

## Item Formats On The In-Training and Part 1 Examination

The In-Training and Part 1 Examinations have three types of item formats: A-type, R-type, and G sets. K-type questions will no longer be on the examination. Examples of all item formats are shown below.

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### Sample A-type Items

1. A 50-year-old man who underwent cardiac transplantation one month ago is scheduled to undergo laparoscopic cholecystectomy. He takes prednisone, cyclosporine, and lisinopril. The cardiac action of which of the following drugs is most likely to be decreased in this patient?
  - (A) Atropine
  - (B) Isoproterenol
  - (C) Metoprolol
  - (D) Neostigmine
  - (E) Norepinephrine
2. During acute hemorrhagic shock, release of renin contributes to the immediate control of blood pressure by increasing which of the following?
  - (A) Adrenal glucocorticoid production
  - (B) Angiotensin II production
  - (C) Conversion of thyroxine (T4) to triiodothyronine (T3)
  - (D) Release of norepinephrine
  - (E) Release of vasopressin
3. A 30-year-old parturient with significant mitral stenosis develops atrial fibrillation (ventricular response rate 130) one hour after delivery. Mean arterial pressure is 40 mmHg, and pulmonary capillary wedge pressure is 28 mmHg. Which of the following is the most appropriate initial management?
  - (A) Adenosine
  - (B) Cardioversion
  - (C) Digoxin
  - (D) Furosemide
  - (E) Phenylephrine
4. Which of the following drugs causes vasodilation by producing nitric oxide?
  - (A) Hydralazine
  - (B) Nicardipine
  - (C) Phentolamine
  - (D) Prostaglandin E1
  - (E) Sodium nitroprusside

### Sample R-type Items

DIRECTIONS: Each group of items below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the ONE lettered heading or component that is most closely associated with it and fill in the circle containing the corresponding letter on the answer sheet. Each lettered heading or component may be selected once, more than once, or not at all.

- (A) Acute pericarditis
- (B) Cardiogenic shock
- (C) Chronic constrictive pericardiopathy
- (D) Mitral valve disease
- (E) Myocarditis
- (F) Pericardial tamponade
- (G) Pleuritis
- (H) Pulmonary embolism
- (I) Rheumatic fever
- (J) Spontaneous pneumothorax

For each patient with chest pain, select the most likely mechanism causing the symptoms.

5. A previously healthy 18-year-old man comes to the emergency department 12 hours after the onset of chest pain in the area of the trapezius muscle. He has had an upper respiratory tract infection for 9 days. A friction rub is heard over the precordium. An ECG shows elevation of the J point of all leads except aVR and V1. After administration of aspirin, the pain subsides.
6. A 42-year-old woman comes to the emergency department 1 hour after the sudden onset of chest pain, cough, dyspnea, tachypnea, and marked anxiety. Two days ago, she underwent right hemicolectomy for cancer of the ascending colon. An accentuated pulmonary S2 is heard on auscultation. An ECG shows nonspecific ST-segment and T-wave changes. Leukocyte count is 12,000/mm<sup>3</sup>. An x-ray film of the chest shows no pulmonary infiltrates or pleural effusions. Arterial blood gas analysis on room air shows a PCO<sub>2</sub> of 30 mmHg and a PO<sub>2</sub> of 55 mmHg.

- (A) Acute bronchitis
- (B) Asthma
- (C) Chronic obstructive pulmonary disease
- (D) Congestive heart failure
- (E) Cystic fibrosis
- (F) Metastatic cancer to the lung
- (G) Pneumonia
- (H) Primary lung carcinoma
- (I) Primary pulmonary hypertension
- (J) Pulmonary embolism
- (K) Sarcoidosis
- (L) Sleep apnea
- (M) Spontaneous pneumothorax
- (N) Tuberculosis
- (O) Viral pleurisy

For each patient with a cough, select the most likely diagnosis.

7. A 59-year-old man has had a cough productive of blood-tinged sputum for 8 hours. He has had temperatures to 38.9 C (102 F), malaise, shortness of breath, and a cough productive of yellow phlegm for 2 days. He has smoked two packs of cigarettes daily for 40 years. Rhonchi, wheezes, and egophony are heard over the right hemithorax. An x-ray film of the chest shows a dense lobar infiltrate in the right hemithorax.
8. A 25-year-old man has had a cough productive of blood-streaked sputum for 5 days. Over the past 6 years, he has had similar symptoms once or twice annually that have been successfully treated with antibiotic therapy. He has had a cough for 12 years, recently productive of one to two cups of yellow-green sputum daily. He does not smoke. He takes lipase, protease, and amylase for malabsorption. Coarse rhonchi bilaterally and wheezes are heard. An x-ray film of the chest shows increased interstitial markings bilaterally, nodular lesions, and hyperinflation.

### Sample R-type Items (cont)

- (A) Acute bronchitis
- (B) Asthma
- (C) Chronic obstructive pulmonary disease
- (D) Congestive heart failure
- (E) Cystic fibrosis
- (F) Metastatic cancer to the lung
- (G) Pneumonia
- (H) Primary lung carcinoma
- (I) Primary pulmonary hypertension
- (J) Pulmonary embolism
- (K) Sarcoidosis
- (L) Sleep apnea
- (M) Spontaneous pneumothorax
- (N) Tuberculosis
- (O) Viral pleurisy

9. A 47-year-old woman has had a cough productive of scant amounts of yellow phlegm and temperatures to 38.3 C (101 F) for 3 months. On one occasion, the phlegm was blood streaked. She has had a 10-kg (21-lb) weight loss over the past 4 months. She does not smoke. She immigrated from Vietnam 20 years ago, and medical records are unavailable. Coarse upper lobe crackles and rhonchi are heard bilaterally. An x-ray film of the chest shows multiple bilateral upper lobe cavities with surrounding infiltrates in the lungs.

### Sample G set

Directions: Use the following scenario to answer questions 10 – 11.

An obese 10-year-old boy with diabetes mellitus is admitted to the hospital because of severe ketoacidosis and cardiovascular collapse. Initial management consists of cardiac monitoring and intravenous administration of fluids, electrolytes, and insulin. Because of difficulty obtaining satisfactory peripheral venous access, the left femoral vein is catheterized percutaneously. Six hours later, his mental status is improved, blood pressure is 120/70 mmHg and serum glucose concentration is 250 mg/dL. Physical examination at this time shows a cold left foot with diminished pulses compared with those of the right foot.

10. Which of the following is the most likely explanation for the diminished pulses?

- (A) Diabetic arteriopathy
- (B) Inadvertent injury of the femoral artery
- (C) Intense arteriolar constriction induced by hyperosmolality
- (D) Paradoxical embolus from the femoral vein
- (E) Thrombosis of the catheterized femoral vein

11. A deficit in which of the following electrolytes is most likely to cause death in this patient?

- (A) Bicarbonate
- (B) Calcium
- (C) Chloride
- (D) Potassium
- (E) Sodium

### ITEM FORMATS ON THE PART 1 (WRITTEN) EXAMINATION Answers to Sample Questions

- 1. A
- 2. B
- 3. B
- 4. E

- 5. A
- 6. H
- 7. G

- 8. E
- 9. N
- 10. B
- 11. D