



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS 2018/2019 ACADEMIC YEAR FIRST YEAR THIRD SEMESTER

SCHOOL OF SCIENCE BACHELOR OF SCIENCE NURSING

COURSE CODE: NUR 1302

COURSE TITLE: NURSING PHARMACHOLOGY 1

DATE: 28TH AUGUST, 2019

TIME: 0830 - 1130 HRS

INSTRUCTIONS TO CANDIDATES

- a) Answer **ALL** Multiple questions in Section A and **All** short Essay questions in Section **B** and **ANY two** Questions in **SECTION C**

- b) Illustrate your answers with suitable diagrams and give examples wherever necessary.

1. A bacteriostatic substance is one that:
 - a) Directly kills any bacteria it comes in contact with
 - b) Directly kills any bacteria that are sensitive to the substance
 - c) Prevents growth of any bacteria
 - d) Prevents the growth of specific bacteria that are sensitive to the substance

2. The interaction of one drug increased by the presence of a second drug is known as:
 - a) Potentiation
 - b) Addictive effect
 - c) Antagonism
 - d) Synergism

3. The antifungal that can be **safely** used in pregnant women is
 - a) Fluconazole
 - b) Nystatin
 - c) Ketoconazole
 - d) Amphotericin B

4. When considering the pharmacotherapeutic effects of drugs administered to clients, the nurse considers which property of **most importance**:
 - a) Efficacy
 - b) Interaction with other drugs
 - c) Potency
 - d) Toxicity

5. A patient reports to have been experiencing diarrhea after consuming her prescribed antibiotics for a week. This is because:
 - a) The drugs render food indigestible
 - b) Gastric flora is disturbed.
 - c) Fluid is added into the intestine.
 - d) Normal intestinal bacteria are destroyed.

6. Changes in visual acuity and color perception are associated with the following treatment:
 - a) INH (isoniazid)
 - b) PZA (pyrazinamide)
 - c) ETH (ethambutol)
 - d) SM (streptomycin)

7. One of the following is a characteristic of drugs transferred from maternal plasma into breast milk.
 - (a) Low pH
 - (b) Protein bound
 - (c) Low molecular weight
 - (d) Low lipid solubility.

8. Half- life ($t_{1/2}$) is the time required to
 - (a) Change the amount of drug into plasma by half during elimination
 - (b) Metabolize half of an administered drug into the active metabolite
 - (c) Absorb half of an administered drug

(d) Bind a half of an administered drug to plasma proteins.

9. An antidote is

- a) A drug that reduces the action of poison.
- b) A drug that works in opposition to the poison.
- c) A drug that combines with poison to form non-toxic product.
- d) A drug that is easily excreted from the body.

10 One of the following is **NOT** a mechanism of teratogenicity

- (a) Interfere with metabolism tissues of the fetus through interference of oxygen and nutrients passage through the placenta
- (b) Direct effect on the fetus
- (c) Direct action on process of differentiation in development
- (d) Direct enzymatic reduction of drugs.

11 A 65 year old man with hypertension is to be treated with a vasodilator. Drug X and Y have the same mode of action. Drug X in a dose of 5mg produces the same decrease in blood pressure as 500mg of drug Y. One of the following statements best describes these results.

- (a) Drug Y is less efficacious than drug X
- (b) Drug X is about 100 times more potent than that of drug Y
- (c) Toxicity of drug X is less than that of drug Y
- (d) Drug X has a wider therapeutic window than drug Y.

12 Parental administration

- (a) Cannot be used in unconscious patients
- (b) Generally results in a less accurate dosage than oral administration
- (c) Usually produces a more rapid response than oral administration
- (d) Is too slow for emergency use.

13. The ability of an antibiotic to kill or suppress microbial pathogens without causing injury to the host is?

- (a) Antimicrobial effect
- (b) Selective toxicity
- (c) Immunosuppression
- (d) Therapeutic utility

14. A patient's chart includes an order that reads as follows:

“Diclofenac 50mg once daily at 0700hrs” Which action by the Nurse is correct?

- (a) The nurse tells the patient to swallow the diclofenac that will be brought by relatives from chemist
- (b) The nurse gives the available diclofenac 50mg tablet orally
- (c) The nurse contacts the prescriber to clarify the dosage
- (d) The nurse gives diclofenac 50mg intravenously since that's what the patient has been on

15. Which one the following is the drug of choice in the treatment of **severe** malaria in Kenya

- (a) Chloroquine
- (b) Intravenous Artesunate
- (c) Intravenous Quinine
- (d) Fansidar

16. A patient taking metronidazole is prohibited from taking **alcohol** due to which of the following reaction?
- (a) Toxic reaction
 - (b) Steven Johnson's syndrome
 - (c) Disulfiram like reaction
 - (d) Idiosyncratic reaction
17. The Nematode *Filariae* is responsible for **which** of the following condition
- (a) Vomiting, massive diarrhea,
 - (b) Lymphatic obstruction, resulting in elephantiasis
 - (c) Bowel obstruction
 - (d) Chronic blood loss and progressive anemia
18. The drug of choice for a patient infected with the nematode ***Enterobius vermicularis* (Pin worm)** is:
- (a) Albedazole or Mebendazole
 - (b) Sodium stibogluconate
 - (c) Niclosamide
 - (d) Praziquantel
19. Combination of antimalarial: artemether and Lumefantrine is majorly done to achieve which of the following effect
- (a) Increase gastrointestinal symptoms
 - (b) Reduce tinnitus
 - (c) Increase efficacy of the drugs
 - (d) Reduce cost of drugs
20. Peripheral neuropathy caused by Isoniazide (INH) is prevented by ?
- a) Vitamin C (ascorbic acid)
 - b) Vitamin B6 (pyrodoxin)
 - c) Vitamin B12 (cobalamin)
 - d) Vitamin B₁(Thiamine)

Section 2: Short Answer Questions 40 Marks

Answer all Questions

1. State four ways a nurse could prevent medication errors. (4 marks)
2. State THREE factors to consider when selecting essential drugs (3 Marks)
3. Explain four factors that may influence drug absorption. (8 marks)
4. Citing relevant examples, discuss four indications for antibiotics combination (8 marks)
5. State 3 microbial mechanisms of drug resistance (6 Marks)
6. State 4 (four) **patient related** causes of Anti Tuberculosis drug **non adherence** (4Marks)
7. State the class, mechanism of action and **two** side effects of **Gentamicin** (4 marks)
8. **State** the bioavailability phenomena (3 Marks)

Section c: Long Structured Questions Answer

Question one

- a) Discuss pharmacokinetic drug therapy in the Elderly (12 marks)
- b) Describe interventions that a nurse may initiate in reduction of risks associated with various drug regime in the elderly. (8 marks)

Question Two

Discuss **penicillin** under the following

- a) State 3 classes of penicillin giving one examples of drugs in each case (6 marks)
- b) Pharmacodynamics (2 marks)
- c) Pharmacokinetics (5 marks)
- d) State two drug-drug interactions involved in the use of penicillin (2 marks)
- e) Major nursing implications in the administration of penicillin. (5 marks)

Question Three

Tetracyclines are important antibacterial drugs used for treatment of various infections

- a) Name four drugs that fall under this class (2Marks)
- b) Describe the mechanism of action of these drugs (3 Marks)
- c) State five clinical uses of the drugs (5 Marks)
- d) Describe the mechanism of resistance against the drugs (4 Marks)
- e) Outline 6 adverse reactions associated with the use of the drugs (6 Marks)

//END