



**KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE**

**END OF SEMESTER EXAMINATION
FOR
MARCH 2021 CLASS – YEAR 1 SEMESTER I**

PAPER: PHARMACOLOGY & THERAPEUTICS I

DATE: 4th August, 2021

TIME: 2 HOURS (8:00AM – 10:00 AM)

INSTRUCTIONS

1. This paper consists of:
 - Section 1 (20 Multiple Choice Questions)
 - Section 2 (4 Short Answer Questions)
 - Section 3 (2 Long Answer Question)
2. Attempt **ALL** Questions
3. Write your **ADMISSION NUMBER** on all the answer sheets provided and on the question paper.
4. Ensure that all examination answer scripts are handed in at the end of the examination
5. Ensure you sign in the ‘sign IN and OUT’ examination register provided

EXAMINATION NUMBER

Section 2 (4 Short Answer Questions)
 Section 3 (2 Long Answer Question)

Section 1 (20 Multiple Choice Questions)

1. The following are correct in regards to therapeutic agents of amobicides
 - a) Luminal amobicides acts on the parasites on the lumen
 - b) Systemic amobicides only act on amoeba in the liver
 - c) Are only classified into two, systemic and mixed amobicides
 - d) Mixed amobicides are effective only on luminal forms of the disease
2. The following are examples of drugs under systemic amobiasis except
 - a) Hemitine
 - b) Dehydroemitine
 - c) Chloroquine
 - d) Tinidazole
3. About leshmaniasis, which statement id true
 - a) Caused by toxoplasma
 - b) Dermal leshmaniasis is caused by leshmania braziliensis
 - c) Drug used is stiboglucolate
 - d) Allopurinol is not useful
4. Rectal route of drug administration
 - a. Cause nausea and vomiting
 - b. Is not preferred if the drug is irritant
 - c. Have 50% first pass metabolism
 - d. All the above
5. Which of the following are correctly matched
 - a) Trichuris trichuria → pin worm
 - b) Tinea solium → fish tapeworm
 - c) Schistosoma species → blood fluke
 - d) All the above are correct
6. Which of the following is the odd one out in regards 4-aminoquionolons
 - a) Quinine
 - b) Chloroquine
 - c) Amodiaquine
 - d) Piperaquine
7. What does "pharmacokinetics" include?
 - a. Excretion of substances
 - b. Mechanisms of drug action
 - c. Interaction of substances
 - d. Localization of substances
8. Drug overdose may be due to
 - a) Suicidal

- b) Accidental
 - c) Deliberate
 - d) All the above are true
9. The volume of distribution (Vd) relates
- a. An uncharged drug reaching the systemic circulation
 - b. Amount of a drug in the body to the concentration of a drug in plasma
 - c. Single to a daily dose of an administered drug
 - d. An administered dose to a body weight
10. What does "drug affinity" mean?
- a. This is how tightly a drug binds to a receptor
 - b. A measure of bioavailability
 - c. This is how tightly a drug binds to plasma proteins
 - d. A measure of inhibiting potency of a drug
11. Factors affecting irrational drug use in the health system includes
- a. Shortage of drug dispensing materials
 - b. Expired drugs
 - c. Unreliable drug supply
 - d. Adequate training of the prescriber
12. Biotransformation of the drug is to render them
- a. More lipid soluble
 - b. More pharmacologically active
 - c. Less lipid soluble
 - d. Less ionized
13. Elimination is expressed as follows
- a. Time required to decrease the amount of drugs in plasma by one-half
 - b. Rate of renal tubular reabsorption
 - c. Clearance of an organism from a xenobiotic
 - d. Clearance speed of some volume of blood from substance
14. In classification of drugs according to the body system they work on which one is correct
- a. Central nervous system-----antidiarrheal
 - b. Genitourinary system ----- diuretics
 - c. Gastroenteritis system ----- sedatives
 - d. All the above are correct
15. The following are types of antagonist except
- a) Chemical antagonist
 - b) Partial antagonists
 - c) Physiological antagonist
 - d) Proton antagonist
16. The following factors affect the response of placebo
- a. Doctors attitude
 - b. Doctor patient relationship
 - c. Formulation or route of drug administration
 - d. All the above
17. Main site of drug metabolism

- a) Liver
 - b) Kidney
 - c) Lungs
 - d) skin
18. Importance of date in a prescription are except :
- a. Validate refill
 - b. Helps faster recovery
 - c. Promote patient follow up
 - d. For supervision
19. Main ways by which drugs can be absorbed
- a) Lipid diffusion
 - b) Special carriers
 - c) Aqueous diffusion
 - d) All are true
20. What are the main goals or aims of using drugs in relation to malarial infection
- a) To control the mosquitos from breeding
 - b) Actively treating everybody who is asymptomatic
 - c) As a radical curative
 - d) To train many clinical officers

SHORT ESSAY QUESTIONS 40 MARKS

1. Define the following terminologies in pharmacology (10mks)
 - a. Rational drug use
 - b. Biological half life
 - c. Drug
 - d. Adverse drug reactions
 - e. Drug bioavailability
2. Oral medication are widely used worldwide Kenya being one of them, explain briefly 10 oral route formulations used in Siaya county (10mks)
3. Outline five local sites of drug administration in the body (10mks)
4. Chief a 30 year old male and a resident of Siaya presented to the casualty with history fever for three days, pain while passing urine for 2 days and yellow urethral discharge for 2 days. It was found to have had unprotected sex 3 days prior to onset of the above symptoms. You quickly suspected him to suffer from Gonorrhoea and started him on:
Injection cefogram 2g once on that day and never repeated, tablet norfloxacin 800mg twice a day for 1 week, tabs metronidazole 400mg every 8 hours for 5days and intramuscular diclofenac 150 mg stat. Give detailed prescription in the treatment sheet.

LONG ESSAY QUESTIONS

1) Metronidazole is commonly used drug and at the same time commonly misused drug. Discuss metronidazole under the following sub headings

- i. Mode of action (5mks)
- ii. Pharmacokinetics (5mks)
- iii. Side effects (5mks)
- iv. Drug interactions (5mks)

2) Javan a 56 year old patient was prescribed a daily parenteral drug for one week after a senior clinical officer on duty diagnosed him with a cute diarrhea. About parenteral drug use:

- a. Identify 7 forms of injections (7mks)
- b. Classify parenteral routes of drug administration (3mks)
- c. Outline 10 advantages of parenteral drugs (10mks)