FUNDAMENTALS OF RESPIRATORY CARE FINAL EXAM

Study Guide and Practice Questions
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You can get access to our massive bank of TMC Practice Questions by Clicking Here. 😊
Why hello there!

Thank you so much for downloading this study guide! In this book, you will find a ton of helpful practice questions, all, of course, covering the topic of — Fundamentals of Respiratory Care.

These questions are designed to help you prepare for the Fundamentals of Respiratory Care final exam in Respiratory Therapy School.

Hopefully, by going through these practice questions, you will be able to boost your knowledge to a whole new level and ace your final exam.

This is definitely one of the most important subjects in Respiratory Therapy School. Not to mention, it’s also the topic that some students struggle with.

With that being said, (hopefully) this study guide, along with the resources on our website and YouTube channel can help.

So if you’re ready, let’s go ahead and get started.

Good luck! 😊
1. While performing postural drainage on a patient who is in a head-down position, the patient appears dyspneic due to severe prolonged coughing. The respiratory therapist should do which of the following?
   A. Perform percussion
   B. Turn the patient
   C. Administer oxygen
   D. Have the patient sit up

2. A pediatric patient with an acute upper airway obstruction would have which of the following physical signs?
   A. Unilateral lung expansion
   B. Expiratory wheezing
   C. Inspiratory stridor
   D. Inspiratory crackles

3. A tachypneic patient with pulmonary edema is brought to the emergency department (ED). Which of the following should be used to provide supplemental oxygen?
   A. Air entrainment mask
   B. Nasal cannula
   C. Nonrebreathing mask
   D. Partial rebreathing mask

4. While reviewing a patient's chart, results of a chest radiograph indicate complete opacification of the left chest with a shift of the trachea and mediastinum to the left. These findings are consistent with:
   A. Pneumothorax of the right lung
   B. Atelectasis of the left lung
   C. Right sided pleural effusion
   D. Pulmonary embolus in the left lung

5. A physician orders 1 mg atropine by aerosol for a patient. If the concentration of atropine in a stock solution is 0.04%, how many mL of the atropine solution must be administered?
   A. 0.25
6. For a tracheal tube cuff to allow circulation to tracheal mucosa, the cuff pressure must be less than:
   A. Capillary pressure
   B. Pulmonary artery pressure
   C. Pulmonary capillary wedge pressure
   D. Central venous pressure

7. Three days postoperatively, a patient is febrile and the white blood cell count is 18,000/cu mm. A chest radiograph shows a patchy bilateral infiltrates with air bronchograms. Based on this information, which of the following is the most probable diagnosis?
   A. Pneumonia
   B. Atelectasis
   C. Pulmonary edema
   D. Pleural effusion

8. Common complications associated with arterial punctures include which of the following?
   I. Fistula formation
   II. Hematoma formation
   III. Spasm of the vessel
   A. I only
   B. III only
   C. I and II only
   D. II and III only

9. A patient is receiving volume controlled ventilation with a continuous flow IMV circuit added. The respiratory therapist notices that the PEEP level drops from the prescribed 8 to 4 cm H2O with each spontaneous breath. To correct this problem, the therapist should increase the:
   A. PEEP to 12 cm H2O
B. Sensitively setting
C. Peak inspiratory flow setting on the ventilator
D. Flow to the continuous flow reservoir bag.

10. A 45-year-old patient with mild kyphoscoliosis and postpolio syndrome requires noninvasive inspiratory assistance and is to be fitted with a chest cuirass. Which of the following should the respiratory therapist recommend regarding proper fit?
   I. A 2 to 3 inch air cushion between the shell and the patient’s maximum chest rise is required.
   II. A cast of the thorax may be made for the patient to accommodate structural abnormalities.
   III. A properly fitted cuirass shell should extend anteriorly from the clavicle to the bottom of the rib cage.
   A. I and II only
   B. I and III only
   C. II and III only
   D. I, II and III

11. Direct spirometry CANNOT be used to measure which of the following?
   A. Vital capacity
   B. Residual volume
   C. Tidal volume
   D. Inspiratory reserve volume

12. A patient has a chest tube placed anteriorly in the fourth intercostal space that is connected to an underwater seal drainage system with suction. The respiratory therapist observes that one of the chest tube side holes is now outside the chest wall. Correct statements about this situation include which of the following?
   I. The tube should be disconnected from suction.
   II. The tube should be clamped immediately.
   III. A pleurocutaneous fistula exists.
   IV. A complete pneumothorax is possible.
   A. I and IV only
B. II and III only
C. III and IV only
D. I, II and IV only

