

## Review for Unit Test #1: Medical Emergencies

### Terms and Structures:

1. Be able to recognize the definitions for the following terms for medical emergencies:

personal protective equipment	scene size up	hazmat
tiered response	pathogens	Universal precautions

2. Be able to recognize the definitions for the following terms for the respiratory system:

tidal volume	suffocation	chronic bronchitis
vital capacity	strangulation	emphysema
expiratory reserve volume	asphyxiation (aspiration)	chronic disease
cellular respiration	cyanosis	anaphylaxis
gas exchange	asthma	hives
hemoglobin	COPD	auto-injector (epi-pen)

3. Be able to recognize the definitions for the following terms for the cardiovascular system:

electrocardiogram (ECG)	hypertension	coronary bypass
ventricular tachycardia	hypotension	myocardial cells
ventricular fibrillation	vasodilate	heart attack (myocardial infarction)
atrial fibrillation	shock (hypoperfusion)	arrhythmia
bradycardia	sphygmomanometer	defibrillator
systole	atherosclerosis	hypoxia
diastole	plaque	ischemia
depolarize	angina	hemorrhagic stroke
repolarize	coronary artery disease	ischemic stroke
systolic blood pressure	angioplasty	FAST
diastolic blood pressure	stent	tPA

4. Be able to label these structures on a diagram of the respiratory system. Know their functions:

alveoli	diaphragm	pharynx
bronchi	epiglottis	pulmonary artery
bronchiole	larynx	pulmonary vein
capillaries	nasal cavity	trachea

5. Label these structures on a diagram of the cardiovascular system. Know their functions:

carotid artery	pulmonary artery	tricuspid valve
jugular vein	pulmonary vein	bicuspid (mitral) valve
brachial artery	vena cava	coronary artery
radial artery	right atrium	sino-atrial (SA) node
femoral artery	right ventricle	atrio-ventricular (AV) node
iliac artery	left atrium	Bundle of His
aorta	left ventricle	Purkinje fibres

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### Practice Multiple Choice Questions

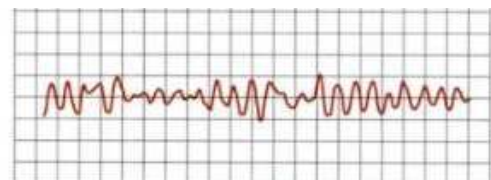
- The purpose of Universal precautions is to:
  - protect the patient from getting a pathogen from a care-giver
  - protect the patient from getting a pathogen from medical equipment
  - protect the care-giver from getting a pathogen from the patient
  - all of the above
- Your fire truck is dispatched to a domestic dispute. The situation is violent and the husband is present at the scene. You should:
  - put on your turn-out suit and helmet, and walk in to confront the husband
  - hook up a fire hose and hose down the husband
  - put a ladder up to an upstairs window and rescue the wife from here
  - stage at a safe distance and wait for the police to secure the scene
- Tiered response means that:
  - more than one emergency service may be dispatched to an emergency
  - all emergency services are dispatched to all emergencies
  - only the single, most relevant emergency service is dispatched to the emergency
  - once the first emergency service arrives at the scene, they call in other help as needed
- A police car is dispatched by tiered response to a MVC. A truck has hit a hydro pole and wires are draped over the truck. The driver is in the truck and seems to be badly hurt. The police should:
  - drive as close to the truck as they can and climb onto the truck without stepping on the ground
  - stay a safe distance back from the wires and call Hydro (E-1) to turn off the power
  - get the fire department to put a wooden ladder onto the truck and save the driver
  - put on rubber boots and rubber gloves, then approach the truck and driver
- A pathogen is a:
  - biological agent that causes disease
  - poisonous chemical
  - doctor who studies how a person died
  - bicycle for patrolling public pathways
- Which of the following is/are part of Universal precautions?
  - wearing a SCBA to a fire
  - hand-washing
  - wearing steel-toed safety boots
  - all of the above
- Which of the following body fluids has the highest likelihood of transmitting the HIV/AIDS virus?
  - vaginal secretions
  - vomit
  - urine
  - all of these fluids will transmit HIV/AIDS
- You are called to a patient who is coughing up blood. What PPE should you use?
  - a face mask over your mouth
  - gloves
  - a face shield or goggles over your eyes
  - all of these PPE should be used
- Which of the following is/are part of Universal precautions?
  - never re-capping a used (dirty) needle
  - never re-using a used (dirty) needle
  - wiping the patient's arm with alcohol before a needle
  - all of the above
- Which of the following groups should emergency personnel assume have blood-borne pathogens?
  - all adults
  - all street people and known drug users
  - all people over 12 years of age
  - all people, regardless of their age
- A blood pressure of 144/88 mmHg means that there is a pressure of:
  - 56 mmHg when the left ventricle is at rest
  - 88 mmHg when the left ventricle contracts
  - 144 mmHg when the left ventricle contracts
  - 144 mmHg when the left ventricle is at rest

