



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

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

September 2023 Examination

B.Sc. Respiratory Care Technology (RCT)

Time : 3 Hrs.

[Max. Marks : 100]

Respiratory Care Technology Clinical

Q.P Code : J6891

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay (no choice)

2×10=20 Marks

1. Describe in detail about Endo tracheal tube.
2. Write in detail about capnography

Short Essay (Answer any 10)

10×5=50 Marks

3. Write a note on reservoir oxygen therapy devices.
4. Describe in ultrasonic nebulizer
5. Describe about Small volume nebulizer along with labelled diagram
6. Write a note on manual resuscitation bag
7. Describe in detail tracheostomy tube
8. Describe in detail transcutaneous oxygen monitoring
9. Describe about laryngeal mask airway
10. Describe oropharyngeal airway
11. Write a note Dry powder inhaler
12. Describe about Nasopharyngeal airway
13. Write a note Metered dosed inhaler
14. Describe about pulse oximeter

Short answer (Answer any 10)

10×3=30 Marks

15. Write note on uses of LMA
16. Describe about indication and adverse effect of MDI
17. Describe the optimal technique of using SVN
18. Write the rationale between PaCO₂ and EtCO₂
19. Write the difference between USN and SVN
20. Write a note abnormal capnography
21. Describe the methods of confirmation of ET tube in lungs
22. Describe the uses of nebulizer therapy
23. Write the difference between DPI and MDI
24. Draw a neat labelled of ET tube
25. Write the insertion technique of OPA
26. Write the difference between low and high flow oxygen therapy devices



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

September 2023 Examination

B.Sc. Respiratory Care Technology

Time : 3 Hrs.

[Max. Marks : 100]

Respiratory Care Technology - Applied

Q.P Code : J6892

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay

2 X 10 = 20 Marks

1. Define ECG. Explain 12 lead standard ECG placement write a indications and contraindications of ECG
2. Define hemodynamic monitoring. Explain detail notes on central venous pressure monitoring and mention it's normal pressure.

Short Essay (Answer any Ten)

10 X 5 = 50 Marks

3. Analgesic drugs used during mechanical ventilation and it's effect on PEEP
4. CVP monitoring
5. Define neuromuscular blocking agents and briefly explain about nitric oxide.
6. Explain briefly about sedative drugs used in intubation procedure
7. Define cardiac output and mention normal cardiac output with appropriate formula.
8. Classification of power system in mechanical ventilation.
9. Define humidification and briefly explain about heated humidifier
10. Pulmonary artery pressure monitoring and it's normal pressure.
11. Detail notes on endotracheal intubation procedure.
12. Indications and complications of tracheostomy procedure
13. Briefly explain about Brady arrhythmia and tachy arrhythmia with proper ECG waveform
14. Define shakable and non-shakable rhythm and briefly explain about non shakable rhythm.

Short Answers (Answer any Ten)

10 X 3 = 30 Marks

15. Define humidification.
16. Classify various types of output waveforms
17. Draw a neat labeled diagram of two types of second degree heart block with appropriate ECG waveform
18. Indications of ECG
19. Meter dose inhaler
20. Phase variables of pressure support mode
21. Contraindications of tracheostomy tube
22. DPI
23. Phase variables of pressure control mode
24. How to measure arrhythmias in ECG
25. How to measure heart rate in ECG
26. Define passive humidifier

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

September 2023 Examination

B.Sc. Respiratory Care Technology

Time : 3 Hrs.

[Max. Marks : 100]

Respiratory Care Technology - Advanced

Q.P Code : J6893

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

Long Essay

2 X 10 = 20 Marks

1. Define pulmonary edema and briefly explain its etiology, pathophysiology, investigation and management.
2. Define drowning. Briefly explain about pathophysiology of saltwater drowning and it's management

Short Essay (Answer any Ten)

10 X 5 = 50 Marks

3. Define home mechanical ventilation and it's indication
4. Indications of NIPPV
5. oxygen toxicity
6. Explain briefly about BIPAP
7. Indications and contraindications of CPAP
8. Briefly explain about cardiogenic pulmonary edema
9. Pathophysiology of freshwater drowning
10. Patient selection and goals in home mechanical ventilation
11. Differentiate Life support and Life sustainable ventilation
12. Hyperbaric oxygen therapy
13. Pathophysiology of cardiogenic pulmonary edema
14. Caissons disease

Short Answers (Answer any Ten)

10 X 3 = 30 Marks

15. Define near drowning
16. Define continue positive pressure ventilation.
17. Mechanism of oxidative damage
18. Define oxygen toxicity
19. Define non cardiogenic pulmonary edema
20. Management of cardiogenic pulmonary edema
21. Define drowning
22. Prevention of barotrauma
23. Differentiate CPAP and BIpap
24. Mention various types of mask and interface used in Non invasive positive pressure ventilation
25. Define sleep apnea
26. Clinical manifestations of drowning.