13. The respiratory therapist would instruct a patient which of the following conditions to use pursed lip breathing?
   A. Asthma
   B. Croup
   C. Emphysema
   D. Pneumonia

14. When selecting an endotracheal tube, the respiratory therapist should consider which of the following to minimize airflow resistance?
   I. Internal diameter
   II. External diameter
   III. Length of the tube
   A. I only
   B. II only
   C. I and III only
   D. II and III only

15. A patient is being sent home with an oxygen concentrator. To ensure the safety of the home environment which of the following should be assessed?
   A. Number of outlets
   B. Water supply
   C. Electrical load capacity
   D. Location of bedroom

16. An increase in the number of staphylococcal infections is noted among hospitalized patients receiving respiratory care. Which of the following is the most likely source of the infections?
   A. The ventilators
   B. The personnel
   C. Distilled water
17. While assessing a patient’s radical pulse, the respiratory therapist notes that the pulse feels full and bounding. Which of the following conditions would be the most probable cause of this finding?
   A. Hypovolemia  
   B. Hypertension  
   C. Massive GI bleeding  
   D. Low cardiac output

18. When performing oxygen rounds, the respiratory therapist notes cyanosis in a patient with COPD who is receiving oxygen at 2 L/min by nasal cannula. Morning laboratory results show a hematocrit of 60%. This is most consistent with which of the following?
   A. Anemia  
   B. Leukopenia  
   C. Methemoglobinemia  
   D. Polycythemia

19. Upon completion of a ventilator check, the respiratory therapist notices that a mathematical error was made on the ventilator monitoring sheet. Which of the following would be the most appropriate course of action?
   A. Attempt to erase the error and write over it with the correction. 
   B. Leave the error alone and complete the ventilator check. 
   C. Copy the entire ventilator sheet over to correct the error. 
   D. Line through the error, write the word “error”, correct and initial it.

20. After assisting the physician with a fiberoptic bronchoscopy and transbronchial lung biopsy on a patient receiving volume controlled ventilation, the respiratory therapist notes a marked increase in peak inspiratory pressure. Possible causes of the pressure increase include which of the following?
I. Bronchospasm  
II. Pneumothorax  
III. Pulmonary hemorrhage  
IV. Laryngospasm  
A. I and IV only  
B. II and III only  
C. I, II and III only  
D. I, II, III and IV

21. When pneumatic aerosol generator is being used, the respiratory therapist should decrease the aerosol output for which of the following patients?  
   I. A patient with dried, retained secretions who becomes dyspneic  
   II. Infant who has pulmonary edema  
   III. A patient who has just undergone a tracheotomy  
   A. I only  
   B. III only  
   C. I and II only  
   D. II and III only

22. Which of the following devices should be selected to administer nebulized bronchodilator therapy at home?  
   A. Air compressor  
   B. Oxygen concentrator  
   C. E cylinder of oxygen  
   D. Liquid oxygen system

23. Immediate electric countershock be recommend for which of the following cardiac dysrhythmias?  
   A. Ventricular asystole  
   B. Ventricular fibrillation  
   C. Atrial fibrillation  
   D. Atrioventricular block

24. The respiratory therapist notes that a patient who is being mechanically ventilated has thick, mucoid secretions. It is
determined that the wick humidifier is producing insufficient relative humidity. The therapist should do which of the following?

A. Remove the excess water in the humidifier.
B. Increase the temperature setting
C. Increase the flow through the humidifier
D. Shorten the tubing connecting the gas source to the humidifier inlet.

25. In which of the following patient would the use of a heat moisture exchanger be acceptable?
   A. An adult breathing oxygen at 6 L/min by a nasal cannula.
   B. A patient with ARDS who is being mechanically ventilated.
   C. A mechanically ventilated patient during transport.
   D. A mechanically ventilated patient with thick secretions.

26. The dynamic compliance of a patient with status asthmaticus requiring continuous mechanical ventilation has decreased sharply over a 1-hour period. Which of the following drugs may be expected to elicit the most rapid improvement in dynamic compliance?
   A. Acetylcysteine (Mucomyst)
   B. Theophylline (Aminophylline)
   C. Beclomethasone (Vanceril)
   D. Albuterol (Ventolin)

27. A 1 month old infant who is being ventilated with a time-cycled, pressure limited ventilator has a peak pressure of 36 cm H2O and a mean airway pressure of 21 cm H2O. The respiratory therapist shortens the inspiratory time. Which of the following responses would be expected?
   A. Increased peak pressure
   B. Increased tidal volume
   C. Decreased expiratory phase
   D. Decreased mean airway pressure
28. The high pressure alarm on a volume cycled ventilator should be set at least 10 cm H2O pressure above which of the following?
   A. Peak airway pressure  
   B. Mean airway pressure  
   C. High pressure pop-off  
   D. Humidifier outlet

