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## PRACTICE QUESTIONS

### American Nurses Credentialing Center Readiness Test

# R47

## Cardiac-Vascular Nursing Readiness Test

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

# Before you begin

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## What this is

9 practice questions for American Nurses Credentialing Center Readiness Test R47 , 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, R47
- the question number
- the email address on your order

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

**QUESTION 1**

MULTIPLE CHOICE

A nurse is assessing a patient with severe aortic stenosis. Which two hemodynamic changes are characteristic of this condition? (Choose two.)

- ☒ **A** Increased left ventricular afterload
- ☐ **B** Decreased left ventricular end-diastolic pressure
- ☒ **C** Increased left ventricular systolic pressure
- ☐ **D** Decreased stroke volume
- ☐ **E** Decreased left ventricular wall thickness

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**ANSWER** A • C

**WHY** In aortic stenosis, the narrowed valve orifice creates resistance to ejection, increasing left ventricular afterload (A) and left ventricular systolic pressure (C). The ventricle must generate higher pressures to eject blood through the stenotic valve. Stroke volume typically decreases, but the question asks about characteristic hemodynamic changes of afterload and systolic pressure generation, not forward flow. End-diastolic pressure typically rises (not decreases) due to impaired emptying and diastolic dysfunction. The LV wall thickens (hypertrophies) in response to the pressure overload, not thins.

**QUESTION 2**

MULTIPLE CHOICE

Which two findings on a 12-lead ECG are characteristic of an acute inferior wall myocardial infarction? (Choose two.)

- ☒ **A** ST-segment elevation in leads II, III, and aVF
- ☐ **B** Pathologic Q waves in leads V1 through V4
- ☐ **C** ST-segment elevation in leads V1 and V2
- ☒ **D** Reciprocal ST-segment depression in leads I and aVL
- ☐ **E** Tall R wave in lead V1

**ANSWER** **A • D**

**WHY** An inferior wall MI is identified by ST-segment elevation in the inferior leads (II, III, aVF) (A), which view the diaphragmatic surface of the heart supplied by the right coronary artery in most patients. Reciprocal ST-segment depression in the lateral leads (I and aVL) (D) is a classic finding that supports the diagnosis and indicates significant myocardial injury. Pathologic Q waves in V1–V4 indicate an anterior MI, and ST elevation in V1–V2 indicates a septal or anterior involvement. A tall R wave in V1 is associated with right ventricular hypertrophy or posterior MI, not inferior MI.

**QUESTION 3**

SINGLE CHOICE

A patient with non-ST-elevation acute coronary syndrome (NSTEMI-ACS) is started on aspirin, a P2Y<sub>12</sub> inhibitor, and anticoagulation. The chest pain has resolved. The patient's blood pressure is 88/56 mmHg with signs of cardiogenic shock. Which intervention is the most appropriate next step?

- ☐ A Administer a glycoprotein IIb/IIIa inhibitor
- ☐ B Initiate thrombolytic therapy
- ☒ C Urgent coronary angiography with revascularization
- ☐ D Increase the beta-blocker dose
- ☐ E Administer intravenous nitroglycerin

**ANSWER C**

**WHY** For NSTEMI-ACS complicated by cardiogenic shock, urgent coronary angiography with revascularization (percutaneous coronary intervention) is the evidence-based intervention to restore coronary perfusion and improve outcomes. Glycoprotein IIb/IIIa inhibitors are adjunctive agents and do not address the underlying ischemia. Thrombolytic therapy is indicated for ST-elevation MI when PCI is unavailable, not for cardiogenic shock management. Increasing beta-blockers in a hypotensive patient is contraindicated. IV nitroglycerin should not be given to patients with hypotension.

**QUESTION 4**

SINGLE CHOICE

A patient with chronic heart failure with reduced ejection fraction (HFrEF) is being discharged on an ACE inhibitor, a beta-blocker, spironolactone, and furosemide. Which laboratory finding requires the most immediate nursing intervention?

- ☐ A Serum potassium of 4.2 mEq/L
- ☐ B Serum creatinine of 1.1 mg/dL
- ☐ C Serum sodium of 138 mEq/L
- ☐ D Serum magnesium of 2.0 mg/dL
- ☒ E Serum potassium of 5.8 mEq/L

**ANSWER E**

**WHY** A serum potassium of 5.8 mEq/L indicates hyperkalemia, a serious complication of combined ACE inhibitor and spironolactone therapy. It predisposes the patient to life-threatening ventricular arrhythmias and requires immediate intervention including holding the medications and notifying the prescriber. The other values fall within or near normal limits and would not typically warrant immediate intervention.

**QUESTION 5**

SINGLE CHOICE

A patient 2 days post femoral-popliteal bypass surgery reports sudden onset of severe pain, pallor, pulselessness, paresthesia, and paralysis in the affected extremity. Which complication is the priority nursing concern?