12. The function(s) of the nasal cavity during inhalation is to:
- a) filter dirt and dust particles from the air
  - b) moisten the air
  - c) warm the air
  - d) all of the above
13. The tube that carries air from the pharynx to the lungs is called the:
- a) bronchus
  - b) esophagus
  - c) epiglottis
  - d) trachea
14. The flap that covers the opening of the trachea during swallowing is called the:
- a) epiglottis
  - b) larynx
  - c) diaphragm
  - d) tongue
15. What is the function of the alveoli?
- a) they contain haemoglobin to hold oxygen
  - b) they provide a surface for gas exchange
  - c) they trap dirt to keep the air in the lungs clean
  - d) all of the above
16. During inhalation, the muscles in the diaphragm:
- a) relax and lengthen
  - b) relax and shorten
  - c) contract and lengthen
  - d) contract and shorten
17. When air enters the respiratory system it travels through the structures in which order?
- a) larynx, pharynx, trachea, bronchioles
  - b) pharynx, larynx, bronchioles, trachea
  - c) pharynx, larynx, trachea, bronchioles
  - d) pharynx, trachea, larynx, bronchioles
18. During gas exchange in the lungs:
- a) oxygen moves into the alveoli
  - b) carbon dioxide moves into the blood
  - c) oxygen moves into the blood
  - d) both a) and b)
19. The nasal passages, trachea and bronchi are lined with mucous. The function(s) of mucous is to:
- a) decrease friction during inhalation
  - b) trap dirt so it can be coughed up
  - c) increase gas exchange into the blood
  - d) all of the above
20. Which parts of the respiratory system have cartilage rings?
- a) the trachea and esophagus
  - b) the bronchi and alveoli
  - c) the esophagus and alveoli
  - d) the trachea and bronchi
21. What is the major trigger for breathing?
- a) low levels of CO<sub>2</sub> in the blood
  - b) high levels of CO<sub>2</sub> in the blood
  - c) high levels of O<sub>2</sub> in the blood
  - d) low CO<sub>2</sub> in the alveoli
22. What are the number of breaths per minute and tidal volume for an average adult?
- a) 15 breaths per minute, and 500 mL
  - b) 72 breaths per minute and 5 – 6 L
  - c) 15 breaths per minute and 5 – 6 L
  - d) 72 breaths per minute and 500 mL
23. Exhalation is:
- a) an active process, the diaphragm contracts
  - b) a passive process, the diaphragm contracts
  - c) an active process, the diaphragm relaxes
  - d) a passive process, the diaphragm relaxes
24. The **maximum** volume of air that can be exchanged in a single breath is called the:
- a) vital capacity
  - b) tidal volume
  - c) residual volume
  - d) expiratory reserve
25. Which of the following factors can affect vital capacity?
- a) sex (gender)
  - b) body size
  - c) fitness
  - d) all of the above

