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FACULTY OF BASIC MEDICAL SCIENCES
DEPARTMENT OF BIOCHEMISTRY
2013/2014 RAIN SEMESTER EXAMINATION

BCH 418: PHARMACOLOGICAL BIOCHEMISTRY

February 2015

Time allowed: 3 hrs

12

Instruction : Answer question ONE and any other two questions

- (i) Give the generic name, brand name, class of drug and indications of any FIVE pharmacologic agent/drugs that one is likely to find in a reputable pharmacy in Ikenne township. (Hint: the drug must be in your CA list submitted)
- (ii) What do you understand by the terms (a) drug action (b) drug effect (c) drug resistance (d) therapeutic index
- (iii) Distinguish between (a) a pharmacodynamic agent and a chemotherapeutic agent (b) acquired resistance and intrinsic drug resistance
- (iv) Discuss briefly the major mechanisms by which: (a) microorganisms exhibit resistance to antimicrobials and (b) cancer cells elicit resistance to chemotherapeutic anticancer drugs.
2. Describe in details the molecular mechanism of action of the antibiotic, penicillin in a gram negative bacteria like the *E.coli*
3. Draw the structure and give the molecular basis of the therapeutic action of the following: Drugs (a) the antimalaria, chloroquine (b) the antiinflammatory drug, aspirin (c) the anticancer drug, methotrexate
4. Acetaminophen is a common drug that is indicated for its analgesic and antipyretic therapeutic properties. What is the current state of knowledge on the mechanism of action by which it mediates its analgesic properties.
5. Discuss the role of cytochrome P₄₅₀ (CYP) enzymes in drug metabolism

biotransform of drug

Depression
Killing
disease, virus
decrease
Incidence