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PRACTICE QUESTIONS

Special Purpose Examination (SPEX)

CSPEX

COMP SPECIAL PURPOSE EXAM

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Special Purpose Examination (SPEX) **CSPEX**, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, **CSPEX**
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

SINGLE CHOICE

A 45-year-old man presents with acute onset severe chest pain radiating to the back. Blood pressure is 180/110 mmHg in the right arm and 140/90 mmHg in the left arm. A diastolic murmur of aortic regurgitation is heard. Which of the following is the most likely diagnosis?

- ☐ A Acute myocardial infarction
- ☒ B Aortic dissection
- ☐ C Pulmonary embolism
- ☐ D Tension pneumothorax

ANSWER B

WHY The combination of severe tearing chest pain radiating to the back, differential blood pressures between arms (>20 mmHg), and a new diastolic murmur of aortic regurgitation is classic for aortic dissection, particularly involving the ascending aorta (Stanford type A). MI typically does not cause blood pressure differential or new aortic regurgitation.

QUESTION 2

SINGLE CHOICE

A 6-month-old infant is brought to the clinic with a rash that began on the face and spread to the trunk and extremities. The rash is maculopapular, and the child has had a low-grade fever and coryza for 3 days. Which of the following is the most likely cause?

- ☐ A Varicella zoster virus
- ☒ B Measles virus
- ☐ C Rubella virus
- ☐ D Roseola (HHV-6)

ANSWER B

WHY Measles classically presents with the 3 Cs (cough, coryza, conjunctivitis), high fever, Koplik spots, and a maculopapular rash that starts on the face/behind the ears and spreads cephalocaudally to the trunk and extremities. Roseola typically affects children 6 months to 2 years with high fever followed by a rash AFTER the fever breaks, beginning on the trunk. Varicella produces a vesicular rash in different stages. Rubella has posterior auricular and suboccipital lymphadenopathy.

QUESTION 3

SINGLE CHOICE

A 28-year-old woman presents with palpitations, heat intolerance, weight loss, and a diffuse goiter. Laboratory tests show a suppressed TSH and elevated free T4. Which of the following is the most appropriate initial treatment?

- ☐ A Levothyroxine
- ☒ B Methimazole
- ☐ C Radioactive iodine ablation
- ☐ D Subtotal thyroidectomy

ANSWER B

WHY This patient has classic Graves disease (hyperthyroidism with diffuse goiter). Initial treatment in most patients is a thionamide such as methimazole (or propylthiouracil in first trimester pregnancy). Levothyroxine would worsen the condition. Radioactive iodine and surgery are typically reserved for patients who fail or cannot tolerate thionamides, or for definitive therapy.

QUESTION 4

SINGLE CHOICE

A previously healthy 3-year-old child develops a barking cough, inspiratory stridor, and hoarseness after a few days of upper respiratory symptoms. Low-grade fever is present. The child is not drooling and appears comfortable when calm. Which of the following is the most likely diagnosis?

- ☐ A Epiglottitis
- ☐ B Bacterial tracheitis
- ☒ C Croup (laryngotracheobronchitis)
- ☐ D Foreign body aspiration

ANSWER C

WHY Croup typically affects children 6 months to 3 years and presents with a barking (seal-like) cough, inspiratory stridor, and hoarseness following a viral URI (usually parainfluenza). Epiglottitis presents with high fever, drooling, tripod posture, and severe distress. Bacterial tracheitis causes high fever and toxic appearance. Foreign body aspiration is usually sudden in onset without preceding URI.

QUESTION 5

SINGLE CHOICE

A 62-year-old man with a history of atrial fibrillation presents with sudden onset right-sided weakness and aphasia. Symptoms began 2 hours ago. Non-contrast CT of the head shows no hemorrhage. Which of the following is the most appropriate immediate management?

