Candidate Study Guide for the Illinois EMT-Paramedic (EMT-P) Licensure Examination

The following information is intended to help you prepare for the Illinois Emergency Medical Technician-Paramedic (EMT-P) Licensure Examination. Part I of this study guide contains general information about the profession and testing procedures. Part II provides a content outline, lists the competencies covered in the examination, and identifies reference materials that support this examination. Part III includes sample questions to help you prepare for this test.

Part I General Information

PURPOSE OF THE EXAMINATION

This examination has been developed in collaboration with Illinois Department of Public Health (IDPH) and representatives of the 11 Illinois Emergency Medical Service regions. EMT-P licensure is granted only to candidates who demonstrate sufficient knowledge of the U.S. Department of Transportation National Standard Curriculum for EMT-P as adapted and approved by IDPH.

TEST VALIDITY

The time limit for this examination is 2½ hours. This examination has been developed to meet strict standards of test fairness and validity to protect the health and safety of the public.

PHOTO ID

Each candidate must present a photo ID and a valid admission notice to be admitted to any of these examinations. Only a valid Driver’s License, Secretary of State ID card, or a current passport is acceptable as photographic identification. If the name on the photo ID does not match the name on the admission notice, proof of legal name change also must be presented before the candidate can be admitted to an examination.

SPECIAL ACCOMMODATIONS

Any candidate who needs special accommodations in test-taking procedures because of a disabling condition must communicate that need in writing with his or her application. No accommodations can be arranged on the day of a test.

SCORING THE EXAMINATION

Candidates who pass this examination will receive their license as an EMT-P from the Illinois Department of Public Health.

MISSING AN EXAMINATION

There are no "make-up" examinations. You may re-register for the next scheduled examination date.

RE-EXAMINATION

Candidates who fail the test will receive information to help them identify content areas on which they need to improve their performance to pass on a subsequent attempt. Candidates must register to take the test again through the resource hospital associated with their EMT-P training program.

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Part II Test Content Outline

This examination was developed in collaboration with a committee of representatives of the 11 Illinois Emergency Medical Service regions and staff from the Illinois Department of Public Health. Content areas on the test are outlined below. The examination reflects the U.S. Department of Transportation National Standard Curriculum for EMT-P as adapted and approved by the Illinois Department of Public Health.

Emergency Medical Technician – Paramedic (EMT-P)

1. **Preparation and Professional Issues** (20 questions)
   A. EMS responsibilities and well-being of the EMT-P
   B. Medical and legal issues
   C. General principles of pathophysiology
   D. Pharmacology
   E. Vascular access and medication administration
   F. Therapeutic communications

2. **Airway Management and Ventilation** (4 questions)
   A. Intubation indications, contraindications, placement and complications
   B. Needle cricothyrotomy

3. **Patient Assessment** (10 questions)
   A. History taking and techniques of physical examination
   B. Scene size-up, initial assessment, GCS, detailed examination and transport decisions
   C. Communications and documentation

4. **Trauma** (24 questions)
   A. Mechanisms of injury
   B. Hemorrhage and shock
   C. Soft tissue trauma and burns
   D. Head and facial trauma
   E. Spinal trauma
   F. Thoracic trauma
   G. Abdominal and pelvic trauma
   H. Musculoskeletal trauma

5. **Pulmonary and Cardiovascular Medical Emergencies** (33 questions)
   A. Respiratory emergencies
   B. Cardiovascular emergencies

6. **Other Medical Emergencies** (39 questions)
   A. Neurology
   B. Endocrinology
   C. Allergies and anaphylaxis
   D. Gastroenterology
   E. Renal and urogenital disorders
   F. Toxicology
   G. Hematologic disorders
   H. Environmental conditions
   I. Infectious and communicable diseases
   J. Behavioral and psychiatric disorders
   K. Obstetrics
7. **Neonatology, Pediatrics and Geriatrics** (14 questions)
   A. Neonatal assessment and resuscitation
   B. Pediatrics
   C. Geriatrics

8. **Other Topics** (6 questions)
   A. Abuse and assault
   B. Crime scene awareness, disaster response and medical incident command
   C. Hazardous materials, domestic preparedness and homeland security

**Recommended Study Materials**

The following references support questions on this examination. These books may be available in public and academic libraries. They also are available purchased from retail stores or online. All candidates should prepare for this examination by studying one or more of these references.