29. The respiratory therapist observes low exhaled volumes during volume-cycled, pressure-limited, mechanical ventilation. To determine if the low volumes are caused by inaccurate ventilator volume control, the therapist should measure the tidal volume at the:
   A. Machine outlet  
   B. Patient connector  
   C. Exhalation valve  
   D. Humidifier outlet

30. A previously healthy 30 year old patient is hospitalized with chills and fever. A chest radiograph is consistent with pneumonia of the right upper lobe. Which of the following is most likely to aid in the patient’s management?
   A. Bronchial drainage of the right lung  
   B. Incentive spirometry  
   C. Aerosol therapy  
   D. Spirometry before and after a bronchodilator

31. The respiratory therapist is preparing to initiate oxygen therapy by a nasal cannula at 2 L/min for a 58 year old patient who has admitted with chest pain. Upon entering the patient’s room, the therapist finds him slumped over in bed and unresponsive to verbal and tactile stimuli. The therapist should do which of the following first?
   A. Call for help  
   B. Administer oxygen  
   C. Begin external cardiac compression  
   D. Deliver a precordial thump
32. A patient becomes febrile 24 hours after intubation. The respiratory therapist notes other signs of developing pneumonia. A sputum specimen for microbiological assessment should be obtained by:
   A. Swabbing the artificial airway
   B. Swabbing the airway humidifier device
   C. Using a sterile suction trap
   D. Using sputum suctioned from the upper airway

33. A year 21 old man arrives in the emergency department (ED) after being rescued from a house fire. Physical examination reveals burns on the upper chest and face, and marked edema of the face and oropharynx. The results of an arterial blood gas sample obtained while the patient was breathing room air are below:
   Ph – 7.55
   PaCO2 – 26 torr
   PaO2 – 105 torr
   HCO3 – 22 mEq/L
   BE – 0 mEq/L

   Based on the patient's condition at this time, the respiratory therapist should recommend which of the following?
   A. Intubate the patient
   B. Administer IPPB with ethanol
   C. Administer metaproterenol (Alupent)
   D. Administer aerosol therapy

34. While checking an aerosol mist tent, the respiratory therapist is unable to see any aerosol particles in the tent. The therapist should:
   A. Decrease the F, Oz setting on the aerosol-producing device.
   B. Check the patency of the jet and capillary tube on the aerosol device.
   C. Check the coolant level in the refrigeration unit.
   D. Empty any water that has collected in the condensation bottle.
35. A patient with hypoxemia is receiving 10 cm H2O PEEP with an FiO2 of 0.40. Shortly after increasing the PEEP to 15 cm H2O, the respiratory therapist notes that the cardiac output measurement decreased from 4.5 to 2.7 L/min. Which of the following is the most appropriate action?
   A. Maintain the present therapy and measure cardiac output in 1 hour.
   B. Decrease PEEP to 10 cm H2O and increase the FiO2 to 0.50
   C. Increase PEEP to 20 cm H2O and maintain the FiO2 at 0.40
   D. Discontinue PEEP and increase the FiO2 to 1.0

36. Which of the following devices would be most appropriate for the treatment of postoperative micro-atelectasis in an alert, cooperative patient?
   A. IPPB
   B. Incentive spirometry
   C. Aerosol nebulizer
   D. Percussor

37. The respiratory therapist is called to the operating room because carbon dioxide is leaking from an E Cylinder. The therapist should do which of the following?
   I. Tighten all connections
   II. Check the outlet for the presence of foreign debris.
   III. Replace the washer between the cylinder and regulator connections.
   IV. Lubricate the connection where gas is leaking
   A. IV only
   B. I and II only
   C. III and IV only
   D. I, II and III only

38. Which of the following is the most appropriate device for calibrating volume measurement of a water-seal spirometer?
   A. A 3-L syringe
   B. An adult manual resuscitator bag
C. A volume ventilator
D. A pediatric flowmeter

39. A patient with a suspected head injury presents in the emergency department (ED). As the patient’s pupil is exposed to light, they constrict rapidly, indicating a:
   A. Comatose state
   B. Normal response
   C. Neurological head injury
   D. Brain stem infarction

40. When setting up mask CPAP for an adult patient, which of the following alarms is the most important to ensure maintenance of therapy?
   A. High Fi02
   B. Low pressure
   C. High respiratory rate
   D. Pulse monitor

