1. **Which of the following does NOT occur during inspiration?**
   a. Intercostal muscles contract
   b. Chest cavity increases in size
   c. Diaphragm lowers
   d. Diaphragm relaxes

2. **Which of the following is TRUE concerning expiration?**
   a. The chest cavity increases in size.
   b. The diaphragm moves upward.
   c. The intercostal muscles contract to force air out of the lungs.
   d. The ribs move upward and outward.

3. **Which of the following respiratory rates is considered an abnormal respiratory rate for an adult?**
   a. 20 breaths/min
   b. 12 breaths/min
   c. 16 breaths/min
   d. 8 breaths/min

4. **Which of the following respiratory rates should be cause for alarm in a 2-month-old child?**
   a. 28 breaths/min
   b. 40 breaths/min
   c. 16 breaths/min
   d. 32 breaths/min

5. **While caring for a 3-year-old child, you should be concerned if his respiratory rate exceeds ________ breaths per minute.**
   a. 16
   b. 20
   c. 24
   d. 30

6. **Which of the following BEST defines inadequate breathing?**
   a. Wheezing noises when breathing
   b. Breathing that is insufficient to sustain life
   c. Breathing slower than normal
   d. Breathing faster than normal

7. **Which of the following patients does not necessarily have inadequate breathing?**
   a. A patient with cyanosis
   b. A patient's whose breath sounds cannot be heard
   c. A patient with agonal respirations
   d. A patient with an irregular respiratory rhythm

8. **Which of the following signs of inadequate breathing is more prominent in children than in adults?**
   a. See-sawing of the chest and abdomen
   b. Grunting respirations
   c. Nasal flaring
   d. All of the above

9. **You are first on the scene of a 61-year-old female in need of assistance with her respirations. You have a pocket mask with supplemental oxygen. How can you determine that your artificial ventilation is effective?**
   a. You are assisting respirations at 10 breaths per minute.
   b. Patient's pulse returns to normal.
   c. You assure oxygen is being delivered at 15 liters per minute.
   d. Patient's skin color remains the same.
10. Your patient is a 24-year-old woman with asthma who is struggling to breathe and is very agitated. She has cyanosis of her lips and nail beds, and is cool and clammy to the touch. When you attempt to assist her ventilations with a bag-valve-mask device, she becomes combative and repeatedly pushes the mask away from her face. Which of the following is the BEST option?
   a. Use a nasal cannula to administer supplemental oxygen.
   b. Have your partner restrain the patient's hands so you can ventilate her.
   c. Begin transport immediately and contact medical control for advice.
   d. Wait for the patient's level of consciousness to decrease so that she can no longer resist your attempts to ventilate.

11. Your patient is a 15-year-old male with a history of multiple prior hospitalizations for asthma. Upon your arrival the patient responds only to painful stimuli and is making very weak respiratory effort. Which of the following should you do next?
   a. Contact medical control.
   b. Check the patient's oxygen saturation level.
   c. Assist the patient with his inhaler.
   d. Assist the patient's ventilations with a bag-valve-mask device and supplemental oxygen.

12. Which of the following is a sign of adequate artificial ventilations in a pediatric patient?
   a. The breath is delivered easily.
   b. Pulse rate slows down.
   c. Pulse rate increases.
   d. You notice cyanosis developing around the mouth.

13. When ventilating a child with inadequate respirations, which of the following is the maximum rate at which artificial respirations should be delivered?
   a. 15 per minute
   b. 12 per minute
   c. 24 per minute
   d. 20 per minute

14. You are ventilating a 6-year-old child and note that his heart rate has decreased from 70 to 54. Which of the following is NOT appropriate?
   a. Notify medical control that the patient's condition has improved.
   b. Check the flow of oxygen reaching the bag-valve-mask device.
   c. Increase the force of ventilations.
   d. Insert an oropharyngeal airway and continue ventilating.

15. Your patient is a 6-year-old male who appears very anxious, is using increased effort during expiration, and has a fever. He is wheezing and has a respiratory rate of 34. The patient's skin is very warm and dry. He does not have any cyanosis. The child is drooling and his mother states that he complained of a sore throat and pain on swallowing earlier in the afternoon. Which of the following conditions is most likely causing the patient's distress?
   a. COPD
   b. Epiglottitis
   c. Pertussis
   d. Pneumonia

16. Which of the following is NOT a sign of difficulty breathing?
   a. Inability to speak full sentences
   b. Coughing
   c. Decreased level of consciousness
   d. Curling up in the fetal position
17. Your patient is a 60-year-old female with a sudden onset of severe difficulty breathing. She has no prior history of respiratory problems. Which of the following should be done before applying oxygen by nonrebreather mask?
   a. Listen to the patient's breath sounds.
   b. Obtain a history of the present illness.
   c. Check the patient's oxygen saturation level.
   d. None of the above

18. Your patient is a 30-year-old female who may have overdosed on antidepressant medications. On your arrival, she is lying supine on her bed with her head on a pillow. She is unresponsive to painful stimuli and is snoring. She appears to be pale and her skin is cool and clammy. What should you do first?
   a. Apply oxygen by nonrebreather mask.
   b. Insert an oropharyngeal airway.
   c. Check the patient's pulse.
   d. Remove the patient's pillow.

