Walgreens Pharmacy Technician PTCB Practice Exam (Sample)

Study Guide

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Questions

1. What is the process called when drugs move from higher concentration to lower concentration?

A. Disposition

B. Active transport

C. Passive diffusion

D. Active diffusion

2. All dispensed prescriptions must have a _____ cap unless otherwise specified by the patient.

A. Non-child resistant; child-resistant

B. Child resistant; non-child resistant

C. Child-resistant; child resistant

D. Non-child resistant; non-child resistant

3. What is a common reason a patient might receive a medication for free or at a reduced cost?

A. They are participating in a clinical trial

B. They have been prescribed a generic medication

C. They have excellent insurance coverage

D. They qualify for financial assistance programs

4. Idiosyncratic reactions occur the _____ time a drug is given to a patient.

A. Fourth

B. Third

C. Second

D. First

5. Which statement is true regarding single-dose vials?

A. Do not contain preservatives

B. Can be reused within 48 hours if refrigerated

C. Contain preservatives

D. Can be reused within 24 hours if refrigerated

6. Which type of pharmacies operates as part of national mass merchandise chains?

A. Mass merchandiser pharmacies

B. Independent pharmacies

C. Chain pharmacies

D. Food store pharmacies

7. What does the abbreviation "QD" stand for in a prescription?

A. Every other day

B. Four times a day

C. Once a day

D. As needed

8. What type of device is Parata Max?

A. Point of use storage system

B. Counting/filling device

C. Unit-dose dispensing device

D. Mobile robot

9. What is a disadvantage of vaginal administration of medication?

A. Tuberculosis

B. Human papillomavirus

C. Sickle cell anemia

D. Toxic shock syndrome

10. What must be inspected before using glass vials for medication preparation?

A. Color of the solution

B. Expiration date

C. Presence of glass particles

D. Volume of the solution

Answers

1. C
2. B
3. D
4. D
5. A
6. A
7. C
8. B
9. D
10. C

Explanations

1. What is the process called when drugs move from higher concentration to lower concentration?

A. Disposition

B. Active transport

C. Passive diffusion

D. Active diffusion

The correct answer identifies passive diffusion as the process through which drugs move from an area of higher concentration to an area of lower concentration. This movement occurs spontaneously and does not require energy input. In biological systems, this process is crucial for the absorption of medications across cell membranes, allowing substances to spread and balance their concentration levels within different compartments of the body. Passive diffusion takes advantage of the natural kinetic energy of molecules. As substances tend to disperse evenly in a solvent, they move down their concentration gradient until equilibrium is reached. This property explains why many medications can be absorbed effectively when taken orally; they passively diffuse across the intestinal lining into the bloodstream. Understanding this concept is important in pharmacy, as it influences how drugs are formulated and administered, knowing that some medications will require different strategies if they cannot cross membranes through passive diffusion effectively.

2. All dispensed prescriptions must have a _____ cap unless otherwise specified by the patient.

A. Non-child resistant; child-resistant

B. Child resistant; non-child resistant

C. Child-resistant; child resistant

D. Non-child resistant; non-child resistant

The correct response requires understanding the regulations surrounding prescription medications, particularly regarding safety packaging. In the United States, federal law mandates that most dispensed prescriptions are required to have child-resistant caps, which are designed to prevent accidental ingestion by young children. This safety measure is part of an effort to reduce the risk of poisoning and is a standard practice in pharmacies. Child-resistant packaging must be used unless a patient specifically requests otherwise or if a physician determines that it is not necessary for a particular medication. This allows for some flexibility in patient care but prioritizes safety in the general population. Therefore, the correct answer reflects the requirement for child-resistant caps to be used by default when dispensing medications, with the option for patients to opt out. Understanding this context is crucial for pharmacy technicians, as they play a key role in ensuring compliance with safety regulations while also catering to individual patient requests.

3. What is a common reason a patient might receive a medication for free or at a reduced cost?

A. They are participating in a clinical trial

B. They have been prescribed a generic medication

C. They have excellent insurance coverage

D. They qualify for financial assistance programs

A common reason a patient might receive a medication for free or at a reduced cost is due to qualifying for financial assistance programs. These programs are typically offered by pharmaceutical companies, non-profit organizations, or government entities to help individuals who are underinsured or unable to pay for their medications. By meeting certain income criteria or demonstrating financial need, patients can access medications without the burden of high costs, making essential treatments more accessible. In contrast, participating in a clinical trial can sometimes offer free medications, but this is usually temporary and contingent on the study's requirements rather than a general financial assistance program. Receiving a generic medication often leads to lower costs than brand-name drugs; however, it does not guarantee that the medication will be free or significantly reduced. Having excellent insurance coverage can reduce out-of-pocket expenses but generally means that costs are still associated with the medication, rather than being free or at a reduced rate.

4. Idiosyncratic reactions occur the _____ time a drug is given to a patient.

A. Fourth

B. Third

C. Second

D. First

Idiosyncratic reactions are unique and unexpected responses to a medication that can occur upon initial exposure to a drug. These reactions are not related to the drug's pharmacological properties and may arise from individual genetic factors, resulting in unpredictable effects that differ from typical side effects. Since idiosyncratic reactions can manifest upon the very first dose of a medication, recognizing the importance of observing patients closely during their initial exposure is crucial for healthcare professionals. This understanding helps in managing patient safety and the potential need for alternative therapies if an adverse reaction is identified early on.