- ☐ A Aspirin 325 mg orally
- ☒ B Intravenous thrombolytic therapy (alteplase) if no contraindications
- ☐ C Heparin infusion
- ☐ D Warfarin with bridging

ANSWER B

WHY This patient has an acute ischemic stroke within the 4.5-hour window and no evidence of hemorrhage on CT. IV alteplase (or tenecteplase) is the standard of care for eligible patients within this window, after excluding contraindications. Aspirin is given if thrombolytics are not given or after 24 hours post-thrombolytic. Acute anticoagulation with heparin is not recommended for acute ischemic stroke, even with atrial fibrillation.

QUESTION 6

SINGLE CHOICE

A 35-year-old woman presents with intermittent episodes of severe headaches, palpitations, sweating, and episodes of feeling anxious. Her blood pressure during an episode is recorded at 220/120 mmHg. Which of the following is the most likely diagnosis?

- ☐ A Essential hypertension
- ☒ B Pheochromocytoma
- ☐ C Hyperthyroidism
- ☐ D Panic disorder

ANSWER B

WHY The classic triad of pheochromocytoma is episodic headaches, palpitations, and diaphoresis, often with paroxysmal severe hypertension. Although hyperthyroidism and panic disorder can mimic some symptoms, the severity of the blood pressure elevation and the paroxysmal nature with this triad strongly suggest pheochromocytoma. Diagnosis is confirmed with plasma free metanephrines or 24-hour urinary metanephrines.

QUESTION 7

SINGLE CHOICE

A 4-year-old child is brought in after ingesting an unknown number of acetaminophen tablets approximately 2 hours ago. The child is currently asymptomatic. Which of the following is the most appropriate next step in management?

- ☐ A Induce emesis with ipecac
- ☒ B Administer activated charcoal
- ☐ C Begin N-acetylcysteine immediately
- ☐ D Wait for symptoms and check liver function tests in 24 hours

ANSWER B

WHY For recent ingestion (<1-2 hours) of a potentially toxic amount of acetaminophen, activated charcoal is the appropriate initial gastrointestinal decontamination if the patient presents within about 1-2 hours and has a protected airway. Ipecac is no longer recommended. N-acetylcysteine is started if the acetaminophen level on the Rumack-Matthew nomogram (drawn at 4 hours or later) is above the treatment line, or immediately for massive ingestions.

QUESTION 8

SINGLE CHOICE

A 55-year-old man with a long history of alcohol use presents with confusion, ataxia, and ophthalmoplegia. His serum glucose is normal. Which of the following is the most likely diagnosis?

- ☒ A Wernicke encephalopathy
- ☐ B Alcohol withdrawal delirium
- ☐ C Hepatic encephalopathy
- ☐ D Subdural hematoma

ANSWER A

WHY Wernicke encephalopathy is caused by thiamine (vitamin B1) deficiency and presents with the classic triad of confusion, ataxia, and ophthalmoplegia (or nystagmus), commonly in patients with chronic alcoholism or malnutrition. Treatment is urgent IV thiamine before any glucose administration to prevent worsening. Alcohol withdrawal would present with tremors, autonomic hyperactivity, and hallucinations, not ophthalmoplegia.

QUESTION 9

MULTIPLE CHOICE

A 70-year-old woman presents with fever, dysuria, and flank pain. Urinalysis shows pyuria and bacteriuria. Vital signs: temperature 39.0°C, heart rate 110, blood pressure 95/60 mmHg. Which of the following are appropriate components of initial management? (Choose two.)

- ☒ **A** Immediate empiric broad-spectrum intravenous antibiotics
- ☒ **B** Aggressive intravenous fluid resuscitation
- ☐ **C** Outpatient oral antibiotics with follow-up in 48 hours
- ☐ **D** Discharge with symptomatic care only

ANSWER A - B

WHY This patient has urosepsis with hypotension and tachycardia meeting criteria for sepsis. Management includes prompt empiric broad-spectrum IV antibiotics (within 1 hour), aggressive IV fluid resuscitation, and admission. Outpatient management is inappropriate given hemodynamic instability. Symptomatic care alone is inadequate.