



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.
Tel: +254 (0)799529958, +254 (0)799529959, +254 (0)712524293
Website: www.must.ac.ke Email: info@must.ac.ke

UNIVERSITY EXAMINATIONS 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN NURSING

NND 3214/NNU 3211 – CLINICAL PHARMACOLOGY II

DATE: JANUARY 2025

TIME: 3 HOURS

INSTRUCTIONS: *All questions are compulsory*

Ensure that all your answers are properly numbered

Part 1 Multiple Choice Questions (MCQs): Write the correct answer on the space provided in the answer booklet. Each MCQ is one mark.

Part 11: Short Answer Questions-Answer questions following each other on the answer booklet

Part 111: Long Answer Questions-Answer

SECTION I: SHORT ANSWER QUESTIONS (20 MARKS)

1. What is the mechanism of action for penicillin?
 - A) Inhibits protein synthesis.
 - B) Disrupts cell wall synthesis.
 - C) Inhibits nucleic acid synthesis.
 - D) Alters cell membrane permeability
2. What is a major side effect associated with the use of tetracyclines?
 - A) Hearing loss
 - B) Photosensitivity
 - C) Nephrotoxicity
 - D) Liver damage



3. Which of the following antibiotics is classified as a macrolide?
 - A) Amoxicillin
 - B) Azithromycin
 - C) Gentamicin
 - D) Cephalexin
4. A patient is prescribed clindamycin. Which of the following is a significant nursing consideration?
 - A) Monitor for signs of hepatotoxicity.
 - B) Assess for signs of superinfection, particularly *C. difficile* infection.
 - C) Ensure the patient receives an annual flu vaccine.
 - D) Advise the patient to take the medication with antacids.
5. Which antibiotic should be avoided in children under 8 years of age due to the risk of permanent tooth discoloration?
 - A) Amoxicillin
 - B) Tetracycline
 - C) Azithromycin
 - D) Vancomycin
6. Which of the following medications is commonly used as a first-line treatment for uncomplicated malaria caused by *Plasmodium falciparum*?
 - A) Chloroquine
 - B) Quinine
 - C) Artemether-lumefantrine
 - D) Mefloquine
7. Which of the following side effects is commonly associated with the use of mefloquine?
 - A) Nausea and vomiting
 - B) Liver toxicity
 - C) Neuropsychiatric symptoms
 - D) Cardiac arrhythmias
8. What is the primary use of primaquine in malaria treatment?
 - A) Treatment of severe malaria
 - B) Treatment of uncomplicated malaria
 - C) Radical cure of *P. vivax* and *P. ovale* malaria
 - D) Prophylaxis against malaria

9. Which of the following statements regarding artemisinin-based combination therapies (ACTs) is true?
- A) ACTs are less effective than monotherapy.
 - B) ACTs are used for both treatment and prevention of malaria.
 - C) ACTs help reduce the risk of developing drug-resistant malaria strains.
 - D) ACTs have no side effects.
10. Which of the following is a common side effect of benzodiazepines?
- A) Hypertension
 - B) Sedation
 - C) Diarrhea
 - D) Tachycardia
11. What serious side effect is associated with the use of monoamine oxidase inhibitors (MAOIs)?
- A) Hyperglycemia
 - B) Hypertensive crisis with tyramine-rich foods
 - C) Liver toxicity
 - D) Neutropenia
12. Which medication is considered a first-line treatment for generalized anxiety disorder (GAD)?
- A) Diazepam
 - B) Sertraline
 - C) Phenobarbital
 - D) Buspirone
13. What is the primary action of glucocorticoids such as prednisone?
- A) Promote insulin secretion
 - B) Suppress the immune response
 - C) Increase calcium absorption
 - D) Stimulate thyroid hormone production
14. Which of the following is a side effect commonly associated with long-term use of corticosteroids?
- A) Weight loss
 - B) Hypoglycemia
 - C) Osteoporosis

- D) Hyperthyroidism
15. Which hormone is commonly administered to patients with hypothyroidism?
- A) Levothyroxine
 - B) Methimazole
 - C) Insulin
 - D) Cortisol
16. What is the primary mechanism of action of metoclopramide?
- A) Inhibits acid secretion
 - B) Increases gastric emptying
 - C) Binds to bile acids
 - D) Inhibits dopamine receptors
17. What is the primary therapeutic use of sucralfate?
- A) Treating diarrhea
 - B) Protecting the gastric mucosa
 - C) Reducing acid secretion
 - D) Increasing gastric motility
18. Which of the following GIT drugs is contraindicated in patients with bowel obstruction?
- A) Loperamide
 - B) Psyllium
 - C) Bisacodyl
 - D) Metoclopramide
19. Which respiratory medication is classified as a leukotriene receptor antagonist?
- A) Ipratropium
 - B) Salmeterol
 - C) Montelukast
 - D) Theophylline
20. Which substance is commonly known to cause reye's syndrome in children when used during viral infections?
- A) Acetaminophen
 - B) Aspirin
 - C) Ibuprofen
 - D) Naproxen

SECTION 2: SHORT ANSWER QUESTIONS: 40 MARKS

1. With regard to opioid formulations
 - a. Describe the difference between short-acting and long-acting opioid formulations (2marks).
 - b. When might a healthcare provider choose one over the other for a patient (2marks)
2. a. Describe the role of naloxone in opioid therapy. (1mark)
b. How does it work, and in what situations should it be administered? (3marks)
3. What are the key differences between ACE inhibitors and angiotensin II receptor blockers (ARBs) in terms of
 - a Mechanism of action, side effects, and therapeutic uses? (4marks)
 - b Provide two examples of each. (1mark)
4. Outline the differences between bactericidal and bacteriostatic antibiotics. List any 2 examples of each? (5marks)
5. With the help of 2 examples, explain the mechanism of action of selective serotonin reuptake inhibitors (SSRIs) and discuss their primary therapeutic uses. (5marks)
6. What are the common side effects of benzodiazepines, and how do they differ from those of non-benzodiazepine anxiolytics? Include examples of each class of drugs in your answer. (5marks)
7. Compare typical and atypical antipsychotics in terms of their mechanisms of action, side effects, and therapeutic efficacy. (6marks)
8. Describe the mechanism of action and primary therapeutic uses of beta-blockers. Include two examples of commonly used beta-blockers (6marks)

SECTION III: LONG ANSWER QUESTIONS 40 MARKS

1. a. Explain the concept of antibiotic resistance. (2marks)
b. Discuss the mechanisms by which bacteria develop resistance to antibiotics and the implications of resistance for patient care and public health. (8marks)
c. Outline strategies that healthcare professionals, including nurses, can implement to combat antibiotic resistance (10marks)



2. a. Explain the role of pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) in HIV prevention (4marks)
- b. Describe the medications used for PrEP and PEP, their mechanisms of action? (8marks)
- c. Regarding PrEp& PEP, what are the nursing considerations for educating patients about their use . (8marks)

