Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Examination – 16-May-2023

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. Explain lower respiratory tract infections.
2. What do you mean by oxygen therapy? Explain its uses.
3. Explain artificial airways.

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

4. What is a face mask? What is the use of it?
5. What are the types of manual resuscitators?
6. What are the advantages and disadvantages of aerosol therapy?
7. How do you treat pulmonary edema?
8. Explain humidification.
9. What are the hazards of aerosol therapy?
10. How do you diagnose acute lung injury?
11. What do you mean by hemoptysis?
12. What do you mean by Immunocompromised host?
13. How do you treat toxic inhalation?
14. How do you treat bronchial asthma?
15. What are the medications for acute Pharyngitis?

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

16. How do you treat epiglotitis?
17. What are transcutaneous oxygen monitor?
18. What are the types of airway adjuncts?
19. How do you use a manual resuscitator?
20. What are the types of humidifiers?
21. What are the indications for using artificial airways?
22. Goals of oxygen therapy.
23. How do you assess the need of oxygen therapy?
24. Symptoms of hypoxemia.
25. What is chronic obstructive pulmonary disease (COPD)?
26. Symptoms of disease laryngo trachietis?
27. What is acute respiratory failure?

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III Year B. Sc. Respiratory Care Technology Degree Examination – 18-May-2023

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. Write in detail on troubleshooting of ventilator alarms and its events
2. Write a note ventilator classification
3. Describe airway management in mechanical ventilation

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

4. Write a note on the types of compliances
5. Write in detail on SIMV mode its indication, uses and its settings
6. Write in detail on phase variables
7. Write in detail on airway resistance and the factors affecting it
8. Write a note PEEP, its types, indication, complications and contraindications of it
9. Write in detail tracheostomy tubes
10. Write a note on capnograph and their abnormalities
11. Write in detail on mean airway pressure and its uses, harmful effects
12. Write a note on drive mechanism
13. Write in detail in improving oxygenation on a ventilator
14. Write a note on artificial airways
15. Write a note on endotracheal intubation

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

16. Types of triggers
17. Plateau pressure
18. Peak inspiratory pressure
19. Effective compliance
20. Autopeep
21. Cardiac tamponade effect
22. Transpulmonary pressure gradient and its importance
23. Hyperventilation vs hyperinflation
24. Types of CPAP system
25. Indication for oxygen therapy
26. Assessment of vital signs
27. Normal ECG

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Degree Examination - 20-May-2023

Time: Three Hours | Max. Marks: 100 Marks

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. Describe weaning from mechanical ventilation including criteria, procedure, signs and causes of weaning failure
2. Modes, indications, contraindications and complications of noninvasive ventilation
3. Describe neonatal mechanical ventilation. Discuss problems inherent to neonates and supplemental therapies to neonatal mechanical ventilation

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

4. Ventilator alarm settings
5. High frequency ventilation
6. Patient and equipment selection for home mechanical ventilation
7. Ventilator – induced lung injury
8. Nosocomial pneumonia-definition, diagnosis and treatment
9. Sleep-disordered breathing
10. Narcotic drug poisoning
11. Pulmonary oedema
12. Modes of neonatal mechanical ventilation
13. Interpretation of arterial blood gas analysis
14. High-altitude sickness
15. Spontaneous breathing trial

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

16. Initial ventilator settings for a patient of status asthmaticus
17. CPAP
18. Hazards of oxygen therapy
19. Management of Hypokalemia
20. Causes of metabolic acidosis
21. Calculation of body surface area and nutritional requirement
22. Hypomagnesemia
23. Pneumothorax in ICU
24. Inverse ration ventilation
25. Nitric oxide therapy
26. ECMO
27. Oxygen saturation

Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Respiratory Care Technology Degree Examination – 16-May-2023

Time: Three Hours | Max. Marks: 100 Marks

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. Write in detail on central venous pressure procedure, waveforms and complications
2. Write a note on types, pathophysiology of septic, cardiogenic shock
   OR
   Discuss the polysomnogram channels and its significance

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

3. Write a note on nutritional assessment status in chronic respiratory patients
4. Write in detail on resistance exercise training
5. Discuss the role of pulmonary rehabilitation in patients with pulmonary hypertension
   OR
   Write in detail on GI bleed
6. Write a note on percardiocentesis
7. Write a note on extracorporeal CPR
8. Arterial **LINE** insertion – indication, procedures, sites and complication
9. Write a note on skeletal muscle relaxants
10. Write a note on vap bundle
    OR
    Write a note on respiratory assessment in patient with respiratory distress
11. Write a note on acute and chronic respiratory acidosis
12. Write a note on post cardiac arrest care

SHORT ANSWER 10 x 3 = 30 Marks

13. Pulmonary rehabilitation definition
14. Rationale for pulmonary rehabilitation
15. Inspiratory muscle trainer – (IMT)
16. Eclampsia
17. Apnea-hypopnea index
18. Mention any three antipsychotics
19. Types of bronchoscopy and its parts
20. Six-minute walk test
21. Oxygen cascade
22. Determinants of oxygen balance

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Technology Degree Examination – 27-Nov-2023

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. Modes of mechanical ventilation. Explain any three.
2. Explain extubation, equipments needed, procedure, indications and complication.
   OR
   Upper airway emergencies and management.

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

3. Hypovolemic shock.
4. Prone ventilation.
5. Goals of long-term mechanical ventilation.
   OR
   Role of tracheostomy in weaning.
6. Cardiac tamponade and management.
7. Hazards of oxygen therapy with mechanical ventilation.
8. Capnography.
9. P-V Loop in ARDS.
10. Troubleshooting in mechanical ventilation.
    OR
    HFOV.
11. Management of Blunt trauma.
12. Infection control practices in Bronchosocpy.

SHORT ANSWER 10 x 3 = 30 Marks

13. Auto PEEP.
14. Indication and contraindications of NIV.
15. Muscle relaxants.
16. Chest cuirass.
17. Defibrillator.
18. Pulmonary artery catheter and insertion sites.
19. Hysteresis.
20. Indication of tracheostomy.
21. Oxygen dissociation curve.
22. Name few advanced ventilator modes.

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Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Respiratory Care Technology Degree Examination – 29-Nov-2023

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 development of fetal circulation with diagram
   Or
   Write in detail on neonatal respiratory syndrome and management

2. Write a note on high frequency ventilation for pediatrics
   OR
   Write a note on ECMO in pediatrics

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

3. **Write a note on bubble CPAP & its settings.**
4. Congenital diaphragmatic hernia – pathophysiology and management
5. Write a note on coarctation of the aorta
   OR
   Write in detail on surfactant replacement therapy in neonates
6. **Write a note on transient tachypnea of new born ?**
7. Write a note on inhaled nitric oxide therapy
8. Indications, contraindications and complications of NIV in newborns
9. Write a note on drowning and its management
10. Write a note on Pneumonitis in pediatrics
    OR
    Write a note on pulmonary air leak
11. **Algorithm of acute coronary syndrome for adults ?**
12. Write a note on colorimetry

SHORT ANSWER 10 x 3 = 30 Marks

13. Thermoneutral environment
14. Techniques of surfactant delivery
15. Capnography
16. Complications of arterial puncture
17. **PEEP**
18. Epiglotitis
19. Laryngeal Mask Airway
20. High flow nasal cannula and sized according to gestational age
21. Mention any three sedatives in pediatric care
22. Functions of surfactant

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