CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN NURSING

NUMS 823: ADVANCED PHARMACOLOGY I

STREAMS: MSC NURSING   **TIME: 3 HOURS**

DAY/DATE: FRIDAY 9/8/2019   **8.30 A.M - 11.30 A.M.**

INSTRUCTIONS
- Answer **ANY FIVE (5)** Questions
- Do not write anything on the question paper
- Mobile phones and any other reference material are NOT allowed in the examination room
- Number all your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.

1. (a) Describe drug development process.   [10 Marks]

    (b) Different therapeutic approaches can be used to manage different disease conditions. Explain how you would manage a small child brought to emergency room suffering from pneumonia using empiric therapy.

2. (a) Explain five (5) clinical situations where prophylactic antibiotics are indicated. [10 Marks]

   (b) Describe the clinical uses, route of administration, mechanism of action and side effects of the "azoles" group of antiprotozoal compounds.   [10 Marks]

3. (a) Explain four classes of **antiretroviral** drugs used in management of HIV/AIDS clearly outlining their mechanism of action, side effects and two examples in each class.
                                                    [10 Marks]

  (b) Discuss the mechanism of action, side effects and main clinical indications of **albendazole.**
                                                   [10 Marks]

4. (a) Describe the mechanism of action, clinical uses, route(s) of administration and major side effects of **Tetracyclines.** [10 Marks]

(b) Discuss the use of drugs in the treatment of Tuberculosis, focusing on the mechanism of action and main side effect of any FOUR main drugs used in treatment of Tuberculosis.
[10 Marks]

5. Explain the following concepts, using examples where appropriate:
    (a) The importance of dose response curves in toxicity testing. [5 Marks]
    (b) The concept of selective toxicity as applied to antimicrobial drugs. [5 Marks]
    (c) Receptor down regulation [5 Marks]
    (d) Metabolic activation of prodrugs. [5 Marks]

6. (a) (i) Classify fluoroquinolones according to their spectrum of activity, giving relevant examples in each class of drugs. [4½ Marks]

    (ii) Explain their mechanism of action, clinical indications and side effects. [5½ Marks]

(b) Discuss Chiropractic and its use as a better alternative to contemporary medicine. [10 Marks]

(c) Describe the clinical uses, route of administration, mechanism of action and side effects of **macrolides.** [10 Marks]
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