41. The respiratory therapist determined that a patient who is being mechanically ventilated has developed auto-PEEP due to dynamic airflow obstruction. Which of the following should the therapist do?
   A. Add inspiratory plateau
   B. Apply expiratory retard
   C. Increase respiratory rate
   D. Decrease inspiratory flow

42. If the ratio light alarm on a ventilator is illuminating on each breath, which of the following controls may be adjusted to remedy the problem?
   I. Volume
   II. Respiratory rate
   III. Sensitivity
   IV. Inspiratory flow
   A. I and II only
   B. II and III only
43. A 17 year old has sustained a cervical spine injury. He is conscious and spontaneously breathing. The patient weighs approximately 50 kg (110 lb) and his head has been stabilized with sandbags. Arterial blood gas results indicate that the patient is in acute ventilatory failure. To secure the patient’s airway, the respiratory therapist should select which of the following?
   A. 6.0 mm nasopharyngeal airway
   B. 7.0 mm nasotracheal tube
   C. 9.0 mm nasotracheal tube
   D. 37 Fr Carlen’s orotracheal tube

44. To reduce fluctuations in pressure in a mask CPAP system with a threshold resistor valve, the respiratory therapist should do which of the following?
   A. Improve the mask seal
   B. Reduce gas flow
   C. Increase expiratory resistance
   D. Use a smaller reservoir

45. The respiratory therapist has just performed nasopharyngeal suctioning on a patient and is withdrawing the catheter. Suddenly, the patient slumps over in bed and becomes unresponsive. A pulse is not palpable. The therapist should:
   A. Reinsert the suction catheter and resume suctioning
   B. Reinsert the suction catheter and connect it to the oxygen source
   C. Go to the nursing station for help
   D. Initiate CPR

46. A patient is receiving mechanical ventilation with a tidal volume of 700 mL has just undergone a tracheostomy. The respiratory therapist notes a cuff pressure of 18 mm Hg and a leak of 25 mL. The therapist should:
A. Add 10 mL of air to the cuff.
B. Maintain the present cuff volume
C. Advice the physician to insert a larger tracheostomy lube
D. Withdraw air from the cuff until the pressure is less than 15 mm Hg.

47. Which of the following would be the most accurate method for determining the amount of volume loss through a chest tube in a patient who is being mechanically ventilated?
   A. Subtract the expired Vt from the inspired Vt.
   B. Note the difference between the peak and plateau pressures.
   C. Compare the volume delivered when the chest tube is open vs clamped.
   D. Measure the flow coming from the suction regulator.

48. While checking a patient’s progress notes, the respiratory therapist views a physician’s treatment plan that includes changes in respiratory care. The therapist’s most appropriate action is to:
   A. Initiate the changes immediately.
   B. Confer with the patient’s nurse about when to implement the changes.
   C. Check to see if there are new respiratory care orders.
   D. Review the planned changes with the shift supervisor.

49. Findings consistent with chest percussion include which of the following?
   I. A well aerated lung produces a resonant sound on percussion.
   II. Atelectasis produces hyperresonance on percussion.
   III. Dullness is produced when percussion is performed over an area consolidated by pneumonia.
   IV. Hyper resonance normally occurs when percussion is performed over the heart.
   A. I and II only
   B. I and III only
50. A patient complains that after his last aerosolized bronchodilator treatment, he experienced nervousness and increased anxiety. The respiratory therapist’s best response would be which of the following?
   A. “The nervousness and increased anxiety are expected since the nebulizer is powered by pure oxygen.”
   B. “Increase your rate and depth of breathing to remove the excess CO2 from the aerosol mask.”
   C. “Relax and try to breathe slowly and I will be here with you so that nothing goes wrong.”
   D. “There is no need to worry because all patient’s become nervous and anxious while taking this kind of treatment.”

51. The respiratory therapist is instructing an outpatient in the care of respiratory equipment. Which of the following steps should be included in the cleaning procedure?
   I. Wash thoroughly in mild detergent.
   II. Remove all soap by rinsing with water.
   III. Soak in vinegar solution for 20 minutes.
   IV. Drain dry without wiping.
   A. I and II only
   B. I, III and IV only
   C. II, III and IV only
   D. I, II, III and IV

52. When performing a leak test on volume ventilator, the respiratory therapist should do which of the following?
   A. Open the breathing circuit to the atmosphere.
   B. Use a circuit factor of more than 4 mL/cm H2O
   C. Set the flow control at maximum
   D. Set the high pressure limit at maximum

53. Which of the following specialized imaging tests would be most useful in diagnosing a pulmonary emboli?
A. Chest X-ray  
B. Pulmonary function test (PFT)  
C. Ventilation-perfusion scan (V/Q scan)  
D. Arterial blood gas