26. Cellular respiration:
- a) is another name for breathing
  - b) takes place in the alveoli of the lungs
  - c) uses oxygen and produces carbon dioxide
  - d) all of the above
27. The tiny blood vessels that surround the alveoli for gas exchange are called:
- a) venules
  - b) arteries
  - c) capillaries
  - d) haemoglobin
28. If the airway is obstructed from the outside of the body, it is called:
- a) asphyxiation
  - b) aspiration
  - c) suffocation
  - d) all of the above
29. Which of the following is/are common causes of choking in young children?
- a) hot dogs
  - b) popcorn
  - c) peanuts
  - d) all of the above
30. Which of the following age groups is most at risk for choking?
- a) teenagers (due to alcohol intoxication)
  - b) pregnant women
  - c) elderly people
  - d) men who have had a heart attack
31. When a choking person is coughing effectively and can speak, you should:
- a) pat them gently on the back
  - b) hit them forcefully on the back
  - c) perform abdominal thrusts
  - d) leave them alone, but monitor closely
32. Which of the following is/are common causes of strangulation in young children?
- a) cords on window blinds
  - b) choking on small toys
  - c) soft toys and pillows in their beds
  - d) all of the above
33. When putting infants to sleep, you should:
- a) prop them up on a pillow to help them breath
  - b) remove all soft, fluffy toys from their crib
  - c) always sleep with them in your bed
  - d) use a soft mattress that forms to their body
34. Which of the following is/are **true** about asthma?
- a) asthma is annoying but not serious
  - b) asthma can be life-threatening
  - c) asthma is a disease of the alveoli
  - d) all of the above
35. Which of the following cause narrowing of the bronchioles during an asthma attack?
- a) the lining of the bronchioles becomes inflamed and swollen
  - b) cells lining the bronchioles produce excess mucous
  - c) rings of muscle around the bronchioles contract and squeeze the bronchioles shut
  - d) all of the above
36. Which of the following is/are signs that a person is having a severe asthma attack?
- a) cyanosis
  - b) swelling of the hands and feet
  - c) an abnormal ECG pattern
  - d) all of the above
37. Many asthma sufferers have puffers that are “bronchodilators”. Who can legally administer a puffer?
- a) EMS
  - b) fire fighters
  - c) teachers
  - d) both “a” and “c”
38. Legally, teachers are allowed to administer which of the following drugs?
- a) aspirin (ASA)
  - b) epinephrine (epi-pens)
  - c) ventalin (asthma puffers)
  - d) all of the above
39. COPD stands for:
- a) constable on patrol duty
  - b) coronary occlusion and pressure disease
  - c) chronic obstructive pulmonary disease
  - d) congestive ocular pressure disorder

