

CHUKA UNIVERSITY
UNIVERSITY EXAMINATIONS 2020/2021
SECOND SEMESTER EXAMINATION
BMET 336: INTRODUCTION TO PHARMACOLOGY

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INSTRUCTIONS: *Answer question one and any other two questions*

Questions

Question 1 (Compulsory) (30 marks)

- a) Explain giving examples the difference between bacteriostatic and bactericidal drug action. (4 Marks)
- b) Outline 4 clinical indications uses of Praziquantel. (4 Marks)
- c) Antimalarial drugs are classified by their selective actions on the parasite's life cycle. Describe for classes of antimalarials and give specific examples in each case.(8 Marks)
- d) Explain 5 host factors to be considered in the selection an antibiotic. (5 Marks)
- e) (i) Trimethoprim-Sulfamethoxazole (Cotrimoxazole) combination is preferred over a single use of either of the drug. (2 Marks)
(ii) Outline 3 clinical uses of the combination in (i) above. (3 Marks)
- f) Discuss briefly transcutaneous route of drug administration. (4 Marks)

Question 2 (20 marks)

- a) Zidovudine is an antiretroviral agent with *in vitro* activity against HIV-1, HIV-2, and the human T cell lymphotropic viruses. Describe its mode of action, efficacy, pharmacokinetics, resistance and adverse reactions. (10 Marks)
- b) Describe 5 physiological factors that influence drug absorption and bioavailability. (10 Marks)

Question 3 (20 marks)

- a) Describe briefly pharmacodynamics drug interactions (10 Marks)
- b) Individuals differ both in the degree and the character of the response that a drug may elicit and therefore the optimum dose of a drug which produces the desired therapeutic effect varies from person to person. Describe 5 important factors which influence the effect of a drug in individuals. (10 Marks)

Question 4 (20 marks)

- a) Explain in detail 5 routes of drug excretion. (10 Marks)
- b) Describe the processes involved in development and evaluation of new drug molecules. (10 Marks)

