Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Examination – 20-May-2025

Time: Three Hours **Max. Marks: 100 Marks**

Clinical care respiratory care technology Paper - I (RS2)

Q.P. CODE: 2929

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Discuss manual resuscitators.
2. Draw a neat labeled diagram of Endotracheal tube. Discuss indications and care.
3. Discuss various first line drugs used in tuberculosis with mechanism of action and adverse events.

SHORT ESSAYS (Answer any Ten) **10 x 5 = 50 Marks**

4. Necrotizing pneumonia
5. Flow volume loop
6. Steps in spirometry
7. Respiratory alkalosis
8. ECG
9. Hypokalemia
10. Cyanosis and various types
11. Jugular venous pressure
12. Hyponatremia and management
13. Newer drugs in treatment of tuberculosis
14. Nasal ET tubes
15. Mesna

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

16. Sputum induction
17. Hypoventilation
18. Silicosis
19. Epiglottis
20. Tracheostomy
21. Breath sounds
22. FRC
23. Toxic inhalation
24. Hazards of oxygen therapy
25. HIV
26. Bernouli’s principle
27. Pulmonary diffusion

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B. Sc. Respiratory Care Technology Degree Examination – 22-May-2025

Time: Three Hours **Max. Marks:100 Marks**

Applied Respiratory Care Technology -II (RS2)

Q.P. CODE: 2930

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two) **2 x 10 = 20 Marks**

1. Discuss airway management in mechanical ventilation. Describe procedure and complications of intubation
2. Describe waveform analysis for mechanical ventilation
3. Discuss operating modes of mechanical ventilation

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. Neuromuscular blocking agents
5. End-tidal CO2 monitoring
6. PEEP
7. Bronchodilators
8. Classification of ventilators
9. Extubation
10. Pulmonary compliance and resistance
11. Ventilator-associated pneumonia
12. Humidification of airways
13. Hypokalemia
14. Dead space ventilation
15. Metabolic acidosis

SHORT ANSWERS (Answer any ten) **10 x 3 = 30 Marks**

16. Speaking valve in tracheostomy
17. Care of ventilator circuit
18. Arterial blood pressure monitoring
19. Laryngeal mask airway
20. Steroids
21. MDIs
22. Oxygenation failure
23. CVP monitoring
24. Minitracheostomy
25. **Permissive hypercapnia**
26. Common artificial airways
27. Pulmonary artery catheter

Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Respiratory Care Technology Degree Examination – 20-May-2025

Time: Three Hours **Max. Marks: 100**

Respiratory Technology – Clinical- Paper-I (RS-3)

Q.P. CODE: 3361

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. List the different types of shock and explain the clinical features and management of septic shock
2. Explain in details various hemodynamic assessment in critically ill patient

   OR

   Extra corporeal membrane oxygenation

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Causes of metabolic acidosis
4. Hyperkalemia – diagnosis, correction and implication in ventilated patient
5. Explain various steps of reading chest x-ray

   OR

   Write a note on pulmonary embolism
6. Targeted temperature management
7. Write a note on cardiac tamponade
8. How do you prepare the mechanical ventilated patients when its required intra hospital transportation?
9. Role of respiratory therapy in bronchoscopy
10. Acute coronary syndrome

    OR

    Explain the percutaneous tracheostomy
11. Muscle relaxants and its usage in ventilated patient
12. Post cardiac arrest care

SHORT ANSWER **10 x 3 = 30 Marks**

13. Gastrointestinal bleed
14. Eclampsia
15. Needle thoracocentesis
16. Complications of Intercostal drainage insertion
17. Fibrino lytics
18. High flow nasal oxygen
19. Stroke
20. Causes for type – II respiratory failure
21. Brain protective ventilation strategy
22. Use of lung ultrasound

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Technology Degree Examination – 22-May-2025

Time: Three Hours **Max. Marks: 100 Marks**

Respiratory Technology – Applied – Paper-II (RS-3)

