



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF THE
DEGREE OF BACHELOR OF SCIENCE IN NURSING
THIRD SEMESTER 2022/2023
[MAY-AUGUST, 2023]

NUR 131: BASICS PHARMACOLOGY

STREAM: Y1S3

TIME: 2 HOURS

DAY: WEDNESDAY, 12:00 – 2:00 PM

DATE: 26/07/2023

INSTRUCTIONS

- 1. Do not write anything on this question paper.**

SECTION A: Answer ALL the questions (30 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. 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. Which route of drug administration is most likely to lead to the first-pass effect?

- a) Sublingual
- b) Oral
- c) Intravenous
- d) Intramuscular

4. 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

5. What term is used to describe a more gradual decrease in responsiveness to a drug, taking days or weeks to develop?

- a) Refractoriness
- b) Cumulative effect
- c) Tolerance
- d) Tachyphylaxis

6. Idiosyncratic reaction of a drug is:

- a) A type of hypersensitivity reaction
- b) A type of drug antagonism
- c) Unpredictable, inherent, qualitatively abnormal reaction to a drug
- d) Quantitatively exaggerated response

7. Which of the following vitamins is given along with isoniazid in treatment of tuberculosis?

- a) Nicotinic acid
- b) Riboflavin
- c) Pyridoxine
- d) Ascorbic acid

8. Bactericidal effect is:

- a) Inhibition of bacterial cell division
- b) Inhibition of young bacterial cell growth
- c) Destroying of bacterial cells
- d) Formation of bacterial L-form

9. Choose the drug belonging to antibiotics-carbapenems:

- a) Aztreonam
- b) Amoxicillin
- c) Imipenem
- d) Clarithromycin

10. Tick the drug belongs to antibiotics-cephalosporins:

- a) Streptomycin
- b) Cefaclor
- c) Phenoxyethylpenicillin
- d) Erythromycin

11. Cephalosporines are drugs of choice for treatment of:

- a) Gram-positive microorganism infections
- b) Gram-negative microorganism infections
- c) Gram-negative and gram-positive microorganism infections, if penicillins have no effect
- d) Only Bacteroides infections

12. Aminoglycosides have the following unwanted effects:

- a) Pancytopenia
- b) anaemia
- c) Ototoxicity, nephrotoxicity
- d) Irritation of gastrointestinal mucosa.

13. Which of the following drugs is used for dermatomycosis treatment:

- a) Nystatin
- b) Griseofulvin
- c) Amphotericin B
- d) Vancomycin

14. Mechanism of sulfonamides' antibacterial effect is:

- a) Inhibition of dihydropteroate reductase
- b) Inhibition of dihydropteroate synthase
- c) Inhibition of cyclooxygenase
- d) Activation of DNA gyrase

15. Combination of sulfonamides with trimethoprim:

- a) Decreases the unwanted effects of sulfonamides
- b) Increases the antimicrobial activity
- c) Decreases the antimicrobial activity
- d) Increases the elimination of sulfonamides

16. Tick the amebicide drug for the treatment of an asymptomatic intestinal form of amebiasis:

- a) Chloroquine
- b) Diloxanide
- c) Emetine
- d) Doxycycline

17. A 12-year-old girl has undergone a bone marrow transplant for the treatment of acute lymphoblastic leukemia (ALL). Five days later, she develops fever, and blood cultures reveal *Candida albicans* in her blood. Which of the following antifungals would be appropriate to use immediately?

- (A) Nystatin
- (B) Miconazole
- (C) Clotrimazole
- (D) Ketoconazole
- (E) Amphotericin

18. All the following are among the 6 rights' in nursing except

- a) right route,
- b) right dose,
- c) right time,
- d) resident's right to accept.