54. While examining a patient in the ICU, you note that he appears somewhat edematous, and the nurse has indicated that the patient's urine output is “minimal”. In what section of the medical record would you check to determine the patient's fluid balance (intake vs output)?  
   A. Physician orders  
   B. Consent  
   C. Lab results  
   D. Nurses’ notes and flow sheet

55. Which of the following physical findings would you expect to see in an alert but anxious asthmatic who has just been admitted to the emergency department?  
   A. Respiratory acidosis  
   B. Respiratory alkalosis  
   C. Clubbing  
   D. Cor pulmonale

56. In the lab results section of a patient's medical record, the overall WBC count is shown as 22,000 for a febrile patient who appears acutely ill and in moderate respiratory distress. Which of the following is this patient's most likely diagnosis?  
   A. Bacterial pneumonia  
   B. Emphysema  
   C. Pulmonary embolus  
   D. Pulmonary fibrosis

57. A PET scan would be most useful in the diagnosis of which of the following conditions?  
   A. Bronchogenic carcinoma  
   B. Chronic bronchitis  
   C. Pulmonary fibrosis
D. Smoke inhalation

58. Negative inspiratory force (NIF) is useful in the determination of which of the following?
   A. Airway resistance
   B. Functional residual capacity
   C. Respiratory muscle strength
   D. Sustained maximal inspiration

59. Assessment of a 28-year old trauma patient reveals diminished breath sounds, asymmetrical chest expansion, severe chest pain, and an SPO2 of 90%, despite receiving oxygen via cannula at 5 L/min. These findings are most consistent with what diagnosis?
   A. Complete airway obstruction
   B. Pneumothorax
   C. Viral pneumonia
   D. Pleural effusion

60. A 23 year-old firefighter is admitted with suspected smoke inhalation. You place him on a nonrebreathing mask. What is the most appropriate method of monitoring his oxygenation?
   A. Arterial blood gas analysis
   B. CO-oximetry
   C. Pulse oximetry
   D. Calculation of P(A-a)02

61. The ratio of lecithin to sphingomyelin, or L/S ratio, is a test to determine fetal lung maturity. Such a test may be done in the later stages of pregnancy, and the values will initially be noted in the lab results section of the mother's medical record. Approximately what ratio is associated with the onset of mature surfactant production?
   A. 2:1
   B. 20:1
   C. 1:2
   D. 1:20
62. Sputum culture and sensitivity would be indicated in the evaluation of which of the following clinical conditions?
   A. Pulmonary edema
   B. Bacterial pneumonia
   C. Bronchiectasis
   D. Empyema

63. An otherwise healthy 25-year-old male patient who took an overdose of sedatives is being supported on a ventilator. Which of the following measures of total static compliance (lungs + thorax) would you expect in this patient?
   A. 100 mL/cm H20
   B. 10 mL/cm H20
   C. 1 mL/cm H20
   D. 0.1 mL/cm H20

64. An adult patient receiving volume-oriented assist/control ventilation has a corrected tidal of 700 mL, a peak pressure of 50 cm H20 and a plateau pressure of 40 cm H20 and is receiving 5 cm H20 positive end-expiratory pressure (PEEP). What is this patient’s static compliance?
   A. 200 mL/cm H20
   B. 20 mL/cm H20
   C. 2 mL/cm H20
   D. 0.2 mL/cm H20

65. To make oral intubation easier, how should the patient’s head and neck be positioned?
   A. Neck extended over the edge of the bed, with head dangling down
   B. Neck extended, with head supported by towel and flexed forward
   C. Both the neck and head fully extended, with neck supported by towel
   D. Neck flexed, with head supported by towel and tilted back
66. Which of the following is true regarding patients in the early stages of an asthmatic attack?
   A. They all exhibit respiratory alkalosis
   B. They always have moderate hypoxemia
   C. They have decreased expiratory flows
   D. They never respond to beta adrenergics.

67. A patient's advanced directive:
   A. Is usually obtained at the time of admission.
   B. Can be found in the doctor's progress notes.
   C. Represents a guideline, not a legal requirement.
   D. Cannot be altered after it is written and signed.

68. An intubated patient is receiving volume control ventilation. The patient's condition has not changed, but you observe higher peak inspiratory pressures than before. Which of the following is the most likely cause of this problem?
   A. There is a leak in the patient-ventilator system.
   B. The endotracheal tube cuff is deflated or burst.
   C. The endotracheal tube is partially obstructed.
   D. The endotracheal tube is displaced into the pharynx.

