN RESPIRATORY MEDICINE AND ADVANCED
RESPIRATORY THERAPY AND CRITICAL CARE**

Q.P. Code : 282204

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Define Oxygen therapy. Discuss various available methods of delivering Oxygen to the critically ill patients in ICU and the complications of Oxygen Therapy.
2. Mention the indications for artificial ventilation, Discuss briefly about the modes of mechanical ventilator and monitoring technique used in the patients on mechanical ventilator?

II. Write Short Notes on:

(10x6 = 60)

1. Write short notes on Nebulizers.
2. Discuss the parts of Ambu bag and its uses.
3. Name few Mucolytic agents and its mechanism of action.
4. Write short notes on Capnography.
5. Discuss briefly about the Medical gas pipelines in ICU.
6. Write a short notes on Chest Drain Systems.
7. Discuss the parts and the principles of Suction apparatus.
8. Write short notes on Multi Organ Dysfunction score.
9. Discuss the types of supraglottic Airway devices.
10. Write short notes on Bronchoscopes.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0522]

MAY 2022

Sub. Code: 2204

M.Sc. RESPIRATORY THERAPY

**FIRST YEAR (Candidates admitted from 2019-2020 & 2020-2021 onwards)
PAPER IV – EQUIPMENT IN RESPIRATORY MEDICINE AND ADVANCED
RESPIRATORY THERAPY AND CRITICAL CARE
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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1022]

OCTOBER 2022

Sub. Code: 2204

**M.Sc. RESPIRATORY THERAPY
FIRST YEAR (Candidates admitted from 2019-2020 & 2020-2021 onwards)
PAPER IV –EQUIPMENTS IN RESPIRATORY MEDICINE & ADVANCED
RESPIRATORY THERAPY & CRITICAL CARE**

Q.P. Code : 282204

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Define respiratory failure. List the causes of Type II respiratory failure and how you would manage a patient with Type II respiratory failure?
2. Weaning and Extubation.

II. Write Short Notes on:

(10x6 = 60)

1. Positive End Expiratory Pressure.
2. Low flow oxygen delivery devices.
3. Draw the 3-bottle drainage system.
4. How will you clean and maintain ICU equipment?
5. Assessment of endotracheal cuff pressure and what pressure to set.
6. Percutaneous Tracheotomy.
7. Humidification.
8. Infection Prevention strategies.
9. Trouble shooting high airway pressure/ low pressure limitations alarm on ventilator.
10. MDI.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0524]

MAY 2024

Sub. Code: 2204

**M.Sc. RESPIRATORY THERAPY
FIRST YEAR (From 2020-2021 onwards)
PAPER IV – EQUIPMENTS IN RESPIRATORY MEDICINE & ADVANCED
RESPIRATORY THERAPY & CRITICAL CARE**

Q.P. Code: 282204

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Detail about Oxygen delivery devices.
2. Complications of Positive pressure ventilation.

II. Write Short Notes on:

(10x6 = 60)

1. Tidal Volume.
2. Work of Breathing.
3. Describe the prophylaxis of DVT.
4. Complications of NIV.
5. Airway Pressure Release Ventilation.
6. Ventilator Strategies in ARDS.
7. Write short on Oxygen toxicity.
8. Methods of sterilization of ventilator.
9. Write down the names of the equipment to be kept in the intubation tray.
10. What are the two ventilator settings that would impact oxygenation and to settings that would impact $Paco_2$?

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1024]

OCTOBER 2024

Sub. Code: 2204

**M.Sc. RESPIRATORY THERAPY
FIRST YEAR (From 2020-2021 onwards)
PAPER IV – EQUIPMENTS IN RESPIRATORY MEDICINE & ADVANCED
RESPIRATORY THERAPY & CRITICAL CARE**

Q.P. Code: 282204

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Define Acute Respiratory Distress Syndrome. Ventilator settings in management of Acute Respiratory Distress Syndrome. Complications of mechanical ventilation.
2. What is Oxygen therapy? Describe the various oxygen delivery systems. Discuss in brief about Oxygen Toxicity.

II. Write Short Notes on:

(10x6 = 60)

1. Supraglottic airway devices.
2. EBUS.
3. Nebulizers.
4. Describe AMBU and its uses.
5. Uses, indications and contraindications of Spirometry.
6. Video laryngoscope.
7. Sterilization of respiratory equipments.
8. Discuss briefly about the Medical gas pipelines in ICU.
9. Non-Invasive ventilation.
10. Mannequins.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1025]

OCTOBER 2025

Sub. Code: 2204

**M.Sc. RESPIRATORY THERAPY
FIRST YEAR (From 2020-2021 onwards)
PAPER IV – EQUIPMENTS IN RESPIRATORY MEDICINE & ADVANCED
RESPIRATORY THERAPY & CRITICAL CARE**

Q.P. Code: 282204

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. How is arterial blood gas analysis done? Describe the Stepwise interpretation of ABG. Write in detail management of respiratory acidosis.
2. What is polysomnography? What are the types of sleep disordered breathing? Write in detail about Obstructive sleep apnea and its management.

II. Write Short Notes on:

(10x6 = 60)

1. Oxygen concentrators.
2. Multipara monitor.
3. Inhalers – MDI, DPI and breath actuated inhalers.
4. Write short notes on Chest Drain Systems.
5. Write about the Principle used and the technique of Incentive spirometry.
6. Describe AMBU and its uses.
7. Nebulizers.
8. Ventilator settings in management of Acute Respiratory Distress Syndrome.
9. Ultrasound findings in normal lung.
10. Cardiopulmonary exercise testing.
