

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**Paper Discussion**

**With**

**(For 2024 SLMC Examination)**

**Dr. Isuru Wijesinghe**



**PhD in Pharmaceutical Sciences (USA)**

**MSc in Pharmaceutical Sciences (USA)**

**BPharm (Special) SL**

**LLB (Reading) SL**

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**For CEYLON MEDICAL COLLEGE COUNCIL**  
**PHARMACIST EXAMINATION (EXTERNAL)**  
**2024**

**Model Exam paper 01 - MCQ**

**01. Examples of inhaled corticosteroids, T/F?**

- a. Beclomethasone
- b. Budesonide
- c. Fluticasone
- d. Prednisone
- e. Triamcinolone



**IMHS**  
INSTITUTE OF MEDICINE AND  
HEALTH SCIENCES

**02. Structure found inside a synovial include, T/F:**

- a. Hyaline cartilage
- b. Nerve endings
- c. Synovial membrane
- d. Joint fluids
- e. Articular capsule

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**03. The following are examples of inactivated vaccines:**

- a. Influenza vaccine (injectable).
- b. Tetanus toxoid vaccine.
- c. Polio vaccine (IPV).
- d. Rabies vaccine.
- e. Yellow fever vaccine.

**04. True or false regarding following facts**

- a. Suppositories should be stored in a cool freezer in a refrigerator
- b. Vaginal delivery exert systemic effects through absorption via the mucosal membrane in addition to providing localized action at the site of administration.
- c. Sucrose is used as a sweetener
- d. Antibacterial tablets frequently incorporate methylparaben as a preservative due to its broad-spectrum antimicrobial properties
- e. EDTA can be given in heavy metal poisoning

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**05. True or false about the strength of drugs and their formulations?**

- a. The concentration of paracetamol in syrup form (250 mg/5 ml) results in compared to paracetamol drops (150 mg/ml).
- b. The efficacy of chlorine-based disinfectants is quantified in terms of parts per million (ppm).
- c. Vitamin A's potency is conventionally measured in International Units (IU), a standard used to quantify the biological activity or effect of fat-soluble vitamins in humans.
- d. A hydrogen peroxide solution labeled as "20-volume" refers to its ability to release 20 times its own volume of oxygen, which is commonly used for disinfecting and bleaching purposes.
- e. The therapeutic dose of chloroquine base varies between chloroquine phosphate and chloroquine sulfate, due to the molecular weight differences between the salt forms.

**06. The following statements about diuretics are true:**

- a. Loop diuretics are more potent than thiazide diuretics.
- b. Spironolactone acts by inhibiting aldosterone.
- c. Loop diuretics act on the thick ascending limb of the loop of Henle.
- d. Potassium-sparing diuretics can cause hyperkalemia.
- e. Diuretics are commonly used in patients with heart failure.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**07. True or false about disinfectants, antiseptics, and preservatives?**

- a. Benzalkonium is a preservative in ophthalmic preparations.
- b. Povidone-iodine, though effective as a skin disinfectant, is not commonly recommended for environmental surface disinfection such as toilets.
- c. Hydrogen peroxide at low concentrations is not recommended for open wound care due to the potential for tissue damage.
- d. Iodine-based antiseptics, such as povidone-iodine, are commonly used for skin disinfection before surgical procedures.
- e. Glutaraldehyde is considered a high-level disinfectant and is frequently used for sterilizing medical equipment, including endoscopes, due to its effectiveness against a wide range of microorganisms.

**08. Which of the following medications used in the treatment of gout?**

- a. Indomethacin
- b. Diclofenac
- c. Piroxicam
- d. Aspirin
- e. Ibuprofen

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**09. Theophylline levels can be increased by concomitant administration of which drugs, T/F?**

- a. Cimetidine
- b. Rifampin
- c. Carbamazepine
- d. Erythromycin
- e. Phenobarbital

**10. True or false the correct matching of excipients?**

- a. Dextrose is used as a tonicity adjusting agent in parenteral solutions, helping to maintain osmotic balance with physiological fluids
- b. Hydroxypropyl methylcellulose (HPMC) is widely used as a viscosity-enhancing agent in liquid formulations
- c. Cetrimide functions as a cationic surfactant in pharmaceutical formulations
- d. Sodium lauryl sulfate acts as an emulsifying agent, enabling the formation of stable oil-in-water emulsions by reducing surface tension
- e. Povidone (polyvinylpyrrolidone) is used as a binder in tablet formulations, facilitating the adhesion of powder particles during granulation and improving the mechanical strength of tablets