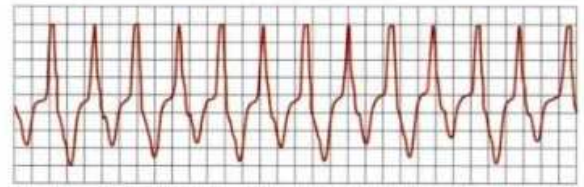
40. A chronic disease is one which:
- a) begins rapidly and lasts a very short time
  - b) is usually fatal
  - c) is highly contagious
  - d) goes on for a very long time
41. During inspiration (inhalation), the chest cavity:
- a) increases in volume and decreases in pressure
  - b) increases in volume and increases in pressure
  - c) decreases in volume and decreases in pressure
  - d) decreases in volume and increases in pressure
42. In emphysema, the alveoli are:
- a) much larger than normal
  - b) much smaller than normal
  - c) more numerous than normal
  - d) both "a" and "c"
43. When a person is anaphylactic, their immune system:
- a) over-reacts to a dangerous substance
  - b) under-reacts to a dangerous substance
  - c) over-reacts to a non-dangerous substance
  - d) under-reacts to a non-dangerous substance
44. Which of the following tissues may swell during an anaphylactic reaction?
- a) the tongue
  - b) the throat
  - c) tissues around the eyes
  - d) all of the above
45. Hives is/are:
- a) a red, itchy rash on the body
  - b) cool, clammy greyish coloured skin
  - c) swelling of the face, tongue and lips
  - d) all of the above
46. What drug is used to treat a person who is having an anaphylactic reaction?
- a) epinephrine
  - b) a puffer
  - c) nitroglycerine
  - d) tPA
47. Before giving any medication, EMS must check:
- a) with the person's parents or spouse
  - b) the five R's
  - c) that the person is lying down
  - d) all of the above
48. The circulatory system is made up of the:
- a) heart, lungs and brain
  - b) blood, lungs and bladder
  - c) heart, blood vessels and blood
  - d) blood, brain and kidneys
49. The pulse in the neck is called the:
- a) thoracic pulse
  - b) jugular pulse
  - c) aortic pulse
  - d) carotid pulse
50. A deep wound to the upper thigh might damage the:
- a) brachial artery
  - b) radial artery
  - c) femoral artery
  - d) carotid artery
51. After blood leaves the right ventricle, it enters the:
- a) right atrium
  - b) left atrium
  - c) pulmonary artery
  - d) pulmonary vein
52. After oxygen-rich blood leaves the lungs, it enters the:
- a) right atrium
  - b) right ventricle
  - c) left atrium
  - d) left ventricle
53. The chamber of the heart that has the thickest muscle wall is:
- a) right atrium
  - b) right ventricle
  - c) left atrium
  - d) left ventricle

54. Which blood vessel carries oxygenated blood?  
 a) jugular vein  
 b) vena cava  
 c) pulmonary vein  
 d) none of these blood vessels
55. The \_\_\_\_\_ carry blood away from the heart while the \_\_\_\_\_ carry blood toward the heart.  
 a) arteries, veins  
 b) veins, arteries  
 c) atria, ventricles  
 d) capillaries, septum
56. The bicuspid (mitral) valve is found between the:  
 a) left ventricle and the aorta  
 b) left atrium and left ventricle  
 c) right ventricle and the pulmonary artery  
 d) right and left ventricles
57. The tricuspid valve prevents blood from flowing back into the:  
 a) right atrium  
 b) right ventricle  
 c) left atrium  
 d) left ventricle
58. Which part of the cardiovascular system contains blood with the lowest amount of oxygen?  
 a) aorta  
 b) pulmonary vein  
 c) vena cava  
 d) left ventricle
59. Myocardial cells get their oxygen from blood in the:  
 a) atria  
 b) ventricles  
 c) coronary arteries  
 d) aorta
60. The “P” wave on an ECG is related to the:  
 a) SA node  
 b) AV node  
 c) Bundle of His  
 d) Purkinje fibres
61. During systole:  
 a) the ventricles contract and atria relax  
 b) the ventricles relax and atria contract  
 c) both the ventricles and atria relax  
 d) both the ventricles and atria contract
62. A heart rate of less than 60 beats per minute is called:  
 a) bradycardia  
 b) tachycardia  
 c) hypocardia  
 d) fibrillation
63. The function of the Bundle of His and Purkinje fibres is to carry the electrical signal rapidly from the:  
 a) SA node to the AV node  
 b) AV node to the SA node  
 c) AV node to the bottom of the ventricles  
 d) SA node across both atria
64. The QRS complex on an ECG occurs when the:  
 a) heart is in systole  
 b) heart is in diastole  
 c) the SA node fires  
 d) none of the above
65. If a person has a heart attack that damages the left ventricle, the person will have an ECG with:  
 a) a very long P wave  
 b) many small P waves  
 c) no P wave at all  
 d) an abnormal QRS complex
66. Which statement is **true** about ventricular tachycardia?  
 a) the heart is beating too slowly  
 b) the QRS complex is abnormal  
 c) the heart pumps with too much pressure  
 d) the SA node is firing very rapidly
67. The ECG to the right shows which arrhythmia?  
 a) ventricular tachycardia  
 b) ventricular fibrillation  
 c) atrial tachycardia  
 d) atrial fibrillation



