

UNIVERSITY OF ESWATINI
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF COMMUNITY HEALTH NURSING SCIENCE
FINAL EXAMINATION: MAY 2019

COURSE CODE: CHN 404: PSYCHOPHARMACOLOGY

TIME ALLOCATED: 2 HOURS

TOTAL MARKS ALLOCATED: 75

INSTRUCTIONS:

- 1. PLEASE WRITE LEGIBLE**
- 2. THE PAPER HAS THREE QUESTIONS, PLEASE ANSWER ALL OF THEM.**
- 3. EACH QUESTION CARRIES A SUM TOTAL WEIGHTING OF 25 MARKS.**
- 4. USE THE PROVIDED ANSWER BOOKLET FOR ALL YOUR ANSWERS**
- 5. START A NEW QUESTION IN A NEW PAGE**
- 6. MAKE SURE THAT ALL YOUR ANSWERS ARE NUMBERED CORRECTLY**

QUESTION 1

A. Matching questions. Match column A with Column B by choosing the word/words in Column B that corresponds to the phrase in Column A. Indicate your answer by writing the alphabet to the phrase in Column A before the corresponding number of the chosen answer in Column B e.g. X =50. Each for a total of 20 marks.

COLUMN A		COLUMN B	
A.	Measurement of the extent to which a drug is dissolved throughout the body's compartments	1.	Pharmacokinetics
B.	A chemical that binds to a receptor and elicits an appropriate response	2.	Specificity
C.	Studying the properties of drugs and their interaction with living organisms, including viruses	3.	Intrathecal
D.	This oral drug's absorption can be impaired by food or acidity	4.	Active transport
E.	Structures that aid tissues to distinguish between chemical messengers	5.	Agonist
F.	Transports drugs of exceptionally large size across the cell membrane	6.	Pharmacodynamics
G.	The fraction of the administered dose of the unchanged drug that reaches the systemic circulation available to have an effect	7.	Late pregnancy
H.	The route of drug administration that achieves partial drug absorption	8.	Hepatic blood flow
I.	What the body does to the drug	9.	Volume of distribution
J.	Knowing the this can help you calculate the dose needed to achieve a critical plasma concentration	10.	Half life
K.	Ability of a drug to combine with a particular type of receptor	11.	Bio-availability
L.	One of the factors which can INCREASE the fraction of unbound (free) drug	12.	Pharmaceutics
M.	What the drug does to the body	13.	Early pregnancy
N.	The route of administration whereby the site of absorption is directly into the cerebro-spinal fluid	14.	Endocytosis
O.	For a drug that has a high hepatic extraction ratio, drug clearance is highly affected by this factor	15.	Therapeutic index
P.	The process that can move drugs from low to high areas of concentration through carrier proteins	16.	Receptors

Q.	The time required to reduce the plasma concentration of a drug to half of its original value	17.	Tetracycline
R.	The strength of the interaction between a drug and the binding site of the receptor	18.	Oral
S.	The difference between plasma concentration that produces desired effect plasma concentration that causes adverse effects is	19.	Affinity
T.	Time taken for blood level to reduce by 50%	20.	Intravenous
		21.	Pharmacology
		22.	Antagonists

B. Musa has ingested a toxic level of 500mg of an imbita whose half-life is 4 hours. The required dose for this imbita is 100mg. How long will it take for Musa's blood level to fall back to the level needed. (5marks)

QUESTION 2

The pharmacological management of anxiety involves the use of four classes of drugs including benzodiazepines

- A.** State three classes of benzodiazepines giving an example for each class.(6 marks)
- B.** Discuss the mechanism of action of benzodiazepines in the management of anxiety (6 marks)
- C.** State the pharmacokinetics of benzodiazepines (6 marks)
- D.** Benzodiazepines are not recommended for long term use in the management of anxiety. State and discuss the reasons for this. (6 marks)
- E.** What other classes of drugs are used in the management of anxiety. Give an example for each class (6 marks)

[Total: 30 marks]

QUESTION 3

Mthokozisi, a 38 year old male, was brought to the National Psychiatric Referral Hospital for the first time with a history of isolating himself, anhedonia, psychomotor retardation, irritability and suicidal ideation. He was diagnosed with BAD-with depressive features and admitted into acute ward. He tested positive to HIV but refused antiretroviral therapy. His prescription was:

Carbamazepine 400 mg bd
Haldol 5mg bd
Folic Acid od

- A.** Do you agree with the prescription? State your reasons for your answer. (6 marks)
- B.** What is the trade name for Carbamazepine (0.5 marks)
- C.** What class of drugs does Carbamazepine fall under? (0.5 mark)
- D.** Discuss the indication for, and mechanism of action of Carbamazepine in the case of Mthokozisi. (6 marks)
- E.** After three days of starting treatment, Mthokozisi presents with stiffness of joints and drooling of saliva.
 - a. What could be possible cause of these side effects? (1 mark)
 - b. Outline the nursing and pharmacological management of each side effect (6 marks)

[Total: 20 marks]