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**11. True or false regarding enteric coated tablets?**

- a. Enteric coating primarily functions to protect the active pharmaceutical ingredient (API) from degradation in the acidic pH of the stomach
- b. A polymer barrier, typically composed of pH-sensitive materials, is applied to the tablet to prevent premature drug dissolution in the stomach
- c. The release of the active ingredient from an enteric-coated tablet is designed to occur primarily in the small intestine.
- d. Hydroxypropyl methylcellulose phthalate (HPMCP) is one of the commonly used polymers in enteric coatings.
- e. Crushing of enteric coated tablets is leading to premature drug release in the stomach.

**12. Which of the following statements True or false regarding the side effects of cytotoxic drugs?**

- a. Vomiting is a common adverse effect due to damage to rapidly dividing cells in the gastrointestinal tract.
- b. Hypertrichosis (excessive hair growth) is a more frequent adverse effect of cytotoxic drugs compared to alopecia, which occurs due to the destruction of hair follicle cells.
- c. Bone marrow suppression, including neutropenia, anemia, and thrombocytopenia, is a dose-limiting toxicity of many cytotoxic drugs.
- d. Weight loss is most common.
- e. Loss of appetite (anorexia) is a common side effect of cytotoxic drugs, often exacerbated by chemotherapy-induced taste changes (dysgeusia) and nausea, leading to significant nutritional deficits in patients undergoing treatment.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**13. True or false regarding antihypertensive medications?**

- a. Hydrochlorothiazide, in higher doses, poses a risk of electrolyte imbalances, and high-dose usage is no longer favored for hypertension treatment.
- b. First-dose ACE inhibitors can cause significant hypotension, especially in patients with elevated renin activity, due to their potent vasodilatory effects.
- c. Nifedipine extended-release is preferred for chronic hypertension management to avoid reflex tachycardia linked to immediate-release forms.
- d. Furosemide is primarily used in hypertension associated with heart failure, rather than for essential hypertension.
- e. Losartan is an angiotensin II receptor blocker (ARB), not an alpha-1 receptor blocker, used to cause vasodilation.

**14. True or false regarding the drugs classification to hazardous because of their potential to cause significant adverse health consequences true or false?**

- a. Antineoplastic agents, commonly used in chemotherapy, are classified as hazardous due to their cytotoxic properties
- b. Certain antiviral agents, particularly those with mutagenic or teratogenic properties (e.g., nucleoside analogs) are classified as hazardous
- c. Biologic agents, particularly those used in immunotherapy (e.g., monoclonal antibodies), are typically classified as hazardous
- d. Drugs with a high risk of hepatotoxicity, including certain anti-tuberculosis medications (e.g., isoniazid and rifampicin), are classified as hazardous
- e. Radioactive isotopes, used in diagnostic imaging (e.g., iodine-131 for thyroid scans), are considered hazardous



**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**15. Which of the following methods are commonly used for the preservation of pharmaceutical products, T/F?**

- a. Refrigeration
- b. Freezing
- c. Lyophilization
- d. Pasteurization
- e. Irradiation

**16. Amoxicillin is,**

- a. A narrow spectrum penicillin.
- b. A bactericidal agent.
- c. Not inactivated by penicillinase enzyme produced by staphylococcus aureus.
- d. Poorly absorbed when there is food in the stomach.
- e. Included in the triple therapy used in Helicobacter pylori eradication.

**17. Important aspects of the emergency treatment of poisoning according to the provided content, true or false?**

- a. Identification of common poisons and their mechanisms
- b. Use of antidotes and specific treatment protocols
- c. Methods for preventing absorption and enhancing elimination of poisons
- d. Management of acute and chronic poisoning scenarios
- e. Understanding the legal and ethical considerations in poisoning cases

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**18. Low molecular weight heparins (LMWHs), T/F?**

- a. Enoxaparin
- b. Warfarin
- c. Dalteparin
- d. Reviparin
- e. Unfractionated heparin

**19). In the context of pharmacy and pharmaceuticals, "pH" stands for "potential of hydrogen" and is a measure of the acidity or alkalinity of a solution. T/F?**

