

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Third Year (Semester-V)

March 2022 Examination

B.Sc. Respiratory Care Technology (RCT)

Time: 3 Hrs.

[Max. Marks: 100]

Respiratory Care Technology Clinical

Q.P Code: J5891

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay (no choice)

2×10=20 Marks

1. Define Acute Respiratory distress syndrome (ARDS). Write a note on causes, clinical features and management of ARDS (2+2+2+4)
2. Explain the characteristics of therapeutic aerosols

Short Essay (Answer any 10)

10×5=50 Marks

3. Describe the mechanism of cough
4. Write a note on Acute pharyngitis
5. Describe the pathophysiology and clinical features of bronchitis
6. Write a note on diagnosis and chest X-ray feature of COPD
7. Describe in detail about the pathophysiology of ARDS
8. Describe in detail about Venturi along with labelled diagram
9. Describe the pathophysiology and clinical features of lung abscess
10. Describe the goals and complication of oxygen therapy
11. Write a note on the key mechanism of aerosol deposition
12. Describe the pathophysiology and clinical features of Asthma
13. Describe in detail about small volume nebulizer along with labelled diagram
14. Write a note on reservoir oxygen therapy devices.

Short answer (Answer any 10)

10×3=30 Marks

15. Mention the chest X-ray feature of pulmonary edema
16. Describe the complication of aerosol therapy
17. Describe the optimal technique of using a Metered dose inhaler
18. Write in detail about pathophysiology of COPD
19. Write the difference between low and high flow oxygen therapy devices
20. Write a note on Nasal cannula
21. Describe the clinical signs of hypoxemia
22. Describe the uses of humidification therapy
23. Write a note on diagnosis of Tuberculosis
24. Write a difference between ALI and ARDS
25. Write note on pathophysiology of Pulmonary edema
26. Mention the difference between Active and Passive humidifiers.



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B.Sc. Respiratory Care Technology (RCT)

Time: 3 Hrs.

[Max. Marks: 100]

Respiratory Care Technology Applied

Q.P Code: J5892

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay (no choice)

2×10=20 Marks

1. Explain in detail about the assessment of oxygenation status
2. Write in detail about troubleshooting of ventilator alarms

Short Essay (Answer any 10)

10×5=50 Marks

3. Lung compliance
4. Ventilation/perfusion mismatch
5. Airway pressure release ventilation (APRV)
6. Phase variables
7. Synchronized intermittent mandatory ventilation (SIMV)
8. Sodium abnormalities
9. Respiratory Acidosis
10. Application of chest inspection, percussion and auscultation
11. Permissive hypercapnia
12. Three strategies to improve oxygenation status
13. Intrapulmonary shunting
14. Metabolic alkalosis

Short answer (Answer any 10)

10×3=30 Marks

15. List the causes of metabolic acidosis
16. Phase variable of assist control (A/C mode)
17. List the causes of high-pressure alarms
18. Hypokalemia
19. Define airway resistance with formula and write the normal value.
20. List three differences between main-stream and side-stream capnography
21. Phase variable of pressure regulated volume control (PRVC) mode
22. List the difference between SIMV and PSV mode.
23. Classify oxygenation on basis of p_{aO_2}
24. Techniques used to confirm endotracheal tube placement
25. Phase variable of pressure support ventilation (PSV) mode
26. Clinical signs of ventilation failure



