OLABISI ONABANJO UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY
REMO CAMPUS, IKENNE
2016/2017 RAIN SEMESTER EXAMINATION

Course: BCH 418
Course Title: Pharmaceutical Biochemistry

Time Allowed: 2 hrs 30 mins
Date: 17 July 2017

Instructions: Answer question ONE and any other two questions

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1. (a) Define the following terms (i) drug (ii) drug target (iii) Brand name (iv) generic name (v) chemotherapeutic agent (vi) Across the counter (OTC) drugs (vii) Intramuscular (i.m.) route (viii) therapeutic index (ix) drug potency (x) drug side effects (xi) drug action (xii) drug secondary effects

(b) Distinguish between drug resistance and drug tolerance

(c) What factors affect an individual response to a drug in microorganisms?

(d) What are the major mechanisms by which microorganisms exhibit resistance to antibiotics

2. Give the biochemical basis (mechanism of action) of the therapeutic action of the following:

(i) antibacterial therapeutic activity of the sulphonamides (e. g. Sulfamethoxazole)

(ii) anticancer activity of 5-fluorouracil, methotrexate

(iii) anti-HIV property of 3'-Azido -3' –deoxythymidine (AZT)

(iv) anti inflammatory properties of acetyl salicylate (aspirin)

3. (a) Chloroquine is a one of the oldest drug indicated as an antimalaria. Discuss its biochemical mechanism of action as a therapeutic antimalarial drug.

(b) Give the Trade names of 3 antimalarial drugs/products in the Nigerian market today that is based on combinational therapy. What are the combinations?

4. Discuss briefly

(a) The biochemical basis of the antibiotic action of penicillin

(b) Some of the current therapeutic targets being investigated to combat the scourge of malaria.