19. Which of the following patients with difficulty breathing should NOT receive supplemental oxygen?
   a. A patient with a chronic lung disease who may have a hypoxic drive
   b. An infant whose eyes may be damaged by excessive oxygen administration
   c. A patient whose oxygen saturation level is 100 percent on room air
   d. None of these patients should have oxygen withheld.

20. What is the primary effect on the body when an EMT assists a patient with a prescribed inhaler if the patient is short of breath?
   a. Decreased heart rate
   b. Dissolved mucus in the airways
   c. Increased contraction of the diaphragm
   d. Relaxation of the bronchioles

21. Which of the following is proper when assisting a patient with the use of a prescribed inhaler?
   a. Have the patient hold the inhaled medication in his lungs as long as possible.
   b. Make sure that the inhaler has been kept in the refrigerator.
   c. Do not use the patient's inhaler, because you do not know how the medication has been stored.
   d. Have the patient inhale deeply before delivering the spray.

22. In which of the following circumstances is medical control necessary when assisting a patient with the use of a prescribed inhaler?
   a. Patient has already overused the inhaler before your arrival.
   b. Medical control is not necessary since assistance with inhaled medications is in the EMT scope of practice.
   c. The inhaler belongs to another family member, not the patient.
   d. Medical control is necessary in all situations in which an EMT assists with a prescribed inhaler.

23. When you hear wheezes while auscultating your patient's breath sounds, which of the following is most likely the cause?
   a. There is an upper airway obstruction.
   b. There is mucus in the air passages.
   c. There is fluid in the lungs.
   d. The lower air passages in the lungs are narrowed.

24. Which of the following inhalers would NOT be used to reverse an asthma attack?
   a. Proventil
   b. Ventolin
   c. Beclomethasone
   d. Albuterol
25. Which of the following is the primary cause of COPD?
   a. Air pollution
   b. Congenital diseases
   c. Infection
   d. Cigarette smoking

26. Which of the following is a possible side effect of a prescribed inhaler for respiratory problems?
   a. Tremors
   b. Sleepiness
   c. Trapped air in the lungs
   d. Decreased heart rate

27. Which of the following devices is used by patients with respiratory problems to assist with the delivery of medication from an inhaler to the lungs?
   a. A Pulmo-Aide
   b. A small-volume nebulizer
   c. An AeroChamber
   d. An oxygen-powered nebulizer

28. Which of the following is a benefit of using small-volume nebulizers for the treatment of respiratory problems?
   a. They allow greater exposure of the patient's lungs to the medication.
   b. The patient can easily carry this equipment in a purse or pocket.
   c. Nebulized medications have fewer side effects than aerosolized medications from an inhaler.
   d. They will work even when the patient's ventilations are inadequate.

29. A patient who has shallow, slow, irregular gasping breaths is said to have ________ respirations.
   a. Kussmaul's
   b. agonal
   c. central neurologic
   d. Cheyne-Stokes

30. Which of the following may be seen just prior to respiratory arrest?
   a. Breathing through the nose, not the mouth
   b. Very deep, rapid respirations
   c. Agonal respirations
   d. Accessory respirations

31. Which of the following observations indicate that your patient may have overused his prescription inhaler?
   a. Decreased level of consciousness
   b. Nervousness
   c. Increased secretions from the airway
   d. Decreased heart rate

32. Which of the following is a prescribed medication used in an inhaled form for the emergency treatment of respiratory problems?
   a. Furosemide
   b. Pronestyl
   c. Albuterol
   d. Primatene mist

33. Which of the following sounds may be heard in lower respiratory obstruction?
   a. Crowing
   b. Wheezing
   c. Stridor
   d. Snoring
34. Which of the following is the most proper dose of inhaled medication the EMT can assist the patient with administering?
   a. As needed until respiratory status improves
   b. Two sprays
   c. The number of sprays directed by medical control
   d. One spray