Q.P. CODE: 3362

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Define the types of weaning. Explain evaluation of clinical criteria and enumerate on assessment of weaning readiness
2. Explain in details about effects of positive – pressure ventilation on the cardio-pulmonary system
   OR
   Describe the acute care and long-term care indications for using NIV and describe the process of selecting appropriate patient for NIV

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Chatburn's classification of ventilatory modes
4. Differentiate between control and assist – control modes
5. Assess the ventilator trouble shooting and management
   OR
   Explain Extubation – readiness criteria and technique
6. Explain lung recruitment and management in ARDS
7. Long – term complications of mechanical ventilation
8. Permissive hypercapnia
9. Write a note on Hemodynamic Measurements in ICUs
10. Describe control and phase variables
    OR
    Indications and contraindications of bronchoscopy
11. Ventilator associated events
12. Describe advanced modes of mechanical ventilation

SHORT ANSWER **10 x 3 = 30 Marks**

13. Mention the Clinical application of volume waveform
14. Components of inflation pressure
15. Sedatives in ICU
16. Complication of NIV
17. Indications and contraindications of prone ventilation
18. Indications of PEEP
19. Mention the factors affecting of aerosol therapy in mechanical ventilated patient
20. Ventilator associated pneumonia bundle
21. Setting of ventilators for a patient with traumatic head injury with raised ICP
22. Management of patient in distress

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Degree Examination - 27-May-2025

Time: Three Hours **Max. Marks: 100**

Advanced Respiratory Care Technology - III (RS-2)
Q.P. CODE: 2931

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Recognition of barotraumas in ventilation patient's and its prevention and management
2. Planning of transport ventilation and various expected complication
3. Management of sleep apnea and related disorders

SHORT ESSAYS (Answer any Ten) **10 x 5 = 50 Marks**

4. Name and explain weaning procedure
5. Ventilator setting in aspiration pneumonia
6. Plateau pressure on patient on ventilator and it's clinically relevance
7. Various methods of sterilization of respiratory therapy equipments
8. Epinephrine-Indications, side effects and dosage
9. Non-invasive ventilation in neonates
10. Management of respiratory distress syndrome
11. Alarm settings
12. Weaning failure
13. Rapid sequence intubation
14. Acute and chronic acidosis and compensatory mechanism
15. Ventilator Associated Pneumonia

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

16. FRC
17. High frequency oscillatory ventilation
18. Spontaneous breathing trial
19. Cuff pressure management
20. Optimal PEEP and inflation point
21. Inverse – ratio ventilation
22. Compliance types
23. Setting of ventilator for a patient with traumatic head injury with raised ICP
24. PaO2 / FiO2 ratio in assessment of arterial hypoxia
25. A-a gradient in type-I respiratory failure
26. Retinopathy of prematurity
27. Management of acute respiratory acidosis of a ventilated patient and its causes

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Technology Degree Examination – 27-May-2025

Time: Three Hours **Max. Marks: 100 Marks**

Respiratory Technology – Advanced – Paper-III (RS-3)

Q.P. CODE: 3363

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Write in detail on meconium aspiration syndrome.
2. Write a note on high frequency ventilation for pediatrics.
   OR
   Write a note on congenital diaphragmatic hernia.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Write a note on perinatal asphyxia.
4. Write in detail about air leak syndrome in pediatrics.
5. Write in detail on surfactant replacement therapy in neonates.
   OR
   Write a note on kangaroo mother care.
6. Write a note on inhaled nitric oxide therapy.
7. Write a note on apnea of prematurity.
8. Write a note on indications and contraindications of invasive ventilation for newborns.
9. Write a note on recognition of respiratory distress syndrome in neonates.
10. Write in detail on neonatal resuscitation.
    OR
    Write a note on choanal atresia.
11. Write a note on cyanotic heart disease.
12. Write a note on pulse oximetry.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Peak pressures.
14. Retinopathy of prematurity.
15. Capnography.
16. Bubble CPAP.
17. Fetal circulation.
18. Laryngeal mask airway.
19. Pediatric asthma.
20. Croup.
21. Ballard scoring.
22. Indications of HFNC in newborns.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Examination – 27-Oct-2025