- a. The pH of a pharmaceutical formulation affects the stability of the active pharmaceutical ingredients (APIs).
- b. Certain drugs are more soluble in specific pH ranges
- c. The pH level affects the compatibility of ingredients in a formulation.
- d. Different body parts have varying pH levels, affecting how drugs are absorbed and distributed
- e. pH testing is a standard quality control measure

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**20. Regarding insulin and hypoglycemic medications for diabetes mellitus (DM), True or False?**

- a. Oral administration of insulin is not effective for glycemic control due to degradation by gastrointestinal enzymes, necessitating parenteral routes such as subcutaneous injection for therapeutic efficacy.
- b. Metformin, as a first-line treatment for type 2 diabetes, reduces hepatic gluconeogenesis and enhances peripheral insulin sensitivity by activating AMP-activated protein kinase (AMPK).
- c. Sulfonylureas act by binding to ATP-sensitive potassium channels on pancreatic beta cells, promoting insulin secretion, making them effective in patients with residual beta-cell function.
- d. Insulin glargine provides a rapid-acting effect suitable for postprandial glucose control.
- e. Thiazolidinediones (TZDs) enhance insulin sensitivity by binding to peroxisome proliferator-activated receptor-gamma (PPAR-gamma), influencing gene expression related to glucose and lipid metabolism.

**21. Anticoagulant medications, T/F?**

- a. Warfarin is a vitamin K antagonist used for long-term anticoagulation.
- b. Direct oral anticoagulants (DOACs) like rivaroxaban are used to prevent stroke in atrial fibrillation.
- c. Heparin is used for immediate anticoagulation and can be monitored using the aPTT.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



- d. Enoxaparin is a low molecular weight heparin used for both treatment and prevention of thromboembolic events.
- e. Anticoagulants are contraindicated in patients with active bleeding or a high risk of bleeding.

**22. Regarding controlled release of medication, T/F?**

- a) Controlled release (CR) formulations are designed to release the active ingredient at a predetermined rate
- b) Reduced dosing frequency enhances patient adherence to the medication regimen and it will Improve Compliance
- c) Maintains a more consistent therapeutic drug level, reducing the peaks
- d) Minimized fluctuation in drug levels can lead to fewer side effects and better tolerability.
- e) Often used in the management of psychiatric disorders to provide stable drug levels

**23. Which of the following statements about medications used for asthma, COPD, and allergic disorders are TRUE?**

- a. Salbutamol is a short-acting beta-agonist used to relieve symptoms of asthma and COPD.
- b. Inhaled corticosteroids like fluticasone are used for long-term control of asthma and COPD.
- c. Montelukast is a leukotriene receptor antagonist used to manage asthma and allergic rhinitis.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



- d. Antihistamines like cetirizine are commonly used to treat allergic disorders.
- e. Tiotropium is a long-acting muscarinic antagonist used to manage COPD.

**24. Regarding medications used for diarrhea are True or false?**

- a. Loperamide is an antidiarrheal that slows bowel movements.
- b. Bismuth subsalicylate has antimicrobial properties and reduces inflammation in the intestines.
- c. Oral rehydration salts (ORS) help to replace lost fluids and electrolytes during diarrhea.
- d. Probiotics can help restore healthy gut flora during and after diarrhea.
- e. Diphenoxylate is used with atropine to reduce bowel movements and alleviate diarrhea symptoms.

**25. True or false?**

- a. A 1000 ml solution of “0.9% w/v Normal Saline” contains 9 grams of NaCl in total, meaning 100 ml of the solution contains 0.9 grams of NaCl, consistent with the isotonic concentration of saline used in clinical settings.
- b. The sum of 1000 milligrams + 100 mg + 10 mg + 1 mg + 1 g + 10 g + 100 g equals exactly 111.111 grams, converting all units to the base unit of grams for accurate addition
- c. One thousand microliters ( $\mu\text{L}$ ) is equivalent to exactly 1 milliliter (mL).
- d. Three tablespoonfuls, with each tablespoonful typically measured as 15 ml, are equal to 45 ml in total.
- e. A teaspoon of paracetamol syrup (120 mg/5 ml) contains 120 mg of paracetamol, which is less than 1/4 of a 500 mg paracetamol tablet.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**26. Determine if the following statements about drugs acting on the autonomic nervous system are true or false.**

- a. Beta-blockers, such as propranolol, are used to manage hypertension and anxiety.
- b. Alpha-adrenergic agonists, like clonidine, can be used to treat high blood pressure.
- c. Anticholinergics, such as atropine, are used to reduce saliva production during surgery.
- d. Sympathomimetic drugs mimic the effects of the sympathetic nervous system.
- e. Parasympathomimetic drugs stimulate the parasympathetic nervous system and can be used to treat dry mouth.