69. Over a 3-hour period, you note that a patient's plateau pressure has remained stable, but her peak pressure has been steadily increasing. Which of the following is the best explanation for this observation?
   A. The patient's airway resistance has increased.
   B. The patient is developing atelectasis
   C. The patient's compliance has decreased.
   D. The patient is developing pulmonary edema.

70. You are assisting with the oral intubation of an adult patient. After the ET tube has been placed, you note that breath sounds are decreased on the left compared with the right lung. What is the most likely cause of this?
   A. The tip of the tube is in the right mainstem bronchus
   B. The cuff of the endotracheal tube has been overinflated
C. The endotracheal tube has been inserted into the esophagus
D. The tip of the tube is in the left mainstem bronchus.

71. A patient receiving long-term positive-pressure ventilatory support exhibits a progressive weight gain and a reduction in the hematocrit. Which of the following is the most likely cause of this problem?
   A. Leukocytosis
   B. Chronic hypoxemia
   C. Water retention
   D. Leukocytopenia

72. Which of the following are the most common sites for the percutaneous sampling of arterial blood for blood gas analysis?
   I. Earlobe
   II. Radial artery
   III. Brachial artery
   IV. Side of the heel
   A. II and III
   B. I and IV
   C. III and IV
   D. I and II

73. What is the primary indication for tracheal suctioning?
   A. Presence of atelectasis
   B. Retention of secretions
   C. Ineffective coughing
   D. Presence of pneumonia

74. What is the most common complication of suctioning?
   A. Hypotension
   B. Infection
   C. Arrhythmias
   D. Hypoxemia
75. Complications of tracheal suctioning include all of the following except:
   A. Hyperinflation
   B. Elevated intracranial pressure
   C. Mucosal trauma
   D. Bronchospasm

76. How often should patients be suctioned?
   A. Whenever they are moved or ambulated
   B. Whenever the charge nurse requests it
   C. When physical findings support the need
   D. At least once every 2 to 3 hours

77. What is the normal range of negative pressure to use when suctioning an adult patient?
   A. –80 to –100 mm Hg
   B. –20 to –30 mm Hg
   C. –60 to –80 mm Hg
   D. –100 to –120 mm Hg

78. What is the normal range of negative pressure to use when suctioning children?
   A. –60 to –80 mm Hg
   B. –80 to –100 mm Hg
   C. –100 to –120 mm Hg
   D. –150 to –200 mm Hg

79. You are about to suction a 10-year-old patient who has a 6-mm (internal diameter) endotracheal tube in place. What is the maximum size of catheter that you would use in this case?
   A. 8 Fr
   B. 14 Fr
   C. 10 Fr
   D. 6 Fr
80. You are about to suction a female patient who has an 8-mm (internal diameter) endotracheal tube in place. What is the maximum size of catheter you would use in this case?
   A. 10 Fr
   B. 14 Fr
   C. 12 Fr
   D. 8 Fr

81. To prevent hypoxemia when suctioning a patient, the respiratory care practitioner should initially do which of the following?
   A. Pre-oxygenate the patient with 100% oxygen.
   B. Have the patient hyperventilate for 2 minutes.
   C. Give the patient a bronchodilator treatment.
   D. Manually ventilate the patient with a resuscitator.

82. To maintain positive end-expiratory pressure (PEEP) and high FIO2 when suctioning a mechanically ventilated patient, what would you recommend?
   A. Use a closed-system multiuse suction catheter.
   B. Use the smallest possible catheter.
   C. Limit suctioning to once an hour.
   D. Limit suction time to no more than 5 seconds.

83. Total application time for endotracheal suction in adults should not exceed which of the following?
   A. 15 to 20 seconds
   B. 3 to 5 seconds
   C. 10 to 15 seconds
   D. 20 to 25 seconds

84. While suctioning a patient, you observe an abrupt change in the electrocardiogram wave form being displayed on the cardiac monitor. Which of the following actions would be most appropriate?
   A. Stop suctioning and immediately administer oxygen.
   B. Decrease the amount of negative pressure being used.
C. Stop suctioning and report your findings to the nurse.
D. Change to a smaller catheter and repeat the procedure.