5. Which statement is true regarding single-dose vials?

A. Do not contain preservatives

B. Can be reused within 48 hours if refrigerated

C. Contain preservatives

D. Can be reused within 24 hours if refrigerated

Single-dose vials are specifically designed to contain a single administration of a medication, with no preservatives included. This lack of preservatives is critical for maintaining sterility and ensuring that the medication is as safe and effective as possible for patient use. Once a single-dose vial has been entered (needle punctured), it is recommended that any remaining contents be discarded immediately rather than reused, primarily to prevent contamination and infection. In contrast, multiple-dose vials are formulated with preservatives to allow for repeated use over a designated period. Because single-dose vials do not contain these preservatives, they should not be stored for reuse after initial opening, which is reflected in the context of your choices regarding reuse timeframes.

6. Which type of pharmacies operates as part of national mass merchandise chains?

A. Mass merchandiser pharmacies

B. Independent pharmacies

C. Chain pharmacies

D. Food store pharmacies

The correct choice identifies mass merchandiser pharmacies, which specifically refer to those pharmacies operating within large retail chains that sell a wide variety of merchandise alongside pharmaceuticals. These pharmacies are commonly found in stores that also sell groceries, clothing, electronics, and more, allowing customers to benefit from one-stop shopping. Chain pharmacies, while they may also sell prescription medications, are typically standalone establishments affiliated with a specific brand and may not have the wider range of non-pharmaceutical goods found in mass merchandiser pharmacies. Independent pharmacies operate as singular entities, usually not part of a larger corporation, and food store pharmacies are specifically located within grocery stores, focusing primarily on medication dispensation within that context. Understanding this classification is important for recognizing the different types of pharmacy operations and the broader retail mechanisms within which they function.

7. What does the abbreviation "QD" stand for in a prescription?

A. Every other day

B. Four times a day

C. Once a day

D. As needed

The abbreviation "QD" stands for "quaque die," which is Latin for "once a day." In the context of a prescription, it indicates that a medication should be taken one time every day. This instruction is significant for ensuring that patients adhere to their dosing schedules effectively, as consistent daily administration can be crucial for the medication's efficacy and for maintaining therapeutic levels in the body. Ensuring patients understand their medication instructions, including dosing frequency, is a key responsibility of pharmacy technicians to promote safe and effective treatment.

8. What type of device is Parata Max?

A. Point of use storage system

B. Counting/filling device

C. Unit-dose dispensing device

D. Mobile robot

The Parata Max is a counting/filling device designed to automate the medication dispensing process in pharmacies. It enhances efficiency by accurately counting and filling prescriptions, which minimizes the potential for human error and speeds up the workflow. This device is particularly beneficial in high-volume pharmacy settings, allowing technicians to focus on other essential tasks while ensuring medications are dispensed correctly and efficiently. While other types of devices play critical roles in pharmacy operations, such as unit-dose dispensing devices that are tailored for specific packaging formats, the Parata Max is specifically engineered for the tasks of counting and filling medications. Its capabilities align closely with the needs of busy pharmacies that require precision and speed in medication dispensing.

9. What is a disadvantage of vaginal administration of medication?

A. Tuberculosis

B. Human papillomavirus

C. Sickle cell anemia

D. Toxic shock syndrome

The chosen answer highlights a significant concern associated with vaginal administration of medications, which is the risk of toxic shock syndrome (TSS). This potentially life-threatening condition can occur when certain pathogens, particularly Staphylococcus aureus, proliferate in the vagina and release toxins into the bloodstream. When medications are administered vaginally, especially in the presence of certain conditions or materials, there is a potential risk of creating an environment that could facilitate this bacterial growth. In contrast, the other options—tuberculosis, human papillomavirus (HPV), and sickle cell anemia—do not specifically relate to the process or risks associated with vaginal administration of medications. Tuberculosis is a systemic infection affecting the lungs, HPV is a virus linked to cervical cancer, and sickle cell anemia is a genetic blood disorder. While these conditions are important in health discussions, they do not highlight the unique risks posed by vaginal drug delivery systems like toxic shock syndrome does, making it the most relevant choice.

10. What must be inspected before using glass vials for medication preparation?

A. Color of the solution

B. Expiration date

C. Presence of glass particles

D. Volume of the solution

When using glass vials for medication preparation, it is essential to inspect them for the presence of glass particles. Glass vials can sometimes break or become damaged, which may lead to small particles of glass contaminating the medication. If a glass vial has been compromised, any medication drawn from it could potentially cause harm to a patient if those particles are injected or consumed. Therefore, ensuring the vial is free of glass debris is a critical safety measure to prevent serious health risks. While the other factors, such as the color of the solution, expiration date, and volume of the solution, are important considerations in medication preparation, they do not carry the same immediate risk associated with the presence of glass particles. The presence of glass debris poses a direct threat to the patient's safety that must be prioritized before any other inspections are conducted.