**Medication list for EMT-P from DOT Curriculum**

In most instances, dosages are not tested as they vary from System to System unless listed below. Students should be prepared to answer questions on drug actions, indications, contraindications, and side effects.

- adenosine (Adenocard)
- albuterol (Proventil) (2.5 mg usual first dose)
- amiodarone (may be mentioned with Lidocaine for Rx of ventricular dysrhythmias)
- aspirin
- atropine
- dextrose 50% 50 ml IVP (adult dose for hypoglycemia)
- diazepam (Valium) (peds dose: 0.2/0.5 mg IVP/IR)
- diphenhydramine (Benadryl)
- dopamine
- epinephrine 1:1000 0.3-0.5 mg for bronchospasm
- epinephrine 1:10,000 1 mg IVP/IO for code mgt.
- furosemide (Lasix)
- glucagon
- lidocaine
- midazolam (Versed)
- morphine
- naloxone (Narcan)
- nitroglycerin
- sodium bicarbonate
- vasopressin (may be mentioned with Epi 1:10,000 for Rx of V-fib and asystole)
- verapamil (offered as an alternative to diltiazem)
### Abbreviations

The following abbreviations may appear in the Paramedic Examinations.

- **ABCs** airway, breathing/ventilation, circulatory status
- **ACE** angiotensin-converting enzyme
- **ADA** Americans with Disabilities Act
- **ADH** antidiuretic hormone
- **AED** automated external defibrillator
- **AIDS** acquired immune deficiency syndrome
- **ALS** Advanced Life Support
- **AMI** acute myocardial infarction
- **APGAR** appearance, pulse, grimace, activity, respirations
- **ANSI** American National Standards Institute
- **ARDS** adult respiratory distress syndrome
- **ASA** aspirin
- **ATP** adenosine triphosphate (body’s energy source)
- **AV** atrioventricular
- **AVPU** Mental status responsiveness check:
  - alert, responds to verbal or painful stimuli, unresponsive
- **BLS** Basic Life Support
- **BP or B/P** blood pressure
- **BPM** beats per minute
- **BSI** body substance isolation
- **BVM** bag valve mask
- **CAD** coronary artery disease
- **c-collar** cervical collar
- **CDC** Center for Disease Control and Prevention
- **CHEMTREC** Chemical Transportation Emergency Center
- **CHF** congestive heart failure
- **CISD** critical incident stress debriefing
- **CISM** critical incident stress management
- **c-spine** cervical spine
- **CNS** central nervous system
- **c/o** complains of or complaining of
- **CO** carbon monoxide
- **CO₂** carbon dioxide
- **COBRA** Consolidated Omnibus Budget Reconciliation Act (federal legislation providing for EMTALA and continuation of health insurance
- **COPD** chronic obstructive pulmonary disease
- **CPR** cardiopulmonary resuscitation
- **CQI** continuous quality improvement
- **D₅W** 5% dextrose in water
- **D₅₀W** 50% dextrose in water
- **DCAP-BTLS** deformities, contusions, abrasions, punctures/penetrations, burns, tenderness, lacerations, swelling
- **DCFS** Department of Children and Family Services
- **DKA** diabetic ketoacidosis
- **dl or dL** deciliter
- **DNR** do not resuscitate
- **DOT** Department of Transportation
Abbreviations (continued)

