MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Your patient is a 16-year-old male who attempted suicide. He is unconscious and apneic, lying supine on a garage floor. The family states they found the patient unconscious in the front seat of a car that was running in an enclosed garage. HR = 70, BP = 100/60, RR = 0. Which of the following is the most appropriate?
   A) Remove the patient from the garage, initiate BVM ventilations with 100% oxygen, intubate, and transport to nearest the facility.
   B) Remove the patient from the garage, initiate BVM ventilations with 100% oxygen, intubate, and transport to a hospital with a hyperbaric chamber.
   C) Remove the patient from the garage, intubate, and transport to the nearest hospital.
   D) Intubate, remove the patient from the garage, and transport to a hospital with a hyperbaric chamber.

2) Your patient is a 72-year-old female, alert and oriented, sitting up in bed at a nursing home. She is in mild respiratory distress. Staff describe a 4-day history of fever, malaise, and productive cough. The patient also states that she has been experiencing chills and chest pain with deep inspiration. Physical examination reveals rales and rhonchi in the right upper lobe and warm, moist skin. HR = 116, BP = 104/76, RR = 20, SaO2 = 93%. Based on the clinical exam findings, the most appropriate diagnosis would be:
   A) emphysema.
   B) chronic bronchitis.
   C) pneumonia.
   D) congestive heart failure.

3) Your patient is a 52-year-old male complaining of shortness of breath. He is sitting up, alert, and oriented and appears to be in moderate respiratory distress. He states that he "always gets a chest cold in the winter" and describes a 3-week history of productive cough and increasing shortness of breath. Physical examination reveals coarse rhonchi to the upper lobes bilaterally, air movement is decreased in the bases, and his skin is cool with peripheral cyanosis. You note that he is overweight and describes an 18-pack-a-year smoking history. Based on these clinical exam findings, you might also expect to find:
   A) barrel chest and increased anterior/posterior chest diameter.
   B) JVD, pedal edema, hepatic congestion.
   C) pulmonary edema and hypotension.
   D) pursed-lipped breathing.

4) Your patient is a 24-year-old male who has been an in-patient in a rehabilitation hospital following surgical reduction of a fractured pelvis. Staff reports sudden development of hypotension and severe respiratory distress about 30 minutes ago. There is no other significant history. Physical exam findings include cold, diaphoretic skin with peripheral cyanosis; jugular venous distension; clear breath sounds bilaterally; and vitals as follows: HR = 134, BP = 74/50, RR = 28, SaO2 = 84%. Which of the following is most likely?
   A) Myocardial infarction
   B) Pulmonary embolism
   C) Idiopathic congestive heart failure
   D) Spontaneous tension pneumothorax
5) Which of the following statements about pulse oximetry is FALSE?
   A) It may be difficult to obtain a reading in patients experiencing peripheral vasoconstriction.
   B) Pulse oximetry should be used on all patients with respiratory complaints.
   C) Pulse oximetry values can be expected to decrease within seconds in cases of developing hypoxia.
   D) Oxygen saturation is the percentage of hemoglobin that is bound with some molecular structure.

6) All of the following are acceptable methods of clearing a foreign body airway obstruction in an unconscious, supine adult EXCEPT:
   A) using Magill forceps to remove the obstruction.
   B) pushing the obstruction into the right main stem bronchus.
   C) intubating around the foreign body.
   D) alternating back blows and abdominal thrusts.

7) The carpopedal spasms that occur due to hyperventilation syndrome are a result of a relative _______, secondary to ________.
   A) hyponatremia, respiratory alkalosis
   B) hypercalcemia, respiratory alkalosis
   C) hypocalcemia, increase in bound calcium
   D) hypocalcemia, decrease in unbound calcium

8) Improving ________ is a primary treatment goal in a patient with bronchospasm.
   A) lung compliance
   B) diffusion across the alveolar membrane
   C) ventilation of the alveoli
   D) lung perfusion

9) Which of the following is NOT an intrinsic risk factor associated with respiratory disease?
   A) Stress
   B) Cigarette smoking
   C) Cardiac disease
   D) Genetic predisposition

10) Which of the following statements comparing pulse oximetry and end–tidal CO₂ detection is TRUE?
    A) Pulse oximeters and capnometers can both give erroneously high readings in cases of carbon monoxide poisoning.
    B) Pulse oximetry gives the care provider feedback on the effectiveness of ventilation, while capnography provides feedback on the effectiveness of oxygenation.
    C) Pulse oximetry gives the care provider feedback on the effectiveness of oxygenation, while capnography provides feedback on the effectiveness of ventilation.
    D) Both pulse oximetry and colormetric CO₂ detection provide numerical feedback.
11) Your patient is 24-year-old male Chinese citizen on vacation in the United States. He is in moderate distress complaining of difficulty breathing and gives a 4-day history of runny nose, sore throat, and general malaise with a productive cough. His sputum production was significantly worse when he woke this morning, and he developed difficulty breathing this afternoon. You note cool, pale, and diaphoretic extremities and lung sounds with rhonchi bilaterally. He gives a medical history of asthma treated with an albuterol inhaler as needed. HR = 134, BP = 132/84, RR = 26, SaO2 = 90%. Which of the following is the best course of prehospital treatment for this patient?

A) Provider use of PPE, albuterol via nebulizer, IV of NS KVO, cardiac monitor, transport
B) Provider use of PPE, oxygen via nasal cannula 4 lpm, notify receiving hospital, transport
C) Provider use of PPE, oxygen via nonrebreathing mask 15 lpm, IV of NS KVO, cardiac monitor, notify receiving hospital, transport
D) Oxygen via nonrebreathing mask 15 lpm, IV of NS with 250 fluid challenge, cardiac monitor, transport

12) Which of the following statements about severe acute respiratory syndrome (SARS) is FALSE?