Time: Three Hours **Max. Marks: 100 Marks**

Clinical care respiratory care technology Paper - I (RS2)
Q.P. CODE: 2929

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. GOLD classifications of severity of COPD, clinical features, causes, pathophysiology and management
2. Discuss manual resuscitators
3. Discuss toxic inhalation and its management

SHORT ESSAYS (Answer any Ten) **10 x 5 = 50 Marks**

4. Fungal pneumonia
5. Acute respiratory distress syndromes
6. Guillain – Barre syndromes
7. Arterial Blood gas Analysis
8. Sputum examination
9. Tropical eosinophilia
10. Broncho – alveolar lavage
11. Cyanosis
12. Dyspnoea
13. Chest X-ray
14. Small volume nebulizers
15. Bronchoprovocation tests

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

16. Asbestosis
17. Haemoptysis
18. Bronchiectasis and classify based on gross anatomic appearance
19. Acute sinusitis
20. Lung abscess
21. Blood pressure
22. Clubbing
23. Acute rhinitis
24. Epiglottis
25. Tachypnoea
26. Antioxidants
27. Bronchodilators

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Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Respiratory Care Technology Degree Examination – 27-Oct-2025

Time: Three Hours **Max. Marks: 100**

Respiratory Technology – Clinical- Paper-I (RS-3)

Q.P. CODE: 3361

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Fixed and variable oxygen delivery devices
2. Clinical features and mechanism of different type of shock

   OR

   Explain in details about percutaneous tracheostomy – indications and contraindication, complications

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Brain death tests
4. Veno-venous extra corporeal membrane oxygenation
5. Mixed venous oxygen saturation

   OR

   Apnea Hypopnea index
6. VAP bundle
7. Basic planning of inter and intra hospital transport of ventilated patient
8. Intercostal drainage – indication, contra indication and complication
9. Name and explain any one sedation scale in ICUs patient
10. Brain protective ventilation strategy

    OR

    Organophosphate poisoning
11. Polysomnography
12. Pneumothorax – causes and management

SHORT ANSWER **10 x 3 = 30 Marks**

13. Causes of type II respiratory failure
14. Indication of tracheostomy
15. Sedative in ICU
16. Advantages of close-suction
17. Complication of Bronchoscopy
18. Respiratory muscle trainers
19. Difference between pleural effusion and collapse of the lung
20. Targeted temperature management in cardiac arrest
21. Noradrenaline in septic shock
22. Post cardiac arrest care

Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Respiratory Care Technology Degree Examination – 29-Oct-2025

Time: Three Hours **Max. Marks: 100 Marks**

Respiratory Technology – Applied – Paper-II (RS-3)

Q.P. CODE: 3362

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Write in detail on effects of positive pressure ventilation on pulmonary system
2. Write a note liberation and discontinuation from mechanical ventilation
   OR
   Write a note on mechanism, pathophysiology, management of hypovolemic shock

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Write a note on ventilatory settings for COPD patients
4. Write in detail on SIMV mode its indication, uses and its settings
5. Write in detail on pulmonary mechanics
   OR
   Write in detail on ventilation perfusion scan
6. Write a note PEEP, its types, indication, complications and contraindications
7. Write a note on traumatic brain injury
8. Write a note on cardiac tamponade
9. Effects of mechanical ventilation on intracranial pressure and cerebral perfusion
10. Write a note on carbon monoxide poisoning and management
    OR
    Write in detail in improving oxygenation on ventilator
11. Write a note on type I respiratory failure
12. Transcutaneous monitoring and its significance

SHORT ANSWER **10 x 3 = 30 Marks**

13. Write a note on Holter analysis
14. Mention any three antiarrhythmic drugs
15. Write a note on ST segment
16. Goals of long-term mechanical ventilation
17. Peak inspiratory pressure
18. Types of burns
19. Central venous pressure graph
20. Sterilization of bronchoscopes
21. Hyperventilation vs hyperinflation
22. Glasgow coma scale (GCS)

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Technology Degree Examination – 31-Oct-2025

