

Maricopa County Community College District
PARAMEDIC CANDIDATE ENTRANCE EXAMINATION
COMPETENCIES
2024

Each question on the MCCCCD Paramedic Candidate Entrance Examination is related to one or more of the following competencies. The competencies serve as a study guide for the examination.

Annotated reference: *Emergency Care of the Sick and Injured, 12th Edition* (AAOS, 2021).

The Paramedic candidate should be able to:

1. List physiologic changes that occur in pregnancy
2. Calculate a Glasgow Coma Scale score for a given adult patient
3. Explain how to perform triage and tagging
4. Explain how to manage a refusal from a competent adult
5. Calculate an Apgar score
6. Explain the significance of a patient found in the tripod position
7. Identify the risk factors associated with
 - Hypoxic drive
 - Supine hypotension syndrome
 - Neurogenic shock
 - Cerebral palsy
 - Deep vein thrombosis
 - Suicide
 - History of atrial fibrillation and taking a “blood thinner” medication
 - Hypoxia
8. Describe how the anatomy of the pediatric airway differs from the anatomy of the adult airway
9. Identify the main cause of cardiac arrest in pediatric patients
10. Describe where to park an EMS unit at the scene of a highway motor vehicle crash
11. Describe how to set up a small volume nebulizer
12. Identify the type of injury that should be splinted in the position of function
13. List the contraindications for administering nitroglycerin
14. Describe when to treat a patient who is being extricated
15. Identify which substances are released by the immune system during an allergic reaction
16. Describe how to make a correction to a documentation error on a PCR
17. Explain the most effective way to convert ventricular fibrillation
18. Explain how to realign a fracture of the shaft of a long bone

19. Identify the required measurement of a helicopter landing zone
20. List complications associated with a patient who has been intubated.
21. Describe the treatment for a/an
 - Adult in cardiac arrest using the AED
 - Dog bite
 - Adult with respiratory failure
 - Hyperthermia caused by an environmental exposure
 - Adult in cardiac arrest found on a bed
 - Uncontrolled bleeding into the airway
 - Shoulder injury
 - Adult with altered mental status
 - Adult with return of spontaneous circulation from cardiac arrest
 - Responsive infant with a foreign body airway obstruction
 - Uncontrolled external bleeding
 - Adult with severe epistaxis
 - Adult with anaphylaxis
 - Adult with a threatening behavioral emergency
 - Adult who gags when an OPA is inserted into their airway
 - Adult with neck and back pain from a motor vehicle crash
 - Postictal adult
 - Stroke
22. Describe the body's compensatory mechanisms for blood loss
23. List signs of definitive or conclusive death
24. Describe the mechanism of action of
 - Naloxone
 - Epinephrine
 - Aspirin
25. Identify where most serious ambulance crashes occur
26. List complications associated with use of a bag-mask device
27. Describe the goal for performing the primary assessment
28. Explain how the EMT can assist a Paramedic to perform an endotracheal intubation
29. Calculate the percentage of body surface area that is burned (using the rules of nines) for an adult in a given scenario
30. Calculate the percentage of body surface area that is burned (using the rules of nines) for an infant in a given scenario
31. Calculate the percentage of body surface area that is burned (using the rules of nines) for a child in a given scenario
32. Identify the device used to administer albuterol
33. Describe the types of triage tags and the patient conditions associated with each
34. Describe function of the pulse oximeter
35. Identify the first rule of safely driving an emergency vehicle
36. Describe how to manage a situation of suspected elderly abuse
37. List the criteria for applying CPAP

38. Identify the organ most likely affected by left flank trauma
39. List the heart rate, blood pressure, and respirations associated with increased intracranial pressure
40. Describe the severity of a burn on the hands of an adult
41. Describe how to manage a patient refusal for a competent adult
42. Explain why a combative patient should be immobilized in the supine position onto a long board
43. Describe function of the brainstem
44. Identify the type of muscle found in the walls of the gastrointestinal tract
45. Identify the device used to administer epinephrine
46. List the contraindications for administering albuterol
47. Identify the oxygen concentrations delivered by the
 - Nasal cannula
 - Nonrebreathing mask with reservoir
48. List the components of the primary assessment
49. Identify the dosage for administering aspirin
50. List common signs of anaphylaxis
51. List the normal systolic blood pressure, pulse rate, and respiratory rate for a/an
 - Adult
 - Child
 - Infant
52. List the order, superior to inferior, the divisions of the spine
53. Describe the standards for performing CPR for a/an
 - Adult
 - Child
 - Infant
54. Describe the START triage categories and tagging procedure
55. Identify the substance used to lubricate a nasopharyngeal airway before insertion
56. List situations that require special reporting
57. List the three stages of labor
58. Explain how the onset of hypoglycemia differs from the onset of hyperglycemia
59. List patient conditions which would most likely expose the EMT to methicillin-resistant *Staphylococcus aureus* (MRSA)
60. List the components of the SAMPLE mnemonic
61. Describe the most common cause of airway obstruction in an unconscious patient
62. List the parts of the brain
63. Describe the route used to administer naloxone
64. Define the role of the:
 - Incident Commander
 - Medical Director

65. Define these medical terms
- Crackles
 - Osteoporosis
 - White blood cells
 - Avulsion
 - Hydroplaning
 - Pulmonary edema
 - Cavitation
 - Emphysema
 - Advance Directive
 - Implied consent
 - Pulse oximetry
 - Hot zone
 - Aerobic metabolism
 - Chronic bronchitis
 - Hypoperfusion
 - AVPU
 - Tetrahydrocannabinol
 - AED
 - Spontaneous abortion
 - Situational awareness
 - Abruptio placentae
 - Transient ischemic attack
66. Describe the location and function of these body structures
- Aorta
 - Left ventricle
 - Oropharynx
 - Femoral artery
 - Epiglottis
 - Coronary arteries
 - Inferior and superior vena cavae
67. Describe the pathophysiology of
- Nail clubbing
 - Bronchiolitis
 - The islets of Langerhans
 - Atherosclerotic coronary artery disease
 - Skin turgor

68. List the signs and symptoms of
- Preeclampsia
 - Allergic reaction
 - Traumatic asphyxia
 - Stridor
 - COPD
 - Peptic ulcer
 - Foreign body obstructed airway in an infant
 - DKA
 - Hypovolemic shock
 - Myocardial infarction
 - Hepatitis
 - Hypoperfusion
 - Hypothermia
 - CHF
 - Ectopic pregnancy
 - Croup
 - Chronic bronchitis
 - Excited delirium
 - Flail chest
 - Closed head injury
 - Paradoxical chest wall motion