



AMREF INTERNATIONAL UNIVERSITY

SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES

END OF SEMESTER AUGUST 2026 EXAMINATIONS

COURSE CODE AND TITLE: BSN 126 Clinical Pharmacology

DATE: 3rd August 2026

Duration: 2 HOURS 9:00AM-11:00AM

INSTRUCTIONS

1. This exam is out of 70 marks
2. This Examination comprises THREE Sections. Section I: Multiple Choice Questions (20 marks), Section II: Short Answer Questions (40 marks) and Section III: Long Answer Questions (40 marks)
3. Answer ALL Questions.
4. Do not write anything on the question paper -use the back of your booklet for rough work if need be

ATTEMPT ALL THE QUESTIONS

SECTION I: MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. 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
2. The main mechanism by which most drugs are absorbed in the Gastrointestinal tract is: -
 - A. Active transport
 - B. Filtration
 - C. Endocytosis and exocytosis
 - D. Passive diffusion
3. Most drug metabolism occurs in the:
 - A. Kidney
 - B. Liver
 - C. Heart
 - D. Lungs
4. Histamine acts mainly through which receptor to increase gastric acid secretion?
 - A. H₁
 - B. H₂
 - C. H₃
 - D. H₄
5. A second-generation cephalosporin: -
 - A. Cephadrine.
 - B. Cefoperazone
 - C. Cefotaxime
 - D. Cefoxitine
6. Non-steroidal anti-inflammatory drugs (NSAIDs) reduce inflammation by:
 - A. Blocking β receptors
 - B. Inhibiting cyclooxygenase enzymes
 - C. Blocking histamine receptors
 - D. Increasing prostaglandin synthesis
7. The antifungal commonly used for oral candidiasis is:-
 - A. Nystatin
 - B. Oseltamivir
 - C. Rifampicin
 - D. Ceftriaxone

8. In a patient with significant renal impairment, a nurse should anticipate that a drug excreted primarily unchanged by the kidneys will require:
- A. An increased dose
 - B. A decreased dose or increased dosing interval
 - C. No dose adjustment
 - D. Administration only by the intramuscular route
9. The route of drug administration most likely to lead to the first-pass effect is: -
- A. Sublingual
 - B. Oral
 - C. Intravenous
 - D. Intramuscular
10. The formulation of drugs inserted in the anal region is referred to as: -
- A. Suppositories
 - B. Pessaries
 - C. Creams
 - D. Tablets
11. An agonist is a substance that: -
- A. Interacts with the receptor without producing any effect
 - B. Interacts with the receptor and initiates changes in cell function, producing various effects
 - C. Increases concentration of another substance to produce effect
 - D. Interacts with plasma proteins and doesn't produce any effect
12. Alcohol should not be taken with: -
- A. Sulphonamides
 - B. Clonidine
 - C. Reserpine
 - D. Metronidazole
13. Tetracyclines: -
- A. inhibit cell wall synthesis.
 - B. Complex with calcium to affect teeth, bones, and interact with foods.
 - C. Are narrow-spectrum.
 - D. Minocycline is ineffective in the treatment of acne
14. An antibiotic that inhibits bacterial protein synthesis by binding to the 30S ribosomal subunit is:-
- A. Ceftriaxone
 - B. Gentamicin
 - C. Penicillin G
 - D. Vancomycin

15. The nurse will watch out for renal toxicity in a patient with which antifungal agent?
- A. Clotrimazole
 - B. ketoconazole
 - C. Nystatin
 - D. Amphotericin B
16. Antiviral that is commonly used in influenza A and B is:-
- A. Acyclovir
 - B. Oseltamivir
 - C. Zidovudine
 - D. Ribavirin
17. The antiviral class that prevents HIV from entering CD4 cells is:-
- A. Protease inhibitors
 - B. Integrase inhibitors
 - C. Entry inhibitors
 - D. NRTIs
18. The antibiotic contraindicated during pregnancy because it affects fetal bone and teeth development is:-
- A. Amoxicillin
 - B. Ceftriaxone
 - C. Tetracycline
 - D. Erythromycin
19. Amphotericin B acts by:
- A. Inhibiting fungal DNA synthesis
 - B. Binding ergosterol and damaging fungal cell membranes
 - C. Inhibiting protein synthesis
 - D. Blocking folate synthesis
20. An enzyme inhibited by Zidovudine is: -
- A. Reverse transcriptase
 - B. Cyclooxygenase
 - C. DNA gyrase
 - D. ACE

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain the concept of bioavailability in relation to different routes of drug administration (4 marks)
2. a) Describe the mechanisms of action of Azoles; give 2 examples and their common uses. (6 marks)

b) Discuss the nursing management of a patient receiving Amphotericin B. (4 marks)
3. Describe the mechanism of action and side effects of Ceftriaxone (4 Marks)
4. Outline four mechanisms by which bacteria develop antibiotic resistance. (4 marks)
5. State the steps of Pharmacokinetics (4 Marks)
6. Discuss 4 common adverse effects associated with antiretroviral therapy and their nursing management. (4 marks)

SECTION III: LONG ANSWER QUESTIONS (20 MARKS)

1. a) Outline and explain the six (6) broad classifications of antibiotics, giving their mechanism of action and examples in each (15 marks)

b) Discuss five (5) factors considered when prescribing antibiotics (5 marks)