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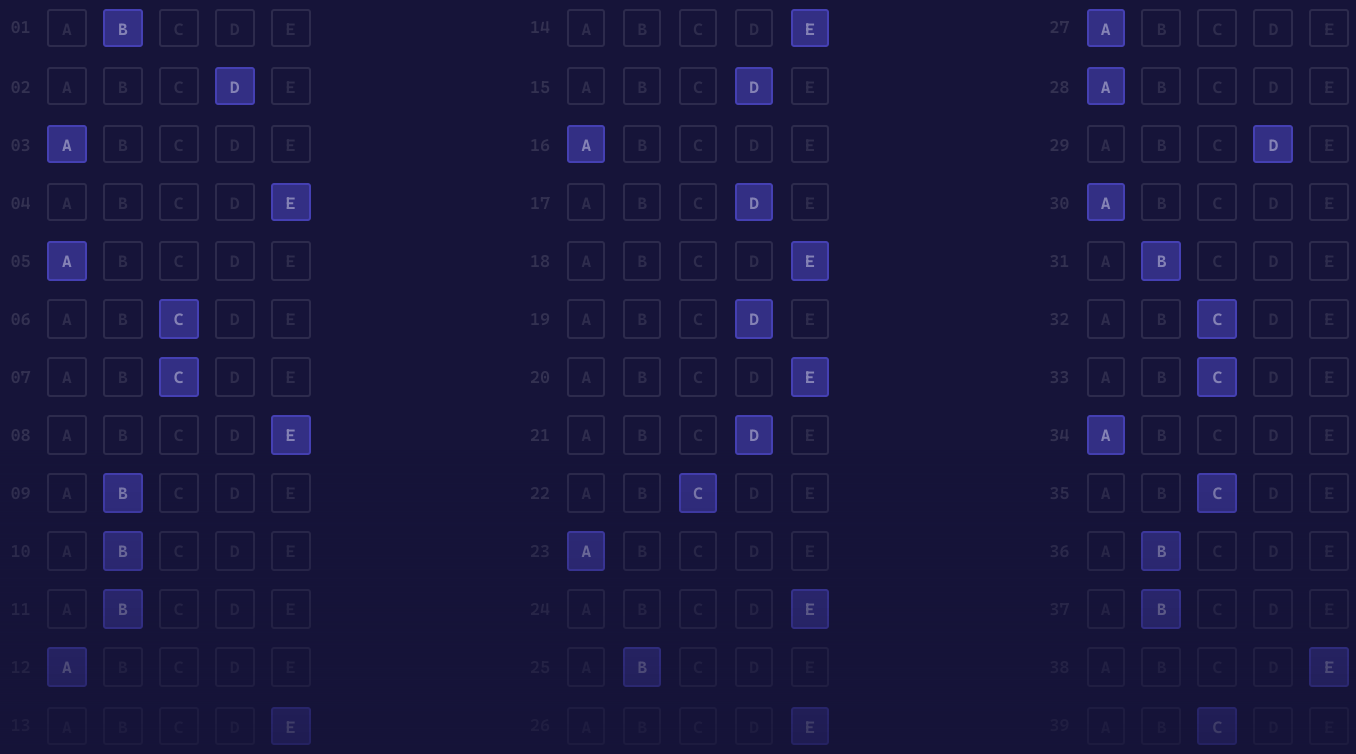

PRACTICE QUESTIONS

TTBU - The Testing Board Ukraine

2PHRU

Krok 2 Pharmacy (Russian)

EDITION	QUESTIONS	ISSUED
Demo	9	September 3, 2026

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Before you begin

What this is

9 practice questions for TTBU - The Testing Board Ukraine `2PHRU`, 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, `2PHRU`
- 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 SINGLE CHOICE

Which non-steroidal anti-inflammatory drug (NSAID) is a selective inhibitor of cyclooxygenase-2 (COX-2)?

A Ibuprofen

B Diclofenac

C Celecoxib

D Aspirin

ANSWER C

WHY Celecoxib is a selective COX-2 inhibitor used for its anti-inflammatory effect with reduced gastrointestinal toxicity compared with non-selective NSAIDs. Ibuprofen, diclofenac and aspirin are non-selective COX inhibitors.

QUESTION 2 SINGLE CHOICE

Which group of bronchodilators acts primarily through stimulation of β2-adrenergic receptors of the bronchi?

A M-cholinoblockers

B β2-adrenomimetics

C Xanthine derivatives

D Leukotriene receptor antagonists

ANSWER B

WHY β2-adrenomimetics (e.g., salbutamol, fenoterol) produce bronchodilation by activating β2-adrenergic receptors on bronchial smooth muscle. M-cholinoblockers (e.g., ipratropium bromide) act via blockade of muscarinic receptors, xanthines (e.g., theophylline) inhibit phosphodiesterase, and leukotriene receptor antagonists (e.g., montelukast) block the cysteinyl leukotriene receptor.