ECG or EKG  electrocardiogram
ECRN  Emergency Communications Registered Nurse
ED  emergency department
EDD  esophageal detector device
EMD  emergency medical dispatcher
EMS  Emergency Medical Services
EOMs  extraocular movements
mEq/L  milli-equivalents per liter
ET  endotracheal
ETT  endotracheal tube
°F  degrees Fahrenheit
GCS  Glasgow Coma Score
GI  gastrointestinal
gm  gram
gtts/min  drops per minute
Hazmat  hazardous materials
HCO₃⁻  bicarbonate
HEENT  head, eyes, ears, nose and throat
HEPA mask  high efficiency particulate airborne mask
HHN  hand held nebulizer
HHNC  hyperglycemic hyperosmolar nonketotic coma
HHNK  hyperglycemic hyperosmolar nonketotic
HHNS  hyperosmolar hyperglycemic nonketotic syndrome
HIPAA  Health Insurance Portability and Accountability Act
HIS  common bundle bridging AV node to bundle branches
HIV  human immunodeficiency virus
HR  heart rate
HTN  hypertension
ICS  incident command system
IM  intramuscular
IMS  incident management system
IV  intravenous
IVP  intravenous push
IVPB  intravenous piggy back
IVR  idioventricular
J  joules
JVD  jugular venous distension
KED  Kendrick extrication device
kg  kilogram
L  liter
lbs  pounds
LLQ  lower left quadrant
LMP  last menstrual period
L/min or lpm  liters per minute
LOC  level of consciousness
LR  lactated Ringers solution
LUQ  left upper quadrant
mA  milliamps
MCI  multiple casualty incident
MDI  metered dose inhaler
mEq  milli-equivalents
mg  milligram
MI  myocardial infarction
min  minute
mL or ml  milliliters
mmHG  millimeters of mercury
MSDS  Material Safety Data Sheet
MVC  motor vehicle collision or crash
NC  nasal cannula
NFPA  National Fire Protection Association
NRM  non-rebreather mask
NS  normal saline
NSR  normal sinus rhythm
NTG  nitroglycerin
O₂  oxygen
OB  obstetric
OPA  oropharyngeal airway
OPQRST  onset, provokes, quality, radiation, severity, time
OSHA  Occupational Health and Safety Administration
P  pulse
PAC  premature atrial contraction
Palp  palpation
PASG  pneumatic anti-shock garment
PCO₂  partial pressure of carbon dioxide
PCR  patient care report
Peds  pediatrics
PERRL  pupils equal and round, regular in size, react to light
pH  partial pressure of hydrogen (hydrogen ion concentration)
PICC  peripherally inserted central catheter
PO₂  partial pressure of oxygen
PPE  personal protective equipment
PR or PRI  P-R interval
psi  pounds per square inch
PSVT  paroxysmal supraventricular tachycardia
PTH  parathyroid hormone
PtL  Pharyngo-tracheal lumen airway (dual lumen airway)
PVC  premature ventricular contraction
QRS  ECG wave representing ventricular depolarization
QT or QTI  QT interval
R  respirations
RA  room air
RBC  red blood cell
RLQ  right lower quadrant
RR  respiratory rate
RSV  Respiratory Syncytial Virus
RTS  revised trauma score
Abbreviations  (continued)

Rule of nines  Each 9%  Whole head, chest, abdomen, anterior each leg, posterior each leg, 
               upper back, lower back/buttocks, whole arm 
               1%  Perineum
RUQ  right upper quadrant
S&S  signs and symptoms
SA  sinoatrial
SAMPLE  symptoms, allergies, medications, past medical history, 
           last oral intake, events surrounding the incident
SCBA  self-contained breathing apparatus
SIDS  sudden death infant syndrome
SL  sublingual
SOB  shortness of breath
SpO₂  pulse oximetry
S-T or ST  S-T segment
START  simple triage and rapid treatment
Sub-q  subcutaneous
T or Temp  temperature
TB  tuberculosis
TBSA  total body surface area
TIA  transient ischemic attack
TKO  to keep open
TSH  thyroid-stimulating hormone
V-fib or VF  ventricular fibrillation
VS  vital signs
V-tach or VT  ventricular tachycardia
WAP  wandering atrial pacemaker
WMD  weapons of mass destruction
y/o  year old