68. The ECG to the right shows which arrhythmia?

- a) ventricular tachycardia
- b) ventricular fibrillation
- c) atrial tachycardia
- d) atrial fibrillation



69. Which of the following arrhythmias is/are “shockable” with a defibrillator?

- a) V-tach
- b) A-tach
- c) A- fib
- d) all of the above

70. A person has resting blood pressure of 124/112. This person has:

- a) high systolic blood pressure
- b) high diastolic blood pressure
- c) low systolic blood pressure
- d) low diastolic blood pressure

71. Which of the following body parts is most likely to be damaged by high blood pressure?

- a) kidneys
- b) stomach
- c) lips
- d) feet and hands

72. Which of the following will cause hypertension?

- a) atherosclerosis
- b) ventricular tachycardia
- c) shock
- d) all of the above

73. Signs and symptoms of shock (hypoperfusion) include:

- a) rapid pulse, warm flushed skin and intense thirst
- b) rapid pulse, shallow breathing and restlessness/anxiety
- c) slow pulse, high blood pressure and rapid, deep respirations
- d) rapid pulse, hot dry skin and a fruity odour on the breath

74. Which of the following may indicate that a patient has internal bleeding? The patient:

- a) is pale, anxious and cool to the touch
- b) has a blood pressure of 144/90
- c) has a pulse of 64 beats per minute
- d) is paralyzed on one side of the body

75. Which of the following tissues will be damaged first as a result of hypoperfusion?

- a) the skin
- b) the bones
- c) the brain
- d) the muscles

76. Which of the following patients is/are most likely to be in shock?

- a) a child who was hit and thrown by a car
- b) an allergic person who is exposed to peanuts
- c) a man who has severe chest pain
- d) all of these patients may be in shock

77. Which of the following situations may result in a person going into **hypovolemic** shock?

- a) an infant has severe diarrhea and will not take her bottle
- b) an elderly woman has a heart attack
- c) an athlete “super-hydrates” by drinking 2 L of water very quickly
- d) all of these patients may be in hypovolemic shock

78. Anaphylaxis causes shock because:

- a) the person can’t believe it is really happening
- b) the person chokes on the allergen
- c) vasodilation causes blood to pool in the tissues, reducing blood volume
- d) heart damage makes the heart pump less efficiently

79. Nitroglycerine is used to treat:

- a) stroke
- b) myocardial infarction
- c) angina
- d) anaphylaxis

80. What is plaque?
- a) a fatty material made of cholesterol and calcium that builds up in arteries
  - b) a region of the heart that is dead or damaged because of a heart attack
  - c) a region of the brain that is dead or damaged because of a stroke
  - d) a thick board that is used to support the head and spine if a person has a spinal injury
81. You should not give a patient nitroglycerine if they have:
- a) very high blood pressure
  - b) very low blood pressure
  - c) tachycardia
  - d) nausea
82. Which of the following is NOT one of the five R's for administering a medication?
- a) right patient
  - b) right dose
  - c) right drug store
  - d) right time
83. If a tissue is ischemic, it is lacking:
- a) water
  - b) protein
  - c) oxygen
  - d) the ability to clot
84. A stent is a(n):
- a) balloon used to expand a clogged artery
  - b) the sticky fatty material inside an artery
  - c) a fine wire mesh tube to hold open an artery
  - d) a vein that is used to bypass a blocked artery
85. Which of the following can cause myocardial infarction?
- a) atherosclerosis
  - b) a ruptured plaque that causes a clot to form
  - c) spasms in the coronary arteries
  - d) all of the above
86. After an ischemic stroke:
- a) tPA should be used within the first 3 hours from the onset of symptoms
  - b) tPA should not be used because it will increase bleeding in the brain
  - c) angioplasty of the coronary artery is a very good treatment
  - d) blood pressure will increase due to vasodilation of the blood vessels in the extremities
87. Infarction means:
- a) someone has broken the law
  - b) tissue death due to lack of oxygen
  - c) closing of the trachea due to swelling
  - d) severe abdominal gas
88. Angioplasty relieves the symptoms of angina by:
- a) opening up coronary arteries that are blocked with plaque
  - b) dissolving blood clots that are blocking coronary arteries
  - c) repairing the coronary arteries where they are losing blood by hemorrhaging
  - d) by-passing blocked coronary arteries by sewing in pieces of veins taken from the leg
89. The "FAST" test for stroke stands for:
- a) feet, arms, smile test
  - b) fast, adult stroke test
  - c) face, arm, speech test
  - d) frown, anger, shuffle test
90. Facial signs that a person may have had a stroke include:
- a) uneven pupils or a droopy eyelid
  - b) smoothing out of one side of the forehead
  - c) drooping of one corner of the mouth
  - d) all of the above