A) SARS is caused by the SARS-CoV bacteria.
B) SARS is considered contagious as long as the patient exhibits symptoms.
C) SARS is transmitted via respiratory secretions and droplets.
D) Patients with underlying respiratory disease have a higher risk of SARS-related problems.

13) You have intubated a 66-year-old female who was experiencing an acute exacerbation of her emphysema. What special consideration does this patient, with her specific pathology, require?

A) She requires frequent, deep suctioning.
B) While ventilating, you must allow for a prolonged expiratory phase.
C) She requires hyperventilation to blow off excess CO2.
D) Oxygen flow should be limited to 4 lpm because of the hypoxic drive common in COPD patients.

14) Your patient is a 68-year-old male complaining of difficulty breathing for the past 2 days. He is sitting up, conscious, alert, and oriented and appears to be in mild respiratory distress. Physical examination reveals cool, dry, pink skin; he is thin with well-defined accessory muscles, and you note diffuse wheezing to all lung fields. HR = 102, BP = 136/96, RR = 20, SaO2 = 92%. The patient gives a 20-pack-a-year history of smoking. Based on these clinical exam findings, which of the following is most likely?

A) Congestive heart failure
B) Asthma
C) Chronic bronchitis
D) Emphysema

15) PEEP can best be described as:

A) a technique for creating back pressure in the airway in order to maintain patency of the alveoli and ensuring adequate ventilation and oxygenation.
B) positive pressure provided by a BVM that increases back pressure in the airway in order to maintain patency of the alveoli and ensure adequate ventilation and oxygenation.
C) positive pressure provided by a BVM that increases expiratory pressure by keeping the alveoli open.
D) a positive effort encouraged in patients with difficulty breathing.
16) A 61-year-old male with a 24-pack-a-year history of smoking presents with pursed-lipped breathing and shortness of breath. You note that he is thin and has florid skin and a barrel chest. Auscultation of his lungs reveals diffuse expiratory wheezing to all fields. Based on this clinical condition, what additional complication is he most likely to develop?
   A) Pulmonary embolism  B) Cor pulmonale
   C) Asthma  D) Left-heart failure

17) Your patient is a 23-year-old female in moderate respiratory distress, complaining of difficulty breathing. She describes an acute onset of shortness of breath 15 minutes ago that has been getting progressively worse and has not responded to her Atrovent inhaler. Physical examination reveals cool, pale, and diaphoretic skin and clear lung sounds bilaterally. She has a history of asthma, is a smoker, and had breast-reduction surgery yesterday. Medications include Atrovent and albuterol inhalers and birth control pills. HR = 129, BP = 110/60, RR = 26, SaO2 = 91%. In addition to 100% oxygen, which of the following is the most appropriate treatment?
   A) Albuterol and atrovent via nebulizer, IV of NS KVO
   B) IV of NS at a keep open rate
   C) IV of NS with 250 cc fluid challenge
   D) Albuterol and atrovent via nebulizer, epinephrine 1:1000 SQ. IV of NS with 250 cc fluid challenge

18) To which of the following medications does the late phase of an asthma attack best respond?
   A) Corticosteroids  B) Ipratropium
   C) Albuterol  D) Epinephrine 1:1000

19) Lung perfusion depends on all of the following EXCEPT:
   A) adequate blood volume.  B) intact pulmonary capillaries.
   C) an intact alveolar membrane.  D) efficient pumping of blood by the heart.

20) Why is the oxygen-hemoglobin dissociation curve curved and not linear?
   A) It's impossible to achieve 100 percent hemoglobin saturation.
   B) As the PO2 increases above 70 mmHg, there are only small changes in the curve.
   C) Hemoglobin and oxygen undergo cooperative binding, making it easier for each additional oxygen molecule to bind to hemoglobin.
   D) Hemoglobin levels in individual red blood cells vary, making oxygen binding in the blood a nonlinear event.
1) B
   Diff: 3 Page Ref: 1114
   Objective: 10

2) C
   Diff: 3 Page Ref: 1110
   Objective: 10

3) B
   Diff: 3 Page Ref: 1103
   Objective: 10

4) B
   Diff: 3 Page Ref: 1115
   Objective: 10

5) C
   Diff: 1 Page Ref: 1093
   Objective: 9

6) D
   Diff: 2 Page Ref: 1099
   Objective: 6

7) D
   Diff: 3 Page Ref: 1117
   Objective: 10

8) C
   Diff: 2 Page Ref: 1084
   Objective: 4

9) B
   Diff: 1 Page Ref: 1081
   Objective: 1

10) C
    Diff: 2 Page Ref: 1093
    Objective: 9

11) C
    Diff: 3 Page Ref: 1111
    Objective: 10

12) A
    Diff: 2 Page Ref: 1111
    Objective: 10

13) B
    Diff: 3 Page Ref: 1102
    Objective: 6

14) D
    Diff: 2 Page Ref: 1103
    Objective: 10

15) A
    Diff: 2 Page Ref: 1101
    Objective: 6

16) B
    Diff: 3 Page Ref: 1102
    Objective: 10

17) B
    Diff: 3 Page Ref: 1107
    Objective: 10

18) A
    Diff: 2 Page Ref: 1106
    Objective: 10

19) C
    Diff: 2 Page Ref: 1082
    Objective: 3

20) C
    Diff: 2 Page Ref: 1083
    Objective: 3
EPC, Ch 27 quiz w-key

Name______________________________

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