85. Which of the following methods can help to reduce the likelihood of atelectasis due to tracheal suctioning?
   I. Limit the amount of negative pressure used.
   II. Hyperinflate the patient before and after the procedure.
   III. Suction for as short a period of time as possible.
   A. I and III
   B. I, II, and III
   C. II and III
   D. I and II

86. Which of the following can help to minimize the likelihood of mucosal trauma during suctioning?
   I. Use as large a catheter as possible.
   II. Rotate the catheter while withdrawing.
   III. Use as rigid a catheter as possible.
   IV. Limit the amount of negative pressure.
   A. II and IV
   B. I, II, and IV
   C. III and IV
   D. I and II

87. What is the purpose of an endotracheal tube stylet?
   A. It helps ascertain proper tube position.
   B. It adds rigidity and shape to ease insertion.
   C. It minimizes mucosal trauma during insertion.
   D. It protects the airway against aspiration

88. Which of the following equipment is NOT needed to perform nasotracheal suctioning?
   A. Suction kit (catheter, gloves, basin, etc.)
   B. Laryngoscope with MacIntosh and Miller blades
   C. Oxygen delivery system (mask and manual resuscitator)
   D. Bottle of sterile water or saline solution
89. After repeated nasotracheal suctioning over 2 days, a patient with retained secretions develops minor bleeding through the nose. Which of the following actions would you recommend?
   A. Perform a tracheotomy for better access to the lower airway.
   B. Discontinue nasotracheal suctioning for 48 hours and reassess.
   C. Stop the bleeding and use a nasopharyngeal airway for access.
   D. Orally intubate the patient for better access to the lower airway.

90. Before the suctioning of a patient, auscultation reveals coarse breath sounds during both inspiration and expiration. After suctioning, the coarseness disappears, but expiratory wheezing is heard over both lung fields. What is most likely the problem?
   A. Secretions are still present and the patient should be suctioned again.
   B. The patient has hyperactive airways and has developed bronchospasm.
   C. A pneumothorax has developed and the patient needs a chest tube.
   D. The patient has developed a mucous plug and should undergo bronchoscopy.

91. What general condition requires airway management?
   I. Airway compromise
   II. Respiratory failure
   III. Need to protect the airway
   A. I and II
   B. I and III
   C. II and III
   D. I, II, and III

92. Which of the following conditions require emergency tracheal intubation?
I. Upper airway or laryngeal edema
II. Loss of protective reflexes
III. Cardiopulmonary arrest
IV. Traumatic upper airway obstruction
A. III and IV
B. I, II, III, and IV
C. I, II, and III
D. I and IV

93. Which of the following autonomic or protective neural responses represent potential hazards of emergency airway management?
   I. Hypotension
   II. Bradycardia
   III. Cardiac arrhythmias
   IV. Laryngospasm
   A. I and IV
   B. I, II, III, and IV
   C. III and IV
   D. I, II, and III

94. All of the following indicate an inability to adequately protect the airway except:
   A. Wheezing
   B. Coma
   C. Lack of gag reflex
   D. Inability to cough

95. Which of the following types of artificial airways are inserted through the larynx?
   I. Pharyngeal airways
   II. Tracheostomy tubes
   III. Nasotracheal tubes
   IV. Orotracheal tubes
   A. I and IV
   B. I, II and III
   C. III and IV
96. Compared with the nasal route, the advantages of oral intubation include all of the following except:
   A. Reduced risk of kinking
   B. Less retching and gagging
   C. Easier suctioning
   D. Less traumatic insertion

97. Compared with the oral route, the advantages of nasal intubation include all of the following except:
   A. Reduced risk of kinking
   B. Less retching and gagging
   C. Less accidental extubation
   D. Greater long-term comfort

98. Compared with translaryngeal intubation, the advantages of tracheostomy include all of the following except:
   A. Greater patient comfort
   B. Reduced risk of bronchial intubation
   C. No upper airway complications
   D. Decreased frequency of aspiration

99. What is the standard size for endotracheal or tracheostomy tube adapters?
   A. 22 mm external diameter
   B. 15 mm external diameter
   C. 15 mm internal diameter
   D. 22 mm internal diameter

100. What is the purpose of the additional side port (Murphy eye) on most modern endotracheal tubes?
    A. Protect the airway against aspiration
    B. Help ascertain proper tube position
    C. Minimize mucosal trauma during insertion
    D. Ensure gas flow if the main port is blocked
101. What is the purpose of a cuff on an artificial tracheal airway?
   A. To seal off and protect the lower airway
   B. To stabilize the tube and prevent its movement
   C. To provide a means to determine tube position via radiograph
   D. To help clinicians determine the depth of tube insertion

102. What is the purpose of the pilot balloon on an endotracheal or a tracheostomy tube?
   A. To help ascertain proper tube position
   B. To minimize mucosal trauma during insertion
   C. To monitor cuff status and pressure
   D. To protect the airway against aspiration

