



“Investing in Africa’s future”

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF PUBLIC HEALTH AND NURSING

NSNS 319: PHARMACOLOGY

END OF SEMESTER EXAMINATION

APRIL 2025

LECTURER: DR A KAPFUNDE

DURATION: 3HOURS

INSTRUCTIONS

Section A: Answer **All** questions

Section B: Answer **any three** (3) questions

DO NOT repeat material.

Write legibly.

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

Instruction circle or tick correct answer.

1. Which of the following statements is not true about the nature of drugs?
 - a. They are Non-peptide organic molecules and Organomimetics.
 - b. They are natural and recombinant proteins.
 - c. They are nucleic acids and their analogues.
 - d. They contain metal and metal ions.
2. The following are sources of drugs except:
 - a. Microbes
 - b. Viruses
 - c. Animals
 - d. Inorganic elements/ compounds
3. Pharmaceutics is not:
 - a. The 1st phase of drug action.
 - b. The same as dissolution.
 - c. Addition of ions to increase absorption.
 - d. Oral drug composition.
4. Pharmacokinetics involves the following processes except:
 - a. Absorption
 - b. Distribution
 - c. Bioavailability
 - d. Metabolism
 - e. Excretion
5. The % of drugs dose reaching the circulatory system is known as:
 - a. Biotransformation
 - b. Bioavailability
 - c. Therapeutic index
 - d. Therapeutic range
6. Which of the following is correct about Benzodiazepines?
 - a. Directly opens chloride channel gates.
 - b. Show analgesic effects
 - c. Readily produce general anesthesia
 - d. All have sedative effects
7. The following is a potent analgesic and weak anesthetic:
 - a. Succinylcholine
 - b. Diazepam
 - c. Nitrous oxide
 - d. Thiopental

8. Increase BP suddenly after administration.
- a. Norepinephrine
 - b. Epinephrine
 - c. Salbutamol
 - d. Terbutaline.
9. Drug distribution is mostly affected by:
- a. Route of administration
 - b. Body temperature
 - c. Ionization at physiologic pH
 - d. Blood concentration.
10. Medications given in pregnancy which cross placenta barrier:
- a. only adversely affects the fetus
 - b. Affects both mother and fetus
 - c. Only in the first trimester
 - d. Only if the placenta is weakened by disease

Circle T(True) or F(False) for the following statements.

11. Vascularity of absorption site determines rate of absorption of the drug. **T or F**
12. Only the part of the drug which is unbound can exert therapeutic effect in the body.
T or F
13. Zero order elimination means the rate of elimination is proportional to blood drug concentration. **T or F**
14. Nurses are only liable for adverse effects of correctly prescribed drugs. **T or F**
15. Age of patient is the most important nursing consideration in drug administration. **T or F**
16. All the phases of the nursing process can be applied to drug administration except planning. **T or F**
17. Protease inhibitors cannot be taken together with Rifampicin. **T or F**
18. Protamine added to insulin decrease rate of absorption of the hormone. **T or F**
19. Excessive bronchial secretions are a symptom of organo-phosphate poisoning. **T or F**
20. Quinidine sulphate can be given together with Quinine to potentiate its effect in malaria treatment. **T or F.**
21. Phenobarbital is primarily used as an antidepressant. **T OR F**
22. The main purpose of beta-agonists is to increase heart rate. **T or F.**

23. The side effects of statins can include muscle pain and weakness. **T or F.**
24. The primary indication for using metoprolol is to treat asthma. **T or F.**
25. Clonidine is often used to treat attention deficit hyperactivity disorder (ADHD). **T or F.**
26. Nitroglycerin can be used for both chest pain and heart failure. **T or F.**
27. Methylprednisolone is a type of Nonsteroidal anti-inflammatory drug (NSAID). **T or F.**
28. The primary action of antihistamines is to block the effects of histamine. **T or F.**
29. Insulin Glargine is a rapid-acting insulin. **T or F.**
30. Amiodarone is commonly used to treat ventricular fibrillation. **T or F.**
31. The use of Thiazolidinedione's can lead to weight loss. **T or F.**
32. Erythromycin is effective against a wide range of bacterial infections. **T or F.**
33. The main side effect of levodopa is hypotension. **T or F.**
34. : Warfarin requires regular blood monitoring due to its narrow therapeutic index. **T or F.**
35. The primary use of bisphosphonates is to treat hypertension. **T or F.**
36. Lisinopril is an ACE inhibitor used to treat high blood pressure. **T or F.**
37. The primary action of glucagon is to lower blood glucose levels. **T or F.**
38. Metronidazole is commonly used to treat parasitic infections. **T or F.**
39. The main purpose of using muscle relaxants is to relieve muscle spasms. **T or F.**
40. Triamterene is a loop diuretic. **T or F.**

SECTION B: ANSWER ANY THREE QUESTIONS (60 MARKS)

QUESTION 1

Describe the drug receptor interaction using the following concept

- | | |
|------------------------|-----|
| i. Drug affinity | (5) |
| ii. Intrinsic activity | (5) |
| iii. Therapeutic index | (5) |
| iv. Therapeutic range | (5) |

QUESTION 2

Describe the principles of drug administration and their application in practice. (20)

QUESTION 3

Describe the concept of adverse effects and side effects citing examples (20)

QUESTION 4

Write short notes on the following drugs:

- | | |
|----------------------|------|
| i. Analgesic | (10) |
| ii. Pharmacokinetics | (10) |

END OF PAPER