35. After the administration of a prescribed inhaler, which of the following should the EMT NOT reassess?
   a. Pupillary size and reaction
   b. Pulse
   c. Respirations
   d. Mental status

36. Which of the following medications is indicated in the treatment of a 52-year-old male with difficulty breathing and a history of emphysema?
   a. Activated charcoal
   b. Nitroglycerin
   c. Proventil
   d. Oral glucose

37. When should the EMT most likely expect to hear wheezes in a patient complaining of shortness of breath secondary to an asthma attack?
   a. While breathing in
   b. In between breaths
   c. While breathing out
   d. All of the above

38. Which breath sound is the EMT most likely to hear when caring for an adult male with a partial airway obstruction that occurred while eating steak?
   a. Rhonchi
   b. Stridor
   c. Wheezes
   d. Crackles

39. While assessing the airway of a pediatric patient, you will notice that it is different than that of an adult. Which of the following is one of those differences?
   a. The cricoid cartilage is less developed, reducing the possibility that it can be completely occluded.
   b. The tongue is smaller, taking up less room in the mouth and allowing larger objects to occlude the airway.
   c. The trachea is smaller, softer, and more flexible, allowing it to be more easily obstructed.
   d. The chest wall is softer, making it easier for the chest to expand.

40. Contraindications for the use of Continuous Positive Airway Pressure (CPAP) include which of the following?
   a. Audible rhonchi
   b. History of pulmonary fibrosis
   c. History of obstructive sleep apnea
   d. Audible wheezing

41. You are treating a 68-year-old female with difficulty breathing and you want to apply CPAP. How many centimeters of water would you start your treatment with?
   a. 2–5 centimeters
   b. 5–10 centimeters
   c. Follow local protocol
   d. Minimum setting and titrate to effect
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42. When the lung collapses without injury or any other cause, it is called which of the following?
   a. COPD
   b. Spontaneous pertussis
   c. Spontaneous pulmonary embolism
   d. Spontaneous pneumothorax

43. You are on the scene of a 22-year-old female patient with a history of asthma who is complaining of respiratory distress. She states she was arguing with her boyfriend, and that triggered her asthma. Vital signs are blood pressure 120/80, pulse 110, respiratory rate 32, and SpO2 99 percent on room air. Her lung sounds are clear in all fields and there are no other significant findings. Her medications include an Albuterol inhaler and Xanax® for "stress." After performing your primary assessment, what should you do next?
   a. Provide oxygen by bag-valve mask.
   b. Assist the patient with her Albuterol medication.
   c. Provide oxygen by nonrebreather mask.
   d. Provide supportive care and reassess her vital signs.

44. What is the best way to determine that you are getting adequate ventilation with a bag-valve mask?
   a. Look for chest rise and fall.
   b. Push the full amount of the bag into the patient.
   c. Ensure the pulse oximeter reads 95 to 100 percent.
   d. Hyperventilate the patient until the oxygen saturation reaches 100 percent.

45. You are on the scene of a 58-year-old male patient in respiratory distress. The patient is flushed and seated in the tripod position. He states he woke up with respiratory distress that is provoked by lying down. He is breathing 28 times a minute. His lung sounds are clear, blood pressure is 150/90, heart rate is 130, and his oxygen saturation level is 95 percent. The patient has a history of angina and has prescription nitroglycerin. However, he is not complaining of chest pain. After performing the primary assessment and requesting an ALS unit, what should you do next?
   a. Provide supportive care until ALS arrives.
   b. Place the patient on oxygen by nasal cannula.
   c. Place the patient on oxygen and contact medical control about administering the patient's nitroglycerin.
   d. Withhold oxygen because of the normal lung sounds and pulse oximeter reading, but call medical control about administering the patient's nitroglycerin.

46. You are responding to a 54-year-old female patient in respiratory distress. The patient is on home oxygen by nasal cannula at 1 lpm. The patient has diminished lung sounds bilaterally with wheezes. She appears malnourished and has a barrel chest. What condition do you suspect?
   a. Bronchitis
   b. Asthma
   c. Chronic obstructive pulmonary disease
   d. Congestive heart failure