## Review for Unit Test #1: Medical Emergencies

### Part A: Introduction to Medical Emergencies (short and long answer questions)

1. What are six (6) types of hazards at an emergency scene that could put the emergency personnel at risk?
2. What is the “rhyme” that can be used to remember the basic types of hazards at a scene?
3. Classify the following body fluids as high risk or low risk for transmitting pathogens:
  - a) Semen \_\_\_\_\_
  - b) Feces \_\_\_\_\_
  - c) Saliva \_\_\_\_\_
  - d) Blood \_\_\_\_\_
  - e) Cerebrospinal fluid \_\_\_\_\_
  - f) Vomit \_\_\_\_\_
  - g) Amniotic fluid \_\_\_\_\_
  - h) Mucous \_\_\_\_\_
  - i) Urine \_\_\_\_\_
  - j) Vaginal secretions \_\_\_\_\_
4. Which of the following are universal precautions?
  - a) Using PPE such as gloves \_\_\_\_\_
  - b) Never re-capping sharps such as needles \_\_\_\_\_
  - c) Hand-washing \_\_\_\_\_
  - d) Using alcohol to sterilize equipment \_\_\_\_\_
  - e) Using a disposable face shield when performing ventilations (rescue breathing) \_\_\_\_\_
5. An ambulance just transported a MVC victim who was bleeding badly. The inside of the ambulance is covered with blood. When cleaning the ambulance, the EMS attendants should:
  - a) wear gloves \_\_\_\_\_
  - b) wear a regular (unfitted) face mask \_\_\_\_\_
  - c) wear an N-95 (fitted) face mask \_\_\_\_\_
  - d) use an antiseptic to sterilize all surfaces \_\_\_\_\_
  - e) refuse to clean the ambulance because it is too dangerous \_\_\_\_\_
  - f) wash their hands carefully when they are finished \_\_\_\_\_
6. What is the single most important thing that emergency personnel can do to prevent the transmission of pathogens?
7. When treating any patient, what assumption should be made by emergency personnel?
8. Describe the proper method for effective hand-washing. What two regions of the hands are often missed?
9. Give two examples of diseases that are spread by air-borne transmission (coughing).
10. Give two examples of diseases that are spread by body fluids.
11. What are the five Rs that must be checked before administering or assisting with medication?
12. A fire truck is dispatched by tiered response to a domestic dispute. A woman with two small children is being threatened by her husband, who is armed with a long knife. He threatens to kill anyone who comes inside. What should the firefighters do?
13. A police car is dispatched by tiered response to a MVC. A truck has hit a hydro pole and wires are draped over the truck. The driver is in the truck and seems to be badly hurt. What should the police do?