Reference Norms

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<th>Intrinsic pacing rates</th>
<th>SA node</th>
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<td>Femoral pulse =</td>
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<td>Radial pulse =</td>
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<td>Upper limits of pacing mA = 200</td>
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Airway, stroke & cardiac treatment questions reference AHA 2005 ACLS Guidelines
Stroke assessments using Cincinnati quick screen: change in speech, facial asymmetry and arm drift
Peds fluid resuscitation volumes are calculated at 20 mL/kg
1 kg = 2.2 lb
Part III Sample Questions

All questions on this examination are multiple-choice with one correct answer. Each question is supported by study materials cited in this bulletin. The answer key appears after these questions.

NOTE: ALL REFERENCES TO EMT IN THIS EXAMINATION REFER TO EMT-PARAMEDIC UNLESS SPECIFICALLY STATED OTHERWISE IN THE QUESTION

1. Which of these is NOT required to prove negligence against an EMT?
   A. Motive
   B. Duty to act
   C. Breach of duty
   D. Proximate cause

2. What do all etiologies and stages of shock have in common?
   A. Tachycardia
   B. Hypotension
   C. Cellular hypoxia
   D. Cool, pale, moist skin

3. A drug comes packaged 2 mg/10 ml. How many milliliters should be administered to a patient who is prescribed to receive a dose of 0.5 mg?
   A. 0.1
   B. 0.25
   C. 1.0
   D. 2.5

4. Which of these is an indication for performing a needle cricothyrotomy on a patient?
   A. Massive facial trauma when intubation and/or bag mask ventilation is unsuccessful
   B. Partial airway obstruction if patient cannot speak or cough
   C. Tension pneumothorax if ventilatory distress is severe
   D. Intubation equipment is not available

5. When performed correctly, endotracheal intubation
   A. reduces the risk of aspiration.
   B. should be performed before defibrillation.
   C. should be accomplished in 40 seconds or less.
   D. can only be used in spontaneously breathing patients.
6. Which of these symptoms is NOT typically associated with a patient experiencing renal calculi?
   A. Pain radiating to the groin
   B. Unilateral flank pain
   C. Hematuria
   D. Fever

7. What injury occurs when compression forces are applied directly to the top of the head and are transmitted to the cervical spine?
   A. Hyperextension
   B. Axial loading
   C. Hyperflexion
   D. Distraction

8. An adult patient has partial thickness burns of the chest, abdomen, perineum and the entire anterior surface of both legs. Using the Rule of Nines, how much of total body surface area has been burned?
   A. 19%
   B. 28%
   C. 37%
   D. 55%

9. A patient from a fire has severe respiratory distress, a hoarse voice, soot around the mouth and nares, respirations of 32 and stridor. Which of these is the best intervention for this patient?
   A. Intubation
   B. Fluid resuscitation
   C. Ventilation by mouth to mask
   D. Nebulized bronchodilator treatment

10. Which of the following findings is the most concerning when treating a patient with a suspected head injury?
    A. Pulse oximetry decreases to 93
    B. Pulse oximetry decreases from 95 to 92
    C. Glasgow Coma Score decreases from 13 to 12
    D. Glasgow Coma Score decreases from 13 to 10
11. An unrestrained victim of a high-speed MVC has a bruise over the sternum and appears pale and anxious. VS: BP in the right arm 120/80, left arm 110/72; P 120; R 20, SpO₂ 96%; ECG ST. Neck veins are flat, breath sounds are clear and equal, heart tones are normal, abdomen is soft and non-tender; femoral and pedal pulses are diminished. What injury should the paramedic suspect?

A. Cardiac tamponade  
B. Massive hemothorax  
C. Thoracic aortic disruption  
D. Blunt cardiac injury

12. Which of these refers to pain after release of the hand during palpation of a patient’s abdomen?

A. Shifting dullness  
B. Rebound tenderness  
C. Abdominal guarding  
D. Diaphragmatic compensation

13. What are albuterol and metaproterenol?

A. Parasympatholytic bronchodilators  
B. Parasympathomimetic bronchodilators  
C. Sympatholytic bronchodilators  
D. Sympathomimetic bronchodilators

14. Hyperventilation syndrome causes

A. excess elimination of O₂.  
B. excess elimination of CO₂.  
C. excess accumulation of CO.  
D. excess accumulation of CO₂.

