

DEPARTMENT OF BIOCHEMISTRY
2012/2013 RAIN SEMESTER EXAMINATION

COURSE CODE: BCH 418

TIME ALLOWED: 3 Hours

COURSE TITLE: PHARMACOLOGICAL BIOCHEMISTRY DATE: 9TH MAY 2014

INSTRUCTION: Answer Question 1 and ANY other Questions.

1. (a) (i) Distinguish between drug resistance and drug tolerance
(ii) What do you understand by the term drug action
(iii) what factors affect an individual response to a drug
(iv) What are the major mechanisms by which cells / microorganisms exhibit resistance to drug
(v) comment briefly on the possible role mutation in bringing out drug resistance
- (b) 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 and methotrexate
(iii) antimalaria activity of chloroquine
(iv) anti-HIV properties of 3'-Azido-3'-deoxythymidine (AZT)
(v) anti inflammatory properties of acetyl salicylate (aspirin)

Protein acyl pro Acetyl binding protein

40 marks

- 2 (a) Acetaminophen is a common across-the counter drug which is indicated as an analgesic and antipyretic medication however, an overdose of this drug can elicit hepatotoxicity. Discuss.
(b) Discuss briefly the biochemical basis of the antibiotic action of penicillin

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XN6BDH

30 marks

3. (a) Briefly, describe the life history of the malaria parasite, *plasmodium falciparum*
(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
(c) Discuss briefly some of the current therapeutic targets being investigated to combat the scourge of malaria.

→ Pump → Fudp → FUTP
Aga
leucine factor
Body weight
pregnancy and lactation
clinical data - drug interaction and food drug interaction

5-fluorodeoxyurmp
Methotrexate
Drug resistance

30 marks