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39	A	B	C	D	E

PRACTICE QUESTIONS

PEBC Demo Exams

PQSPE

Pharmacist Qualifying Sample Practice Exam

EDITION

Demo

QUESTIONS

9

ISSUED

September 4, 2026

Before you begin

What this is

9 practice questions for PEBC Demo Exams **PQSPE**, 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, **PQSPE**
- the question number
- the email address on your order

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

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QUESTION 1

MULTIPLE CHOICE

A 58-year-old patient with type 2 diabetes mellitus is initiated on metformin. Which of the following statements accurately describe the mechanism and clinical use of metformin? (Choose two.)

- ☒ **A** It primarily acts by inhibiting hepatic gluconeogenesis.
- ☐ **B** It causes significant weight gain and is therefore avoided in overweight patients.
- ☒ **C** It increases peripheral insulin sensitivity by activating AMP-activated protein kinase (AMPK).
- ☐ **D** It is contraindicated in patients with an estimated glomerular filtration rate (eGFR) greater than 60 mL/min/1.73 m².
- ☐ **E** It is contraindicated in patients with a history of lactic acidosis.

ANSWER A - C

WHY Metformin's principal glucose-lowering effect is suppression of hepatic gluconeogenesis; it also enhances peripheral insulin sensitivity, partly via activation of AMPK. It is weight-neutral or causes mild weight loss, so option B is incorrect. Metformin is contraindicated (or requires dose adjustment/caution) when eGFR is reduced, not when it is >60, so D is incorrect. A personal history of lactic acidosis is a contraindication to metformin use, but option E states the opposite relationship by pairing the contraindication with the wrong patient feature; the statement as written is not an accurate description of the drug's clinical use. Therefore, A and C are the correct choices.

QUESTION 2

MULTIPLE CHOICE

A pharmacist receives a prescription for oxycodone 20 mg every 6 hours as needed for pain. Which of the following actions are consistent with the pharmacist's legal and ethical responsibilities when handling this controlled substance prescription? (Choose two.)

- ☒ **A** Verify that the prescription was issued for a legitimate medical purpose by a prescriber acting in the usual course of professional practice.
- ☐ **B** Dispense the full 30-day supply without counseling, because Schedule II opioids do not require patient counseling.
- ☒ **C** Ensure the prescription contains all required elements, including patient name, drug, strength, quantity, directions, and a valid DEA registration of the prescriber for controlled substances.
- ☐ **D** Accept faxed refill authorizations for additional quantities indefinitely without prescriber contact.
- ☐ **E** Transfer the prescription to another pharmacy via telephone for one refill only.

ANSWER A - C

WHY The pharmacist's corresponding responsibility requires verifying that controlled-substance prescriptions are issued for a legitimate medical purpose in the usual course of practice (A) and that they contain all legally required elements including the prescriber's DEA registration (C). Option B is incorrect because patient counseling is required for new prescriptions unless refused. Option D is wrong because Schedule II prescriptions cannot be refilled; new prescriptions are required. Option E is incorrect because Schedule II prescriptions may not be transferred for refill purposes in most jurisdictions.

QUESTION 3 SINGLE CHOICE

A drug is administered orally and undergoes extensive first-pass metabolism in the liver. Which pharmacokinetic parameter will most likely be reduced as a direct result of this first-pass effect?

- ☐ A Volume of distribution (V_d)
- ☒ B Bioavailability (F)
- ☐ C Half-life ($t_{1/2}$)
- ☐ D Protein binding

ANSWER B

WHY First-pass metabolism reduces the fraction of an orally administered dose that reaches systemic circulation unchanged, thereby decreasing bioavailability (F). Volume of distribution, half-life, and protein binding are not directly reduced by hepatic first-pass metabolism; they depend on distribution, elimination, and plasma protein interactions, respectively.

QUESTION 4 SINGLE CHOICE

A 67-year-old patient with non-valvular atrial fibrillation ($\text{CHA}_2\text{DS}_2\text{-VASc}$ score = 4) and a creatinine clearance of 25 mL/min requires anticoagulation for stroke prevention. Which oral anticoagulant is most appropriate?

- ☒ A Apixaban
- ☐ B Warfarin
- ☐ C Dabigatran 150 mg twice daily
- ☐ D Rivaroxaban 20 mg once daily

ANSWER A

WHY Among direct oral anticoagulants, apixaban is the preferred agent in patients with significant renal impairment because it has the lowest renal dependence (about 27% renal excretion) and is dosed at 2.5 mg twice daily for many renally impaired patients. Warfarin is also an option but requires frequent INR monitoring and has more drug-drug and food interactions. Dabigatran 150 mg is contraindicated at $\text{CrCl} < 30$ mL/min and rivaroxaban should be avoided when $\text{CrCl} < 30$ mL/min for stroke prevention in AF. Therefore, apixaban is the most appropriate choice.