47. You are called to the scene of a 45-year-old nonsmoker male with a history of asthma in respiratory distress. You find him lying supine on the couch. The patient is lethargic but can answer all your questions appropriately. He is diaphoretic, and complains of being cold, coughing, and having difficulty breathing for the past 3 days. His vital signs are blood pressure of 110/70, heart rate of 116, respiratory rate of 24, oxygen saturation of 93 percent, and temperature of 100.8°F. You hear rhonchi in the left lobes and he is coughing up yellow-tinged sputum. What condition do you suspect?
   a. Asthma
   b. Silent myocardial infarction
   c. COPD
   d. Pneumonia
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48. You are called to the scene of a 45-year-old nonsmoker male with a history of asthma in respiratory distress. You find him lying supine on the couch. The patient is lethargic but can answer all your questions appropriately. He is diaphoretic, and complains of being cold, coughing, and having difficulty breathing for the past 3 days. His vital signs are blood pressure of 110/70, heart rate of 116, respiratory rate of 24, oxygen saturation of 93 percent, and temperature of 100.6°F. You hear rhonchi in the left lobes and he is coughing up yellow-tinged sputum. In addition to his respiratory condition, what other clinical finding is highly possible?
   a. Silent myocardial infarction
   b. Dehydration
   c. Obstructive shock
   d. Meningitis

49. You are responding to a 54-year-old female patient in respiratory distress. The patient is on home oxygen by nasal cannula at 1 lpm. The patient has diminished lung sounds bilaterally with wheezes. She appears malnourished and has a barrel chest. The patient is alert and oriented to time, place, and person. Her vital signs are blood pressure of 150/70, pulse of 90, respiratory rate of 24, and oxygen saturation of 92 percent. The patient is on several medications including an Albuterol inhaler. After you perform your primary assessment, what should be your next step?
   a. Provide oxygen by bag-valve mask.
   b. Provide oxygen by nonrebreather mask.
   c. Apply oxygen, contact medical control, and request permission to assist the patient with her Albuterol.
   d. Provide supportive care and transport.

50. You are on the scene of a 64-year-old male patient in respiratory distress. The patient is flushed and seated in the tripod position. He states he woke up with respiratory distress that is provoked by lying down. He is breathing 28 times a minute. He is alert and oriented to time, place, and person. His lung sounds are coarse crackles (rales) in all fields, blood pressure of 160/90, heart rate is 128, and his oxygen saturation level is 92 percent. The patient has a history of angina and has prescription nitroglycerin. However, he is not complaining of chest pain. After performing the primary assessment and requesting an ALS unit, what should you do next?
   a. Place the patient on 15 lpm by nonrebreather mask.
   b. Place the patient on 15 lpm per minute by bag-valve mask.
   c. Place the patient in the Trendelenburg position for shock.
   d. Administer nitroglycerin to the patient.

51. You are on the scene of a 60-year-old male patient in respiratory distress. The patient is flushed and seated in the tripod position. He states he woke up with respiratory distress that is provoked by lying down. He is breathing 28 times a minute. He is alert and oriented to time, place, and person. His lung sounds are coarse crackles (rales) in all fields, blood pressure is 150/90, heart rate is 130, temperature is 98.6°F, and his oxygen saturation level is 91 percent. The patient has a history of angina and has prescription nitroglycerin. However, he is not complaining of chest pain. In addition to pulmonary edema, what other medical condition should you suspect?
   a. Pneumonia
   b. Bronchitis
   c. Myocardial infarction
   d. Acute sepsis
52. It is 02:45 a.m. You are on the scene of a 38-year-old, 200-pound female patient in cardiac arrest. The husband states that the female has a history of asthma and smokes one-half pack of cigarettes per day. Her only medications are her Albuterol inhaler and an oral contraceptive. She has no allergies. Her husband states that she has been complaining of shortness of breath for 3 days. She saw her doctor twice, who diagnosed her with asthma and gave her another Albuterol prescription. The husband said that he could not wake her up and called 911. The patient's lung sounds are clear and you can auscultate them in all fields when your partner ventilates with a bag-valve mask. You also notice the patient's skin is a dark purple color from the nipple line upwards. What condition do you suspect?
   a. Acute asthma attack
   b. Status asthmaticus
   c. Acute pulmonary edema
   d. Pulmonary embolism

53. You are on the scene of a 40-year-old, 190-pound female patient in cardiac arrest. The husband states that the female has a history of asthma and is a one pack per day smoker. Her only medication is her Albuterol inhaler. She has no allergies. Her husband states she has been complaining of shortness of breath for 3 days. You and your partner have placed an oral airway, begun CPR, and have placed the AED on the patient. The patient's lung sounds are clear and you can auscultate them in all fields when your partner ventilates with a bag-valve mask. The AED says "no shock advised." An ALS unit is 25 minutes away. What is your next intervention?
   a. Administer the patient's Albuterol inhaler with medical control consent.
   b. Stop CPR and have the AED reanalyze the patient's rhythm.
   c. Insert a Combitube with medical control consent.
   d. Terminate efforts due to prolonged ALS arrival time.