103. Which of the following features incorporated into most modern endotracheal tubes assist in verifying proper tube placement?
   I. Length markings on the curved body of the tube
   II. Imbedded radiopaque indicator near the tube tip
   III. Additional side port (Murphy eye) near the tube tip
   A. I and II
   B. I and III
   C. II and III
   D. I, II, and III

104. The removable inner cannula commonly incorporated into modern tracheostomy tubes serves which of the following purposes?
   I. Aid in routine tube cleaning and tracheostomy care
   II. Prevent the tube from slipping into the trachea
   III. Provide a patent airway should it become obstructed
   A. I and III
   B. II and III
   C. III
   D. I, II, and III

105. What is the purpose of a tracheostomy tube obturator?
A. To minimize trauma to the tracheal mucosal during insertion
B. To provide a patent airway should the tube become obstructed
C. To help ascertain the proper tube position by radiograph
D. To provide a means to inflate and deflate the tube cuff

106. In the absence of neck or facial injuries, what is the procedure of choice to establish a patent tracheal airway in an emergency?
   A. Surgical tracheotomy
   B. Orotracheal intubation
   C. Nasotracheal intubation
   D. Cricothyrotomy

107. While checking a crash cart for intubation equipment, you find the following: suction equipment, oxygen apparatus, two laryngoscopes and assorted blades, five tubes, Magill forceps, tape, lubricating gel, and local anesthetic. What is missing?
   I. Obturator
   II. Syringe(s)
   III. Resuscitator bag or mask
   IV. Tube stylet
   A. I, II, and III
   B. II and IV
   C. II, III, and IV
   D. I, II, III, and IV

108. Before beginning an intubation procedure, the practitioner should check and confirm the operation of which of the following?
   I. Laryngoscope light source
   II. Endotracheal tube cuff
   III. Suction equipment
   IV. Cardiac defibrillator
   A. I, II, and III
   B. II and IV
109. While checking a Miller and a MacIntosh blade on an intubation tray during an emergency intubation, you find that the Miller blade “lights” but the MacIntosh blade does not. What should you do now?
   A. Swap the defective MacIntosh for the good Miller blade.
   B. Check and replace the bulb in the MacIntosh blade.
   C. Replace the batteries in the laryngoscope handle.
   D. Check and clean the laryngoscope handle electrical contact.

110. What size endotracheal tube would you select to intubate a 3-year-old child?
   A. 3.0 to 4.0 mm
   B. 4.5 to 5.0 mm
   C. 5.5 to 6.0 mm
   D. 6.0 to 7.0 mm

111. What size endotracheal tube would you select to intubate a 1500-g newborn infant?
   A. 2.5 mm
   B. 3.0 mm
   C. 3.5 mm
   D. 4.0 mm

112. What size endotracheal tube would you select to intubate an adult female?
   A. 6 mm
   B. 7 mm
   C. 8 mm
   D. 9 mm
So there you have it! Wow, you made it all the way to the end — that’s impressive!

By doing so, that lets me know that you have what it takes to become a successful Respiratory Therapist.

You’re definitely on the right track, so keep working and studying hard and you’ll be just fine.

**And not to worry — we’re going to be with you every step of the way along your journey.**

Thanks again for reading through this study guide! If you thought that these questions were helpful, you should definitely consider checking out our [TMC Test Bank](#).

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Let’s go through an example so that you can see what I’m talking about.

Here’s an example of a TMC Practice Question:

A 53-year-old female patient with COPD is receiving volume controlled A/C ventilation. Rhonchal fremitus is felt over the central airways and wheezing is heard over all lung fields. She has very thick secretions and her peak pressure is 45 cm H2O and plateau pressure is 20 cm H2O. Which of the following would be useful to treat this patient's condition?

A. Cromolyn sodium (Intal)
B. Triamcinolone (Azmacort)
C. Levalbuterol (Xopenex)
D. Pancuronium bromide (Pavulon)
Do you know the answer? Not to worry, let’s break it down!

The explanation that you get along with each practice question is the most important part!

By taking the information that is given in the question into consideration, we can determine that bronchospasm is the most immediate problem, which should be treated with a bronchodilator.

Rhonchal fremitus also lets us know that the patient has thick secretions and that is what is causing an increase in airway resistance, PIP, and plateau pressure.

So with that said, a bronchodilator and possibly a mucolytic like acetylcysteine are indicated for this patient.

Triamcinolone is a corticosteroid, pancuronium is a neuromuscular blocking agent, and cromolyn is a mast cell stabilizer.

Levalbuterol is the only bronchodilator of the choices, so we know that it is the correct answer.

The correct answer is: C. Levalbuterol (Xopenex)

Well, what did you think? Do you see how valuable this information can be??

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