19. Drug resistance is a term used to describe the loss of effectiveness of antimicrobial or antitumour drugs. This consideration is:
- True
 - False
20. Therapeutic index (TI) is:
- A ratio used to evaluate the safety and usefulness of a drug for indication
 - A ratio used to evaluate the effectiveness of a drug
 - A ratio used to evaluate the bioavailability of a drug
 - A ratio used to evaluate the elimination of a drug
21. All of the following antimalarial drugs are 4-quinoline derivatives, EXCEPT:
- Chloroquine
 - Mefloquine
 - Primaquine
 - Amodiaquine
22. Tick the antimycobacterial drug belonging to first-line agents:
- PAS
 - Isoniazid
 - Kanamycin
 - Pyrazinamide
23. Chloramphenicol has the following unwanted effects:
- Nephrotoxicity
 - Pancytopenia
 - Hepatotoxicity
 - Ototoxicity
24. Tick the drug belonging to antibiotics-tetracyclines:
- Doxycycline
 - Streptomycin
 - Clarithromycin
 - Amoxicillin
25. What does the term “antibiotics” mean:
- Non-organic or synthetic substances that selectively kill or inhibit the growth of other microorganisms
 - Substances produced by some microorganisms and their synthetic analogues that selectively kill or inhibit the growth of another microorganisms
 - Substances produced by some microorganisms and their synthetic analogues that inhibit the growth of organism cells
 - Synthetic analogues of natural substances that kill protozoa and helminths
26. Tick the drug of choice for herpes and cytomegalovirus infection treatment:
- Saquinavir
 - Interferon alfa

- c) Didanosine
- d) Acyclovir

27. Sulfonamides have the following unwanted effects:

- a) Hematopoietic disturbances
- b) Crystalluria
- c) Nausea, vomiting and diarrhea
- d) All of the above

28. Tick the drug used for malaria chemoprophylaxis and treatment:

- a) Chloroquine
- b) Quinidine
- c) Quinine
- d) Sulfonamides

29. Tick the drug, a benzimidazole derivative:

- a) Praziquantel
- b) Mebendazole
- c) Suramin
- d) Pyrantel

30. All the following are phase I reactions of drug metabolism except?

- a) Oxidation
- b) Reduction
- c) Conjugation
- d) Hydrolysis

SECTION B: Answer ALL the questions (40 marks)

1. State the Significance of pharmacology in Nursing (2 marks)

2. Indicate the meaning of the following abbreviations as used in pharmacology.

- a) P.o. (1 marks)
- b) ad lib. (1 marks)
- c) sig. (1 marks)
- d) q1-2 (1 marks)
- e. p.r.n. (1 marks)

3. Explain the underlisted term commonly used in pharmacology

- a) Drug (1 marks)
- b) Pharmacokinetics (1 mark)
- c) Chemotherapy (1 mark)
- d) Tolerance (1 mark)
- e. Therapeutic effect (1 mark)

4. Enlist the five sequential steps of nursing process as a role of the nurse (5 marks)

5. Briefly describe Drug logistics (6 marks)

6. Write short notes on CAP 244-Pharmacy and poisons (3 marks)
7. During drug Prescription, there are five key stages of the consultation. Outline them in a sequential manner. (5marks)
8. Distinguish between the following terms any three theories of drugs action
- i) Efficacy and potency (1 mark)
 - ii) Complementary medicine and Alternative medicine (1 mark)
 - iii) Adverse drug reaction and Adverse event (1 mark)
9. Highlight the six rights in nursing (3 marks)
10. Outline any three (3) classes of antimalaria giving an example in each (3 marks)

SECTION C: Choose any TWO questions (40 marks)

- 11.a) What do understand by the term Antibiotic (2marks)
- b) Outline any four ways in which antimicrobials acts (8 marks)
 - c) Classify cephalosporins giving an example in each class (10 marks)
12. Describe the process of Drug development (20marks)
13. Describe citing appropriate examples
- (i) Pharmacological classification of Drugs by Legal Definition (10marks)
 - (ii) Basic types of drug action (10marks)