QUESTION 3 SINGLE CHOICE

To which pharmacological group does the antibiotic amoxicillin belong?

A Macrolides

B Aminoglycosides

C Fluoroquinolones

D Semisynthetic penicillins

ANSWER D

WHY Amoxicillin is a semisynthetic penicillin of the β-lactam class with a broad spectrum of activity, especially against Gram-negative organisms. Macrolides (e.g., azithromycin), aminoglycosides (e.g., gentamicin) and fluoroquinolones (e.g., ciprofloxacin) are different antibacterial classes.

QUESTION 4 SINGLE CHOICE

Which medicinal plant is the main natural source of the alkaloid morphine?

A Atropa belladonna

B Papaver somniferum

C Vinca minor

D Rauwolfia serpentina

ANSWER B

WHY Morphine is the principal alkaloid of the opium poppy (Papaver somniferum). Atropa belladonna contains tropane alkaloids (atropine, scopolamine), Vinca minor contains vincamine, and Rauwolfia serpentina contains reserpine.

QUESTION 5 SINGLE CHOICE

A pharmacist is preparing an injectable solution of a drug that is poorly soluble in water. Which of the following excipients would be MOST appropriate to increase aqueous solubility?

A Liquid paraffin

B Sodium chloride

C **Polyethylene glycol 400 (PEG 400)**

D Magnesium stearate

ANSWER C

WHY PEG 400 is a water-miscible cosolvent widely used in pharmaceutical technology to increase the aqueous solubility of poorly water-soluble drugs. Liquid paraffin is an oily vehicle, sodium chloride is mainly used for isotonicity adjustment, and magnesium stearate is a hydrophobic lubricant used in tablet manufacture.

QUESTION 6 SINGLE CHOICE

Omeprazole belongs to which pharmacological group of antiulcer drugs?

A H2-histamine receptor blockers

B **Proton pump inhibitors**

C Antacids

D M-cholinoblockers

ANSWER B

WHY Omeprazole irreversibly inhibits the H+/K+-ATPase (proton pump) of gastric parietal cells, strongly suppressing gastric acid secretion. H2-blockers (e.g., ranitidine) block H2 receptors, antacids neutralize existing acid, and M-cholinoblockers reduce acid via muscarinic blockade.

QUESTION 7 SINGLE CHOICE

A long-term high-dose use of glucocorticoids is most characteristically associated with which adverse effect?

A **Cushing's syndrome (iatrogenic hypercortisolism)**

B Hepatotoxicity with jaundice

C Severe bradycardia

D Hypothyroidism

ANSWER A

WHY Prolonged systemic glucocorticoid therapy reproduces the clinical picture of hypercortisolism: moon face, central obesity, striae, hyperglycemia, osteoporosis and immunosuppression. The other listed effects are typical of other drug groups (hepatotoxicity — e.g., methotrexate, isoniazid; bradycardia — β-blockers; hypothyroidism — lithium, amiodarone).

QUESTION 8 SINGLE CHOICE

Diazepam, a widely used anxiolytic, belongs to which pharmacological group?

A Barbiturates

B **Benzodiazepines**

C Tricyclic antidepressants

D Atypical antipsychotics

ANSWER B

WHY Diazepam is a long-acting benzodiazepine that potentiates the action of GABA at the GABA-A receptor complex, producing anxiolytic, sedative, muscle relaxant and anticonvulsant effects. Barbiturates, tricyclic antidepressants and atypical antipsychotics have different structures and mechanisms of action.

QUESTION 9 MULTIPLE CHOICE

A patient with chronic heart failure (NYHA class II-III) and reduced left ventricular ejection fraction requires addition of a drug that prolongs survival. Which classes of drugs have been shown to reduce mortality in this patient population? (Choose two.)

A **ACE inhibitors (e.g., enalapril)**

B Short-acting dihydropyridine calcium channel blockers (e.g., nifedipine)

C **Mineralocorticoid receptor antagonists (e.g., spironolactone)**

D Class IC antiarrhythmics (e.g., propafenone)

ANSWER **A · C**

WHY ACE inhibitors reduce mortality and morbidity in heart failure with reduced ejection fraction. Mineralocorticoid receptor antagonists such as spironolactone and eplerenone also reduce mortality in NYHA II-IV HF (RALES trial). Short-acting dihydropyridines may worsen HF, and Class IC antiarrhythmics are not indicated and may be harmful in structural heart disease.