## Part B: Respiratory System and Emergencies

1. What are the normal or average values for the following:
  - a) Number of breaths most people take, on average, per minute: \_\_\_\_\_
  - b) Tidal volume: \_\_\_\_\_
  - c) Vital capacity (maximum air exchanged in one breath): \_\_\_\_\_
2. Explain the difference between tidal volume and vital capacity.
3. Describe the steps that take place during one complete breath (breathing in and out).
4. Why is exhalation considered to be a “passive” process?
5. What is the main signal that triggers us to take a breath?
6. What are three factors that can affect vital capacity?
7. What two age groups of people are at the greatest risk for choking?
8. What are two diseases or medical conditions that increase the risk of choking?
9. Why are people who are intoxicated with drugs or alcohol at a high risk for choking?
10. What food is the most common cause of choking in young children?
11. What are three common causes of strangulation in children?
12. Explain three things that happen during an asthma attack that makes breathing difficult.
13. Which emergency service(s) can legally administer medications, such as a puffer or epi-pen?
14. Before administering any medications, what must the emergency personnel check?
15. Describe what happens to a person’s lungs when they have emphysema.
16. How does COPD affect tidal volume? \_\_\_\_\_ Vital capacity? \_\_\_\_\_
17. What part of the respiratory system is affected by asthma? Emphysema? Chronic bronchitis?
18. What are four symptoms of an anaphylactic reaction?
19. What are four common allergens that can trigger an anaphylactic reaction?
20. What is the most effective first aid treatment for anaphylaxis?
21. You come across a person in a public washroom who is choking. The person is coughing forcefully. Describe exactly what you should do.
22. You see a student in hallway who is stumbling. Her face is swollen and her breath is noisy and laboured. Describe exactly what you should do.

## Part C: Cardiovascular System and Emergencies

1. Be able to describe the flow of blood through the heart and body for one cardiac cycle, including the four chambers of the heart and major blood vessels.
2. Be able to describe the flow of electricity through the heart's conduction system during one cardiac cycle.
3. Explain why the atria must contract before the ventricles contract for good blood flow.
4. What is the primary (most important) pacemaker for the heart?
5. How is the left ventricle different from the right ventricle? Explain why.
6. Know the values that define high and low blood pressure.
  - a) What are three causes of high blood pressure?
  - b) What are three causes of low blood pressure?
  - c) What are three negative effects of (problems caused by) high blood pressure?
7. What is shock (hypoperfusion)?
  - a) Describe shock's vicious cycle that can result in death
  - b) What are three different causes of shock? Give an example of each.
  - c) Which tissues are the first to be damaged by shock?
8. What is a cardiac arrhythmia?
  - a) What are three common types of arrhythmias? Be able to recognize them from an ECG.
  - b) What causes an arrhythmia?
  - c) Why are they dangerous?
  - d) What two types of arrhythmias can be treated with a defibrillator?
  - e) What does a defibrillator do?
9. What are the normal or average values for the following, for an adult:
  - a) Resting heart rate, per minute: \_\_\_\_\_
  - b) Total volume of blood in the body: \_\_\_\_\_
  - c) Systolic blood pressure: \_\_\_\_\_
  - d) Diastolic blood pressure: \_\_\_\_\_
10. Explain what happens during an angina attack.
  - a) How does coronary artery disease cause angina?
  - b) What medication is used to treat angina? What does it do?
  - c) What five things must EMS check before administering or assisting with medication?
  - d) What two types of surgery can be used to treat angina?
11. What is a heart attack (myocardial infarction)?
  - a) What are three causes of heart attack?
  - b) What are the most common symptoms of a heart attack?
  - c) Describe first aid for a heart attack.
  - d) To be effective, how quickly after cardiac arrest must defibrillation be applied?
  - e) In what percentage of heart attacks can defibrillation be used?
12. What is a stroke?
  - a) Explain the difference between a hemorrhagic stroke and an ischemic stroke.
  - b) What are the most common symptoms of a stroke?
  - c) What test should first responders use to rapidly diagnose a stroke.
  - d) Why is tPA used to treat ischemic stroke but not hemorrhagic stroke? What does tPA do?
  - e) What is the "golden window" in which to deliver tPA?