54. You are on the scene of a 3-year-old patient who is in respiratory distress. The mother states that the patient has been making a barking cough for the past 24 hours. The child is very scared and upset. He is crying inconsolably. The patient has tachypnea, but his vital signs are normal otherwise. He is leaning forward in the tripod position and is drooling profusely. What condition do you suspect?
   a. Epiglottitis
   b. Croup
   c. Child abuse
   d. Strep throat

55. You are on the scene of a 5-year-old patient who is in respiratory distress. The mother states that the patient has been making a "seal bark"-sounding cough for the past 24 hours. The child is very scared. The patient has stable vital signs. He is leaning forward in the tripod position and is drooling profusely. After performing your primary assessment, what is your best treatment option?
   a. Provide high-concentration oxygen and have the parent hold it to the patient's face.
   b. Provide oxygen by nasal cannula.
   c. Use a tongue depressor to examine the patient's mouth to determine whether the patient has strep throat or croup.
   d. Calm the child as much as possible and provide oxygen by blow-by.

56. You are on the scene of a person down. You arrive at the college dormitory and find a 21-year-old patient lying supine on the floor, unresponsive. The patient is guppy breathing at five times a minute, has a strong radial pulse at 110 beats per minute, and has emesis on himself. Friends state they went out to dinner and a party. They returned to change clothes for another party and he never came out of his dorm room. Your partner suctions the patient, inserts an oropharyngeal airway, and ventilates the patient with a bag-valve mask with high-concentration oxygen. You listen to lung sounds and there are coarse rhonchi bilaterally. What condition do you suspect?
   a. Aspiration
   b. Overdose
   c. Status asthmaticus
   d. Severe meningitis
You are on the scene of a person down. You arrive on-scene and find a 45-year-old patient lying supine on the floor, unresponsive. The patient is breathing at four times a minute, and has a strong radial pulse at 118 beats per minute. Your partner suctions the patient, inserts an oropharyngeal airway, and ventilates the patient with a bag-valve mask with high-concentration oxygen. What is your next course of action?

a. Insert a Combitube.
b. Place the patient on a backboard.
c. Insert a nasopharyngeal airway.
d. Perform a rapid trauma assessment.
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1. d. Diaphragm relaxes
2. b. The diaphragm moves upward.
3. d. 8 breaths/min
4. c. 16 breaths/min
5. d. 30
6. b. Breathing that is insufficient to sustain life
7. d. A patient with an irregular respiratory rhythm
8. d. All of the above
9. c. You assure oxygen is being delivered at 15 liters per minute.
10. c. Begin transport immediately and contact medical control for advice.
11. d. Assist the patient's ventilations with a bag-valve-mask device and supplemental oxygen.
12. c. Pulse rate increases.
13. d. 20 per minute
14. a. Notify medical control that the patient's condition has improved.
15. b. Epiglottitis
16. d. Curling up in the fetal position
17. d. None of the above
18. d. Remove the patient's pillow.
19. d. None of these patients should have oxygen withheld.
20. d. Relaxation of the bronchioles
21. a. Have the patient hold the inhaled medication in his lungs as long as possible.
22. d. Medical control is necessary in all situations in which an EMT assists with a prescribed inhaler.
23. a. The lower air passages in the lungs are narrowed.
24. c. Beclomethasone
25. d. Cigarette smoking
26. a. Tremors
27. b. Agonal smoking
28. a. They allow greater exposure of the patient's lungs to the medication.
29. b. Agonal
30. c. Agonal respirations
31. b. Nervousness
32. c. Albuterol
33. b. Wheezing
34. c. The number of sprays directed by medical control
35. a. Pupillary size and reaction
36. c. Proventil
37. c. While breathing out
38. b. Stridor
39. c. The trachea is smaller, softer, and more flexible, allowing it to be more easily obstructed.
40. b. History of pulmonary fibrosis
41. c. Follow local protocol
42. d. Spontaneous pneumothorax
43. d. Provide supportive care and reassess her vital signs.
44. a. Look for chest rise and fall.
45. c. Place the patient on oxygen and contact medical control about administering the patient's nitroglycerin.
46. c. Chronic obstructive pulmonary disease
47. d. Pneumonia
48. b. Dehydration
49. c. Apply oxygen, contact medical control, and request permission to assist the patient with her Albuterol.
50. a. Place the patient on 15 lpm by nonrebreather mask.
51. c. Myocardial infarction
52. d. Pulmonary embolism
53. c. Insert a Combitube with medical control consent.
54. a. Epiglottitis
55. d. Calm the child as much as possible and provide oxygen by blow-by.
Module 5: Respiratory Emergencies

56. a. Aspiration
57. d. Perform a rapid trauma assessment.