Time: Three Hours **Max. Marks: 100 Marks**

Respiratory Technology – Advanced – Paper-III (RS-3)

Q.P. CODE: 3363

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Write in detail on the stages of fetal lung development.
2. Write a note on respiratory distress syndrome.
   OR
   Write a note on ECMO, its types, functions and management.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Write a note on transient tachypnea of newborn.
4. Write in detail on acyanotic congenital heart disease.
5. Write in detail fetal circulation.
   OR
   Write a note on pneumonitis.
6. Mention in detail about neonatal resuscitation.
7. Write a note on inhaled nitric oxide therapy.
8. Meconium aspiration syndrome.
9. Write in detail on oxygen toxicity.
10. Mention indication of intubation in newborns.
    OR
    Write a note on apnea of prematurity.
11. Surfactant replacement therapy.
12. Fetal development.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Nasal CPAP.
14. APGAR scoring.
15. X-ray findings in meconium aspiration syndrome.
16. Congential diaphragmatic hernia.
17. Ventilation alarms.
18. Tetralogy of Fallot.
19. Tracheo-esophageal fistula.
20. CPAP for neonates.
21. Caffeine therapy.
22. ABG values in newborns.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B. Sc. Respiratory Care Technology Degree Examination – 29-Oct-2025

Time: Three Hours **Max. Marks:100**

Applied Respiratory Care Technology -II (RS2)

Q.P. CODE: 2930

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two) **2 x 10 = 20 Marks**

1. Trachestomy
2. Discuss about pulmonary rehabilitation
3. Physiological effects of Peep

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. **Management of endotracheal and tracheostomy tubes**
5. Troubling shooting of ventilator alarms and events
6. Commonly used artificial airways
7. ARDS Ventilation
8. Pressure support ventilation
9. Care of artificial airway
10. Prone positioning
11. Complications of extubation
12. SpO_2 monitoring
13. Near drowning managment
14. (Intercostal Drainage (ICD)
15. Complications of ETT

SHORT ANSWERS (Answer any ten) **10 x 3 = 30 Marks**

16. Indications of intubation
17. Propafol
18. Respiratory acidosis
19. Permissive hypercapnea
20. Pulse oximetery
21. RSBI
22. Chest Inspection
23. Bronchodilators
24. Ventilator – Induced lung injury
25. Chest compression in cardiac arrest
26. Breathing exercises used in COPD
27. Hypovolemia Shock

Rajiv Gandhi University of Health Sciences, Karnataka

RGUHS THEORY EXAMINATION OCTOBER-2025

NODAL CENTRE:CAUVERY INSTITUTE OF HEALTH SCIENCES, MYSORE

Date: 29-10-2025 **Session: Morning**

CORRECTIONS

Subject:Applied Respiratory care Technology **QP Code:2930**

Q. No	QUESTION Appeared As	QUESTION CORRECTED As	REASON FOR CORRECTIONS
4	Management of endotracheal and tachestomy tubes	Management of endotracheal and tracheostomy tubes	Spelling mistake

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Degree Examination - 31-Oct-2025

Time: Three Hours **Max. Marks: 100**

Advanced Respiratory Care Technology - III (RS2)
Q.P. CODE: 2931

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Discuss home mechanical ventilation
2. Pulmonary Edema-causes and management
3. Weaning from mechanical ventilation

SHORT ESSAYS (Answer any Ten) **10 x 5 = 50 Marks**

4. Lung compliance and resistance
5. CPAP
6. Sufactant replacement therapy
7. Chest physiotherapy
8. Hyperbaric Oxygen Therapy
9. Indication of intubation in neonate
10. Respiratory failure
11. Liquid ventilation
12. Hypoxia
13. Transport during ventilation
14. Cyanotic Heart Diseases
15. Oxygen delivery devices

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

16. Stridor
17. Phase Variable
18. Plateau pressure
19. APGAR Score
20. Oxygen Toxicity
21. Sleep Apnea
22. RSBI
23. Nasophargeal airway
24. Respiratory Acidosis
25. Metabolic Acidosis
26. Adrenalin
27. Intercostal drain care

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