QUESTION 5

SINGLE CHOICE

A patient with a documented penicillin allergy (anaphylaxis) requires treatment for a community-acquired skin and soft tissue infection caused by methicillin-susceptible *Staphylococcus aureus* (MSSA). Which is the most appropriate antibiotic choice?

- ☐ A Amoxicillin-clavulanate
- ☐ B Cefazolin
- ☒ C Clindamycin
- ☐ D Vancomycin

ANSWER C

WHY For patients with a serious IgE-mediated penicillin allergy (anaphylaxis), cephalosporins such as cefazolin should be avoided due to risk of cross-reactivity. Amoxicillin-clavulanate is a penicillin and is also contraindicated. Vancomycin is reserved for MRSA infections, not MSSA. Clindamycin is appropriate for skin and soft tissue infections caused by MSSA in patients with a serious penicillin allergy. Local resistance patterns (e.g., inducible clindamycin resistance) should also be considered before prescribing.

QUESTION 6

SINGLE CHOICE

A patient is to receive a continuous IV infusion of heparin at 18 units/kg/hour. The patient weighs 75 kg. The IV bag contains 25,000 units of heparin in 250 mL of 0.9% sodium chloride. What is the infusion rate in mL/hour?

- ☐ A 1.35 mL/hour
- ☒ B 13.5 mL/hour
- ☐ C 5.4 mL/hour
- ☐ D 0.54 mL/hour

ANSWER B

WHY Step 1: Calculate the dose per hour: $18 \text{ units/kg/hour} \times 75 \text{ kg} = 1,350 \text{ units/hour}$. Step 2: Determine the concentration of the infusion: $25,000 \text{ units} \div 250 \text{ mL} = 100 \text{ units/mL}$. Step 3: Calculate the rate: $1,350 \text{ units/hour} \div 100 \text{ units/mL} = 13.5 \text{ mL/hour}$.

QUESTION 7

SINGLE CHOICE

A 52-year-old patient with type 2 diabetes and chronic kidney disease (eGFR 35 mL/min/1.73 m²) and heart failure is being reviewed for his medication regimen. Which diabetes medication has evidence of cardiovascular and renal benefit in this population and is recommended independent of glycemic control?

- ☐ A Glipizide
- ☐ B Sitagliptin
- ☒ C Empagliflozin
- ☐ D Pioglitazone

ANSWER C

WHY Empagliflozin, a sodium-glucose cotransporter-2 (SGLT2) inhibitor, has demonstrated cardiovascular mortality benefit and slows progression of diabetic kidney disease in patients with type 2 diabetes, including those with reduced eGFR and established cardiovascular disease. Glipizide is a sulfonylurea with no proven cardiovascular or renal benefit. Sitagliptin (a DPP-4 inhibitor) is generally safe but does not provide cardiovascular or renal protection. Pioglitazone is contraindicated in heart failure because it causes fluid retention.

QUESTION 8

SINGLE CHOICE

According to current stepwise management guidelines for asthma, which medication is the preferred add-on therapy for an adult with moderate persistent asthma that is not controlled on a low-dose inhaled corticosteroid alone?

- ☐ A Oral prednisone
- ☒ B Long-acting beta-2 agonist (LABA)
- ☐ C Leukotriene receptor antagonist (LTRA)
- ☐ D Theophylline

ANSWER B

WHY For moderate persistent asthma not controlled on low-dose inhaled corticosteroid (ICS) alone, the preferred next step is to add a long-acting beta-2 agonist (LABA) such as formoterol or salmeterol. Combination low-dose ICS/LABA is preferred over LTRA, theophylline, or oral systemic corticosteroids at this step. Daily oral prednisone is reserved for severe, uncontrolled asthma.

QUESTION 9

SINGLE CHOICE

A patient is picking up a new prescription for warfarin. Which counseling point is most important to include to ensure medication safety?

- ☐ A Take the medication with a high-fat meal to enhance absorption.
- ☒ B Avoid sudden changes in dietary vitamin K intake (e.g., leafy green vegetables).
- ☐ C Discontinue the medication if a missed dose occurs.
- ☐ D Take an extra dose if bruising is observed.

ANSWER B

WHY Warfarin is a vitamin K antagonist, and stable vitamin K intake is essential to maintain a consistent INR. Sudden increases in vitamin K-rich foods (e.g., spinach, kale) can reduce INR, while decreases can increase bleeding risk. Option A is incorrect because warfarin is taken regardless of fat content of meals. Option C is incorrect because missed doses are usually taken as soon as remembered the same day (not doubled). Option D is incorrect because bruising is a sign of over-anticoagulation and should prompt contacting the prescriber or seeking medical attention, not self-dosing.