15. A 65 y/o patient with COPD presents with sudden onset of right-sided chest pain and shortness of breath after coughing vigorously. Neck veins are flat, the trachea is midline, lung sounds are absent on the right and normal on the left. Assessment reveals no fever or hemoptysis. VS: BP 132/78, P 110, R 30 and shallow, SpO₂ 92%. What should a paramedic suspect?

A. Spontaneous pneumothorax  
B. Hyperventilation syndrome  
C. Pulmonary embolism  
D. Pleurisy
16. Identify this rhythm.

A. Ventricular fibrillation
B. Premature ventricular contractions
C. Polymorphic ventricular tachycardia
D. Monomorphic ventricular tachycardia

17. Identify this rhythm.

A. Sinus rhythm with premature atrial contractions
B. Second degree AV block Mobitz II
C. Second degree AV block Mobitz I
D. Complete heart block

18. Which of the following correctly describes the pharmacologic action of furosemide (Lasix) when administered to a patient in pulmonary edema?

A. It causes vasoconstriction to decrease venous capacitance and improve preload.
B. It causes vasodilation to increase venous capacitance and decrease preload.
C. It decreases water retention by the adrenal glands to improve circulation.
D. It increases water retention by the kidney to improve circulation.

19. Which of these findings is associated with Cushing’s triad in the presence of increased intracranial pressure?

A. Increased heart rate
B. Jugular vein distention
C. Increasing systolic blood pressure
D. Decreasing systolic blood pressure
20. Which of these is more commonly found in a pediatric patient with a high fever than in an adult?
   A. Seizure
   B. Altered LOC
   C. Slurred speech
   D. Neurological deficit

21. Which body systems are most affected by narcotics and opiates?
   A. Central nervous and gastrointestinal
   B. Gastrointestinal and respiratory
   C. Respiratory and integumentary
   D. Central nervous and respiratory

22. Which of these conditions is NOT commonly associated with sickle cell anemia?
   A. Renal disease
   B. Abdominal pain
   C. Excessive bleeding
   D. Musculoskeletal pain

23. Which of these is the primary objective when responding to a behavioral emergency?
   A. De-escalate the situation
   B. Ensure scene safety
   C. Notify law enforcement
   D. Contact a psychologist

24. A patient in her third trimester of pregnancy c/o a headache, spots in her visual field and weight gain of 20 pounds in the last two weeks. Skin is pale, warm and dry with generalized edema. Breath sounds are clear bilaterally. VS: BP 160/100, P 80, RR 24. What should the EMT suspect?
   A. Retinal detachment
   B. Hypertensive crisis
   C. Pre-eclampsia
   D. Eclampsia

25. What complication should a paramedic anticipate if there is meconium in the amniotic fluid?
   A. Profound hypoglycemia
   B. Fetal tachycardia and CHF
   C. An infant with a birth defect
   D. Primary or secondary apnea
26. Which of these is the preferred site for intraosseous access on a pediatric patient?
   A. Distal femur
   B. Proximal tibia
   C. Distal humerus
   D. Proximal radius

27. Where must an Illinois EMT report suspected elder abuse?
   A. Emergency department staff
   B. The local states attorney
   C. The elder abuse hotline
   D. The local police

28. Which of these biological agents would lead to nausea, vomiting and “food poisoning” symptoms?
   A. Salmonella
   B. Botulism
   C. Anthrax
   D. Ricin

Answers for EMT-P Sample Questions

1. A  15. A
2. C  16. D
3. D  17. B
4. A  18. B
5. A  19. C
6. D  20. A
8. C  22. C
10. D  24. C
11. C  25. D
13. D  27. C
14. B  28. A