- ☐ A Superficial wound infection
- ☒ B Graft occlusion with acute limb ischemia
- ☐ C Compartment syndrome
- ☐ D Deep vein thrombosis
- ☐ E Seroma formation

**ANSWER B**

**WHY** The classic 'six P's' (pain, pallor, pulselessness, paresthesia, paralysis, poikilothermia) signal acute limb ischemia, most commonly caused by graft occlusion in the immediate postoperative period. This is a surgical emergency requiring immediate notification of the surgeon and restoration of perfusion to prevent limb loss. Compartment syndrome shares some features but typically develops over hours after reperfusion injury and presents with pain out of proportion to exam findings with tense compartments. The full constellation of the six P's in the early postoperative period points to acute graft occlusion.

**QUESTION 6**

SINGLE CHOICE

Telemetry monitoring shows a regular narrow-complex rhythm at a rate of 165 beats per minute. The patient reports palpitations and mild dyspnea but is hemodynamically stable with a blood pressure of 110/70 mmHg. The nurse prepares the patient for which initial intervention?

- ☐ A Synchronized cardioversion
- ☐ B Immediate defibrillation
- ☒ C Vagal maneuvers followed by adenosine if unsuccessful
- ☐ D Amiodarone bolus
- ☐ E Magnesium sulfate infusion

**ANSWER C**

**WHY** The presentation describes paroxysmal supraventricular tachycardia (PSVT) in a hemodynamically stable patient. Per Advanced Cardiac Life Support (ACLS) guidelines, the initial management of stable narrow-complex SVT is vagal maneuvers (Valsalva, carotid sinus massage if appropriate). If unsuccessful, IV adenosine is the first-line pharmacologic agent. Synchronized cardioversion is reserved for unstable patients. Defibrillation is used for pulseless VT/VF, not stable SVT. Amiodarone is not first-line for stable SVT. Magnesium sulfate is indicated for torsades de pointes.

**QUESTION 7**

SINGLE CHOICE

During assessment of a pulmonary artery catheter, the nurse observes that the pulmonary artery wedge pressure (PAWP) waveform shows a dampened tracing with a low mean value after balloon inflation. Which action by the nurse is most appropriate?

- ☐ A Increase the pressure bag pressure to 300 mmHg
- ☐ B Deflate the balloon immediately and assess for spontaneous wedging
- ☐ C Advance the catheter further into the pulmonary artery
- ☒ D Deflate the balloon, then reinflate the balloon slowly while observing for the wedge tracing
- ☐ E Obtain a chest x-ray to confirm catheter tip position

**ANSWER D**

**WHY** A dampened or persistently low PAWP tracing after balloon inflation typically indicates that the catheter has spontaneously migrated into a wedge position or that balloon inflation was too rapid. The proper nursing response is to deflate the balloon, allow the catheter to float back, then reinflate slowly while observing the waveform for a true wedge tracing. The balloon should never be inflated against resistance or left inflated. Advancing the catheter without proper technique risks pulmonary artery rupture. While chest x-ray can confirm placement, the immediate bedside action is to reassess the wedge tracing correctly.

**QUESTION 8**

SINGLE CHOICE

A patient receiving a heparin infusion for venous thromboembolism has an activated partial thromboplastin time (aPTT) of 95 seconds. The therapeutic range is 60 to 80 seconds. Which action by the nurse is most appropriate?

- ☐ A Increase the heparin infusion rate
- ☐ B Continue the current infusion rate and recheck aPTT in 6 hours
- ☒ C Stop the infusion and notify the prescriber for an order to reduce the rate
- ☐ D Administer protamine sulfate
- ☐ E Administer vitamin K

**ANSWER C**

**WHY** An aPTT of 95 seconds is supratherapeutic, placing the patient at increased risk for bleeding. The nurse should stop the infusion (or hold it) and notify the prescriber, who will order a rate reduction based on the hospital protocol. Increasing the rate would worsen over-anticoagulation. Protamine sulfate is the antidote for severe heparin overdose with active bleeding, not for a modestly supratherapeutic aPTT without bleeding. Vitamin K reverses warfarin, not heparin. Simply continuing the same rate risks bleeding.

**QUESTION 9**

SINGLE CHOICE

A patient with infective endocarditis develops a new systolic murmur that increases with inspiration, along with jugular venous distention, hepatomegaly, and peripheral edema. Which complication is most likely developing?

- ☐ A Aortic valve vegetation
- ☒ B Right-sided heart failure secondary to tricuspid regurgitation
- ☐ C Pericardial tamponade
- ☐ D Septic pulmonary emboli
- ☐ E Mitral valve prolapse

**ANSWER B**

**WHY** A murmur that increases with inspiration (Carvallo's sign) suggests right-sided valvular involvement, most commonly tricuspid regurgitation in IV drug users with endocarditis. The accompanying JVD, hepatomegaly, and peripheral edema indicate right-sided heart failure, which results from chronic volume overload of the right ventricle due to tricuspid regurgitation. Aortic valve vegetations typically cause left-sided failure. Tamponade presents with muffled heart sounds, pulsus paradoxus, and equalization of pressures. Septic pulmonary emboli present with respiratory symptoms. Mitral valve prolapse is unrelated to this presentation.