**27. Drug delivery systems refer to the methods or technologies used to administer pharmaceutical compounds into the body effectively. True or false?**

- a. **Controlled Release Systems;** Reduce dosing frequency and Minimize side effects by maintaining steady drug levels.
- b. **Parenteral Delivery;** Bypasses the gastrointestinal tract for faster action.
- c. **Oral Delivery;** Most convenient and widely used route.
- d. **Implantable Devices;** Provide continuous drug release over long periods
- e. **Transdermal Patches;** Provide steady drug delivery through the skin.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**28. Bioavailability & Bioequivalence, T/F?**

- a. Bioavailability is the proportion of a drug dose that reaches systemic circulation for therapeutic effect.
- b. Route of administration, formulation, and first-pass metabolism affect bioavailability
- c. Blood level measurements show how much of a drug enters circulation over time.
- d. Bioequivalence means two drugs have no significant difference in absorption rate and extent.
- e. AUC, Cmax, and Tmax are used to assess bioequivalence

**29. Assess the truthfulness of these statements about the application of filtration in pharmacy (True/False):**

- a. All liquid pharmaceuticals improve in quality when subjected to filtration.
- b. Decantation is a form of crude filtration.
- c. Gases cannot be subjected to filtration.
- d. Sterile filtration is carried out with membrane filters with 10 micrometers opening.
- e. Reverse osmosis is a form of filtration.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**30 . True or false regarding the medication storage:**

- a. Rubella (MMR) vaccine must be stored between 2°C and 8°C, with light protection, and can remain stable for up to 8 hours once reconstituted under these conditions.
- b. Vaccines should not be stored on refrigerator door shelves due to temperature fluctuations from frequent opening, which may compromise their stability
- c. Storing eye drops in a personal pocket for immediate access in emergencies can lead to thermal degradation, affecting their sterility and efficacy
- d. Nitroglycerin (GTN) tablets should not be stored in a home refrigerator, as the low temperature and moisture could cause degradation; they require storage at room temperature in a tightly sealed container.
- e. Unopened insulin should be stored in the main compartment of the refrigerator at 2°C to 8°C

**31 . Which of the following are primary purposes of Good Manufacturing Practices (GMP) true or false?**

- a. Ensuring product quality
- b. Preventing contamination
- c. Ensuring regulatory compliance
- d. Enhancing safety and efficacy
- e. Minimizing risks



**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**32. The following practices align with Good Distribution Practice (GDP) for pharmaceuticals, Are the statements true or false?**

- a. Using tracking systems to monitor the movement of products.
- b. Conducting regular audits to ensure compliance with GDP standards.
- c. Ensuring proper packaging to protect products during transit.
- d. Providing training for all personnel on GDP requirements.
- e. Mixing pharmaceutical products with non-pharmaceutical goods during transport.

**33. True or false regarding bacteria, bacterial infections, and anti-bacterial medications**

- a. Antibiotics are used to treat bacterial infections by targeting specific bacterial structures or functions.
- b. Antibiotic resistance occurs when bacteria acquire mutations that enable them to survive antibiotic treatment.
- c. Broad-spectrum antibiotics are effective against a wide range of both Gram-positive and Gram-negative bacteria.
- d. Narrow-spectrum antibiotics specifically target either Gram-positive or Gram-negative bacteria.
- e. Overuse and misuse of antibiotics contribute significantly to the development of antibiotic-resistant bacteria.

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**34. Verify whether the following statements about medications used for anxiety and insomnia are true or false**

- a. Benzodiazepines are commonly used to treat anxiety and insomnia.
- b. SSRIs are prescribed for long-term management of anxiety disorders.
- c. Buspirone is an anxiolytic that does not cause sedation or dependency.
- d. Antihistamines are sometimes used for short-term treatment of insomnia.
- e. Beta-blockers can be used to manage physical symptoms of anxiety, such as tachycardia.

