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37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

TTBU - The Testing Board Ukraine

1PCU

Krok 1 Pharmacy (Ukrainian)

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for TTBU - The Testing Board Ukraine **1PCU**, 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, **1PCU**
- 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 pharmaceutical formulation in which the active substance is enclosed within a lipid bilayer membrane is classified as a:

- ☒ **A** Liposome
- ☐ **B** Emulsion
- ☐ **C** Suspension
- ☐ **D** Aerosol

ANSWER A

WHY Liposomes are vesicular systems composed of one or more phospholipid bilayers enclosing an aqueous core. Emulsions are two-phase disperse systems of two immiscible liquids; suspensions contain dispersed solid particles in a liquid medium; aerosols are propellant-driven dispersed systems for inhalation. The defining feature described — active substance enclosed within a lipid bilayer — matches a liposome.

QUESTION 2

SINGLE CHOICE

Which pharmaceutical dosage form is a sterile, pyrogen-free aqueous solution or emulsion intended for parenteral administration?

- ☒ **A** Injection
- ☐ **B** Liniment
- ☐ **C** Poultice
- ☐ **D** Elixir

ANSWER A

WHY An injection is a sterile, pyrogen-free preparation intended for parenteral (e.g., intravenous, intramuscular, subcutaneous) administration. Liniments and poultices are external preparations for skin application, and elixirs are sweetened hydroalcoholic oral solutions. Only injections are required to be sterile and pyrogen-free.

QUESTION 3

SINGLE CHOICE

In a Latin prescription, the part beginning with the word 'Recipe:' (Rp.:) is called the:

- ☐ A Praescriptio (inscriptio)
- ☒ B **Invocatio**
- ☐ C Designatio materialium
- ☐ D Subscriptio

ANSWER B

WHY The 'Recipe:' (Rp.:) opening line of a prescription is the invocatio (the appeal to the physician/aphorism 'take'). Praescriptio/inscriptio is the superscription that follows and contains the patient's name, age and the date. Designatio materialium lists the active and auxiliary substances with their doses, and subscriptio contains dispensing instructions to the pharmacist.

QUESTION 4

SINGLE CHOICE

An aqueous liquid dosage form prepared by extracting plant raw material with cold or hot water is called a:

- ☐ A Decoction (decoctum)
- ☒ B **Infusion (infusum)**
- ☐ C Tincture (tinctura)
- ☐ D Mucilage (mucilago)

ANSWER B

WHY An infusion is an aqueous extract of plant raw material prepared by steeping the drug with water (often hot, then cooling) for a defined period; it is prepared ex tempore because of its limited stability. Decoctions are made by boiling tougher plant materials (roots, barks). Tinctures are alcoholic or hydroalcoholic extracts, not purely aqueous, and mucilages are viscous preparations from gums or starch.

QUESTION 5 SINGLE CHOICE

Suppositories are intended to be inserted into body cavities and melt or dissolve at body temperature. Which base is a classic example of a hydrophobic (fatty) suppository base?

- ☒ **A** Cocoa butter (oleum cacao)
- ☐ **B** Glycerinated gelatin
- ☐ **C** Polyethylene glycol (PEG)
- ☐ **D** Macrogol mixture

ANSWER A

WHY Cocoa butter (oleum cacao) is the classic hydrophobic/fatty suppository base, which melts at body temperature. Glycerinated gelatin and polyethylene glycol (macrogol) bases are hydrophilic; they dissolve rather than melt in body fluids.

QUESTION 6 SINGLE CHOICE

The volume of distribution (V_d) of a drug is defined as:

- ☒ **A** The ratio of the total amount of drug in the body to its plasma concentration
- ☐ **B** The rate at which the drug is eliminated from the plasma per unit of time
- ☐ **C** The time required for the plasma concentration of a drug to decrease by 50%
- ☐ **D** The fraction of an administered dose that reaches the systemic circulation unchanged

ANSWER A

WHY Volume of distribution (V_d) = Amount of drug in the body / Plasma concentration. It is an apparent volume that relates the amount of drug in the body to its measured plasma concentration; a large V_d indicates extensive tissue binding. The other options describe clearance, elimination half-life and bioavailability, respectively.

QUESTION 7 SINGLE CHOICE

An antiseptic agent that acts by releasing active chlorine and is widely used for hand antiseptics and wound irrigation is:

- ☒ **A Chloramine B**
- ☐ B Brilliant green
- ☐ C Ethyl alcohol 70%
- ☐ D Hydrogen peroxide

ANSWER A

WHY Chloramine B is a chlorine-releasing antiseptic/disinfectant that liberates active chlorine and is used for hand treatment, wound irrigation and disinfection of non-metal instruments. Brilliant green is a dye antiseptic; ethyl alcohol 70% acts by protein denaturation without chlorine release; hydrogen peroxide is an oxidizing antiseptic that releases oxygen, not chlorine.

QUESTION 8 SINGLE CHOICE

Acetylsalicylic acid (aspirin) differs from paracetamol by the fact that aspirin:

- ☒ **A Has an irreversible antiplatelet effect due to inhibition of platelet cyclooxygenase (COX-1)**
- ☐ B Has no anti-inflammatory activity
- ☐ C Does not affect prostaglandin synthesis in peripheral tissues
- ☐ D Is the first-choice analgesic for children under 12 with viral infections

ANSWER A

WHY Aspirin irreversibly acetylates COX-1 in platelets, blocking thromboxane A₂ synthesis for the lifespan of the platelet, producing an antiplatelet effect used in cardiovascular prophylaxis. Aspirin does have anti-inflammatory activity (paracetamol has only weak peripheral anti-inflammatory effect), it does inhibit peripheral prostaglandin synthesis, and it is contraindicated in children with viral infections due to the risk of Reye's syndrome.

QUESTION 9

SINGLE CHOICE

Яка з наведених лікарських речовин є слабкою основою, що у кислому середовищі шлунка перетворюється на розчинну сіль?

- ☒ **A** Лідокаїн
- ☐ **B** Ацетилсаліцилова кислота
- ☐ **C** Парацетамол
- ☐ **D** Аскорбінова кислота

ANSWER A

ВНУ Лідокаїн має основний характер і в кислому середовищі утворює розчинну сіль, що сприяє його всмоктуванню. Ацетилсаліцилова та аскорбінова кислоти є кислотами, а парацетамол переважно не класифікують як слабку основу.