

2016 Metal/Nonmetal National Mine Rescue Contest

First Aid Competition – Written Test

Answers and Rationales

1. **a) Standard Precautions** – refers to the CDC guidelines to reduce the risk of transmission of disease; combining universal precautions and BSI to be applied with all patients, no matter the diagnosis or infection status. EMR 9th, Page 39.
2. **c) Ingestion, Injection, Absorption, Inhalation** – the route of exposure to pathogens are by swallowing, through a needle stick or bite, through the skin or breathed in through the lungs. EMR 9th, Page 40.
3. **d) Ensure the scene is safe to enter** – regardless of the amount of vehicles involved; scene safety is the first priority. On approach look for hazards, and prior to approaching the patient, ensure the scene is safe for yourself, the patient and bystanders. EMR 9th, Page 44.
4. **c) Palpate the soft areas to the rear of the abdomen on each side** – Located on the flank above the pelvic bones. The area contains the kidneys and is susceptible to injury because it's not protected by bone EMR 9th, Page 65.
5. **b) Exchange of oxygen and carbon dioxide** – The respiratory system includes the nose, mouth, trachea, lungs, bronchi, bronchioles, alveoli, and associated muscles related to breathing. The primary function is to exchange oxygen and carbon dioxide. EMR 9th, Page 67.
6. **d) All of the above** – A firefighter's drag is an emergency move where the rescuer straddles the patient and secures the patient's hands behind the rescuer's neck, then crawls to safety while dragging the patient underneath him/her. EMR 9th, Page 97, 98.
7. **a) True** – Trendelenburg or shock position is used for patients suspected of suffering from shock. It is achieved by placing the patient in a supine position and elevating the feet or foot end of a stretcher to bring blood volume to the vital organs. This position is not recommended when the patient is suffering from a traumatic injury affecting the skull, chest or spine. EMR 9th. Page 108.
8. **c) Used by professional rescuers when there is a possible neck or spine injury** – Jaw Thrust Maneuver is the preferred method for opening the airway of patients with possible neck or spine injuries. EMR 9th, Page 142.
9. **a) Pocket face mask**– used for mouth to mask ventilations. EMR 9th, Page 143.
10. **b) False** – Use the same procedures as you would for a normal patient except-do not pinch the patient's nose closed. EMR 9th, Page 147.

11. **a) True** –*In a complete airway obstruction, a patient who is responsive will not be able to speak, breathe or cough. They will typically grasp their neck and open their mouth which is the universal sign of choking. EMR 9th, Page 150.*
12. **c) Chain of Survival** - *Immediate recognition of cardiac arrest and activation of the emergency response system, early CPR with an emphasis on chest compressions, rapid defibrillation, effective advanced life support, and integrated post-cardiac arrest care. EMR 9th, page 187.*
13. **d) All of the above** – *chest compressions, maintaining an open airway and breathing for the patient all ensure oxygenated blood is being circulated to the vital organs. EMR 9th, Page 188.*
14. **b) Deliver compressions at a rate of at least 100 per minute** – *and provide two breaths for every 30 compressions; deliver each breath over one second; and avoid interrupting compressions for longer than 10 seconds. EMR 9th, Page 195.*
15. **b) Provide one breath every five to six seconds or 10 to 12 breaths per minute** – *if the patient has a carotid pulse begin rescue breathing. New guidelines recommend compressions first; however, compressions were not an option in the choices given and attaching an AED when a patient has a pulse but is not breathing would not be a priority in CPR. EMR 9th, page 197.*
16. **a) True** – *During two-rescuer CPR the compression to ventilation ratio does not change, it is 30:2. EMR 9th, page 198.*
17. **d) A rapid rhythm that originates in the ventricles and rarely produces a pulse** – *Also called V-Tach [tach] meaning rapid or fast is an abnormal rapid contraction of the heart's lower chambers, resulting in very poor circulation. EMR 9th, page 205.*
18. **b) Blood pressure, pulse and respirations.** – *All signs that are observed by the rescuer. EMR 9th, page 216, 217.*
19. **b) Radiating**– *Describes the region and radiating to find out where the pain is originating from and where it is moving or radiating to. EMR 9th, page 220.*
20. **a) True** – *Perfusion is the adequate supply of well-oxygenated blood to all parts of the body. During an injury with volume loss, inadequate perfusion can lead to shock. EMR 9th page 221.*
21. **a) Verbal** – *AVPU is a measurement used to determine mental status and level of consciousness and it stands for Alert, Verbal, Painful, Unresponsive. EMR 9th, Page 221 & 253.*

22. **d) Rate, strength and rhythm** – *Pulse rate is the number of beats per minute to determine if the pulse rate is normal, rapid or slow. Strength is the force of the pulse- either strong or weak. Rhythm is the steadiness of the pulse- either regular or irregular. Diastole is not a word in Webster's Dictionary. The correct term for when the heart EMR 9th, page 225.*
23. **a) Systolic** – *the systolic blood pressure is generated from the pressure within the arteries when the heart contracts. After the left ventricle of the heart contracts, it relaxes and refills- called diastolic pressure. EMR 9th, Page 227.*
24. **c) Perform a scene size-up and primary assessment** – *Safety is the primary goal on a scene size-up. On a trauma patient with no significant MOI, the scene should be assessed to determine the MOI. Was the patient overcome by fumes, etc.? EMR 9th, Page 244.*
25. **b) Angina Pectoris** – *Angina pectoris means pain the chest and occurs when one or more of the coronary arteries are unable to provide an adequate supply of oxygenated blood . EMR 9th. Page 278.*
26. **c) Myocardial infarction** – *“Myo” meaning muscle and “cardial” meaning heart, “infarction” meaning deadening of tissue due to loss of adequate blood supply. EMR 9th, Page 278.*
27. **a) True** – *PCC's are staffed 24 hours per day and the hotline number is 1-800-222-1222; if rescuers forget the number they can contact 911 dispatch who will contact the PCC. EMR 9th, Page 317.*
28. **a) 1 liter or about 2 pints**– . *EMR 9th, Page 336.*
29. **d) Tension pneumothorax** – *A tension pneumothorax occurs when air is allowed to build up inside the chest cavity, causing excessive pressure and if left untreated will cause a collapse of the remaining lobes of the lung. EMR 9th, Page 469.*
30. **d) All of the above** – *Placing the patient on his back and lifting knees takes pressure of the abdominals; very moist sterile dressing provide moisture to the exposed organs and covering with plastic helps maintain moisture to the organs until ALS arrives. EMR 9th Page 474.*