

NURS217 B

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN HUMAN NUTRITION AND DIETETICS

NURS 217 B: CLINICAL PHARMACOLOGY

STREAMS:

TIME: 2 HOURS

DAY/DATE:

INSTRUCTIONS:

 **Answer ALL Questions**

SECTION A: Multiple Choice Questions(20 Marks)

1. The broad categories of drugs include
 - a. Addictive drugs only
 - b. Pharmaceutical drugs only
 - c. Industrial drugs
 - d. Addictive and pharmaceutical drugs
2. What does the term “bioavailability” mean?
 - a. Plasma protein binding degree of substance
 - b. Permeability through the brain-blood barrier
 - c. Fraction of an uncharged drug reaching the systemic circulation following any route administration
 - d. Amount of a substance in urine relative to the initial doze
3. The study of drug properties, composition, and medical applications is called
 - a. Botany
 - b. Pharmacology
 - c. Paleontology
 - d. Ecology
4. Pharmacokinetics is:
 - a. The study of biological and therapeutic effects of drugs
 - b. The study of absorption, distribution, metabolism and excretion of drugs
 - c. The study of mechanisms of drug action
 - d. The study of methods of new drug development
5. The drugs that are used to diagnose, cure and prevent the disease are called
 - a. Pharmaceutical drugs

- b. Addictive drugs
 - c. Industrial drugs
 - d. Single cell drugs
6. Pick out the appropriate alimentary route of administration when passage of drugs through liver is minimized:
- a. Oral
 - b. Transdermal
 - c. Rectal
 - d. Intraduodenal
7. Half-life ($t_{1/2}$) is the time required to:
- a. Change the amount of a drug in plasma by half during elimination
 - b. Metabolize a half of an introduced drug into the active metabolite
 - c. Absorb a half of an introduced drug
 - d. Bind a half of an introduced drug to plasma proteins
8. Pharmacodynamics involves the study of following EXCEPT:
- a. Biological and therapeutic effects of drugs
 - b. Absorption and distribution of drugs
 - c. Mechanisms of drug action
 - d. Drug interactions
9. The substance which alters the functions of the body by absorbing into the body of a living organism is called
- a. Compound
 - b. Vitamin
 - c. Drug
 - d. Mineral
10. What does “affinity” mean?
- a. A measure of how tightly a drug binds to plasma proteins
 - b. A measure of how tightly a drug binds to a receptor
 - c. A measure of inhibiting potency of a drug
 - d. A measure of bioavailability of a drug
11. Toxicity of nicotine containing products:
- a. May result in neuromuscular blockade best treated with atropine
 - b. Usually causes hypotension
 - c. Will have no effects on the foetus
 - d. Can be symptomatically controlled with benzodiazepines
12. Therapeutic dose is not related to:
- a. Patient’s age
 - b. Route of administration
 - c. Desired therapeutic effect
 - d. Treatment costs
13. The duration of therapeutic effect depends on:
- a. Route of administration.
 - b. Frequency of administration.
 - c. Amount of the drug.
 - d. Elimination route
14. Moderate aspirin toxicity can be managed by promoting its excretion when infused with:

- a. Ascorbic acid
- b. Acid citrate
- c. Sodium bicarbonate
- d. Sodium chloride

True or False questions

- 15. Drug resistance is a term used to describe the loss of effectiveness of antimicrobial or anti-tumour drugs.
- 16. Drugs that mimic neurotransmitters are called antagonists.
- 17. Drugs are mainly excreted in the kidney but may also be excreted in the lungs, saliva and faeces.
- 18. Cytochrome P450 is the enzyme system responsible for metabolism of most drugs.
- 19. When two drugs act synergistically, their combined effect is equal to the sum of each drug taken alone.
- 20. Most drugs are absorbed in the small intestines.

Section B: Short Answer Questions (20 Marks)

- 1. Expand the following drug dosage abbreviations. (3 marks)
 - a) p.o.
 - b) q.h.s.
 - c) p.r.n.
- 2. Explain the difference between controlled and non-controlled drugs (2 marks)
- 3. Outline four common items/details found in a prescription sheet (4 marks)
- 4. Describe drug nomenclature (6 marks)
- 5. Name three sites of drug action. (3 marks)
- 6. State two advantages of administering drugs via parenteral route (2 marks)

Section C: Long Answer Questions (30 Marks)

- 1. Describe five ways of classifying drugs (10 marks)
- 2. Describe the processes involved in drug development? (10 marks)
- 3. Describe factors affecting drug absorption and bioavailability (10 marks)