**35. About contraception and contraceptives, true or false?**

- a. Combined oral contraceptives (COCs) contain both estrogen and progestin and are taken daily to prevent ovulation, thicken cervical mucus, and thin the endometrial lining to prevent pregnancy.
- b. Progestin-only pills (POPs) contain only progestin and are suitable for women who cannot take estrogen. They primarily work by thickening cervical mucus and sometimes by inhibiting ovulation.
- c. Intrauterine devices (IUDs) are small, T-shaped devices inserted into the uterus. Copper IUDs release copper ions that are toxic to sperm, while hormonal IUDs release progestin to thicken cervical mucus and inhibit sperm movement.
- d. Implantable contraceptives are small rods placed under the skin of the upper arm that release progestin to prevent ovulation.
- e. Emergency contraceptive pills can be used after unprotected intercourse to prevent pregnancy

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**

**36. True or false?**

- a. Potassium chloride is hygroscopic, readily absorbing moisture under normal conditions
- b. Erythromycin stearate, an ester of erythromycin and a fatty acid, enhances the stability of the antibiotic
- c. Povidone is water-soluble, which makes it an effective binder in tablet formulations
- d. Soaps are sodium salts of fatty acids, produced via saponification of fats and oils
- e. Cardamom oil has carminative effects, traditionally used to alleviate flatulence and gastrointestinal discomfort.

**37. Following facts are related to the Medical ordinance: True or false**

- a. President of medical council is elected from among the members
- b. Registrar of medical council can only act as the secretary of the medical council
- c. Part VII is associated with pharmacists in the medical ordinance
- d. Medical practitioners cannot register as pharmacists
- e. If registered person changed the residence registrar will erase the name from the register

**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**38. Evaluate the accuracy of these statements regarding pharmaceutical compounds and excipients:**

- a. Citric acid is utilized as an antioxidant in pharmaceutical formulations due to its ability to neutralize free radicals and prevent oxidative degradation.
- b. Calamine, a topical agent used for treating skin irritations, incorporates zinc oxide as one of its active ingredients to provide soothing effects.
- c. Glycerin and glycerol are distinct compounds, each possessing different chemical properties and uses in pharmaceutical preparations.
- d. Benzoic acid functions as a preservative in various pharmaceutical products, extending their shelf life by inhibiting microbial growth.
- e. Wool fat, also known as lanolin, contains cholesterol, which contributes to its emollient properties and its use in skin-care preparations.

**39. Which of the following are true regarding the sale, distribution, and possession of dangerous drugs under the Poisons, Opium, and Dangerous Drugs Ordinance?**

- a. A pharmacist may only dispense dangerous drugs on the prescription of a medical practitioner, dentist, or veterinary surgeon.
- b. A prescription for a dangerous drug must always be given in writing, and no dangerous drug can be prescribed for the prescriber's own use.
- c. The possession of a dangerous drug by an individual is lawful only if it has been prescribed by a medical practitioner or pharmacist.
- d. Dangerous drugs dispensed for immediate use do not need to be entered into the Sale of Poisons Book if a prescription is provided.
- e. The sale of dangerous drugs to unknown individuals is strictly prohibited unless they are introduced by someone known to the vendor or they present a valid prescription.

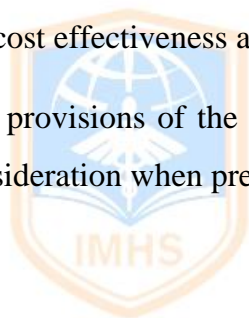
**EXTERNAL PHARMACISTS' EXAMINATION**  
**Pharmacy Exam 2024**



**40. True or false regarding the pricing of medicines, under National Medicines Regulatory Authority Act, No 5 of 2015 and regulations?**

**The Authority appoints the Pricing Committee.**

- a. The Authority appoints the Pricing Committee.
- b. The International Reference Prices are considered determine the introductory price of medicines.
- c. Current market prices of similar products are considered determine the introductory price of medicines.
- d. When determining the price of a new medical entity, the benefit of the new product and the cost effectiveness are being considered.
- e. The provisions of the Consumer Affairs Authority Act, No. 9 of 2003 is taken into consideration when prescribing a pricing mechanism for medicines



INSTITUTE OF MEDICINE AND  
HEALTH SCIENCES

