Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Respiratory Care Technology Degree Examination – 07-May-2026

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

Introduction to Respiratory Technology (RS-3)

Q.P. CODE: 3359

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. Describe the characteristics of therapeutic aerosols. Write in detail about aerosol drug delivery systems and hazards of aerosol therapy.
2. Describe the indication, procedure and complications of surgical airway devices.
   OR
   Enumerate the types and indications of pulmonary function test. Describe the techniques, pathophysiology and significance of body plethysmographs.

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

3. Wave form morphology and applications of capnography.
4. Flexible Bronchoscope.
5. Indications and technique of cardiopulmonary resuscitation.
   OR
   Sputum induction.
6. Peak inspiratory and expiratory flowmeters – Indications, techniques and contraindication.
7. Central arterial cannulation.
8. Oxygen therapy devices.
9. Pacer.
10. **Bag valve mask ventilation**
    OR
    Intrapulmonary percussive ventilation.
11. Incentive spirometer.
12. **Indications of blind aerosol therapy and devices used**

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

13. Blind intubation.
14. Droplet precaution.
15. T-piece resuscitator.
16. Laryngoscopes.
17. Venturi principle.
18. Portable suction units
    Or
    Endotracheal suctioning
19. V/Q ratio.
20. Abnormal pattern of respiratory rate.
21. Types of extra corporal life support.
22. Direct fick method
    or
    Parts of ET Tube

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Respiratory Care Technology Degree Examination – 05-May-2026

Time: Three Hours **Max. Marks: 50 Marks**

Applied Pathology (RS-3)
Q.P. CODE: 3396

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3396 and 3397 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Classify anemias. Write in detail about Iron deficiency anemia and its laboratory diagnosis.
2. What is Bronchiectasis? Describe the aetiopathogenesis and pathology.

SHORT ESSAYS (Answer any Five) **5 x 5 = 25 Marks**

3. Chronic Bronchitis.
4. Valvular Heart Disease.
5. Systemic Hypertension.
6. Asbestosis.
7. Pulmonary embolism.
8. Hemolytic anemia.

SHORT ANSWER **5 x 3 = 15 Marks**

9. Three causes of thrombocytopenia.
10. Microscopy of chronic venous congestion of lung.
11. Aschoff body.
12. Causes of pleural effusion.
13. Honeycomb lung.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Respiratory Care Technology Degree Examination – 05-May-2026

Time: Three Hours **Max. Marks: 50 Marks**

Applied Microbiology (RS-3)
Q.P. CODE: 3397

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3396 and 3397 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Enumerate the diseases transmitted by blood borne route in a health care facility and discuss in detail the pathogenesis, laboratory diagnosis and prevention of Human Immunodeficiency virus infection.

2. Define disinfection and discuss in detail various methods of disinfection of instruments used in patient care and the advantages and disadvantages of each method.

SHORT ESSAYS (Answer any Five) **5 x 5 = 25 Marks**

3. Tracking and surveillance of hospital acquired infections.
4. Clostridium difficile - clinical manifestations.
5. Classes of chemical indicators of sterilization.
6. Standard precautions.
7. Hepatitis B virus post exposure prophylaxis.
8. Ventilator associated pneumonia.

SHORT ANSWER **5 x 3 = 15 Marks**

9. Hepatitis A virus.
10. Floor plan of central sterile supply department
11. Preventing catheter related blood stream infection.
12. **Spaulding's medical device classification.**
    Or
    Give three examples of materials sterilized in Autoclave
13. Three infections where contact isolation precautions are required.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Respiratory Care Technology Degree Examination – 14-May-2026

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

Medicine Relevant to Respiratory Technology (RS-3)

Q.P. CODE: 3360

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. Describe etiology, pathophysiology and management of respiratory failure.
2. Classify asthma. Write in detail aetiology, clinical features, diagnosis and management of Asthma.

   OR

   Discuss etiology, clinical features, diagnosis and management of Pulmonary embolism.

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

3. Management of Pneumothorax.
4. Emphysema.
5. Gullian – Barre Syndrome – Diagnosis and management.

   OR

   Staging of lung cancer.
6. Mitral stenosis.
7. Ventilator associated pneumonia.
8. Kyphoscoliosis.
9. Pulmonary edema – etiology and management.
10. Obstructive sleep apnea.

    OR

    Diagnosis of pulmonary tuberculosis.
11. Asbestos related lung disease.
12. Hypovolemic shock.

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

13. Cardiomyopathy.
14. Anti-cholinergic bronchodilators.
15. Indication of lung transplantation.
16. Heparin.
17. Write three causes of Haemoptysis.
18. Flail chest.
19. Dry powder inhaler (DPI).
20. Draw a neat labelled diagram of normal ECG and its waves.
21. Hematemesis.
22. Dead space.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Respiratory Care Technology Degree Examination – 12-May-2026

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

PHARMACOLOGY (RS-3)

Q.P. CODE: 3398

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. Classify drugs used in Bronchial Asthma. Discuss the role and adverse effects of inhalational corticosteroids used in bronchial asthma
2. Classify opioid analgesics. Discuss the therapeutic uses and contraindications of Morphine
   OR
   Classify general anesthetics. Discuss the advantages and disadvantages of Halothane

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

3. Techniques of local anaesthesia
4. Isoniazid
5. Cardioplegic drugs
   OR
   Heparin
6. Therapeutic uses and adverse effects of Aspirin
7. Therapeutic uses and adverse effects of Glucocorticoids
8. Therapeutic uses and adverse effects of Nitroglycerine
9. Therapeutic uses and adverse effects of Tetracyclines
10. CNS stimulants
    OR
    Gentamicin
11. Thiazide diuretics
12. Domperidone

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

13. Rationale of combining amoxicillin with clavulanic acid
14. Name three Antitussives
15. Name three second generation Antihistaminics
16. Name three centrally acting skeletal muscle relaxants
17. Mention three uses of Mannitol
18. Mention three therapeutic uses of ethanol
19. Name three thrombolytic agents
20. Mention three uses of digoxin
21. Bioavailability
22. Name three immunosuppressants