



<u>FACULTY</u>	: Health Sciences
<u>DEPARTMENT</u>	: Department of Nursing Science
<u>CAMPUS</u>	: DFC
<u>MODULE</u>	: MODULE 1: BASIC PHARMACOLOGY IN NURSING FAV0001
<u>SEMESTER</u>	: First semester
<u>EXAM</u>	: July 2019 Supplementary Examination

DATE : July 2019

SESSION : 08:00 -10:00

ASSESSORS(S) : Mrs P Zibi

MODERATOR : Mr BS Matlala

DURATION : 2 Hours

MARKS : 80

NUMBER OF PAGES: 3 (Three) PAGES

INSTRUCTIONS:

1. Answer ALL THE QUESTIONS.
 2. Number your answers CLEARLY.
 3. One mark per motivated fact.
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SSAO MODULE CODE: FAV0001 – JULY SUPPLEMENTARY EXAMINATION
MODULE 1: BASIC PHARMACOLOGY IN NURSING

- 2 -

QUESTION 1

In 2016, researchers published the results of an investigation against a student nurse, where a cluster of 5 adult patients accidentally received insulin instead of the influenza vaccine. Acute hypoglycaemia was reported in all 5 patients who received the insulin with varying degrees of symptoms. It is noted that the patients were not informed about the “vaccines” they were accidentally given. It was also not documented that the patients received the “vaccines”. After the first 2 patients complained of sweating and light-headedness, the student nurse reported the incidents to the supervising nurse, but did not stop administering the vaccines. Later, two patients required hospitalization for their symptoms, one of which was documented to have a blood glucose level of 2.3 mmol/dc. The patients were instructed by the nurse to stop performing as there was nothing wrong with them. The investigation revealed that the influenza vaccine vial was kept in the refrigerator along with a 10 mL vial of Humalog U-100 insulin; they were not stored in separate, labelled containers. Analyse the scenario and answer the questions below.

- 1.1 Identify five errors that were committed by the student nurse (5)
- 1.2 Stipulate the patients’ rights violated as identified in the scenario above (5)
- 1.3 According to Regulation R2418, explain the functions of the nurse as stipulated in the regulation to guide the practice of the nurse regarding medication (5)
- 1.4 According to the Medicines and Related Substances Act, Act 101 of 1965 as amended and the scope of practice R2598, analyse the scenario, apply the act and regulation to the scenario above (5)
- 1.5 Apply the implications of the Bergman’s model to the practice of the nurse as related to the scenario above (10)
- 1.6 Identify five (5) ethical principles that were violated in the scenario above and indicate strategies that can be implemented to avoid the violation. (10)

***(40)**

...3/

SSAO MODULE CODE: FAV0001 – JULY 2019 SUPPLEMENTARY EXAMINATION
MODULE 1: BASIC PHARMACOLOGY IN NURSING

- 3 -

QUESTION 2

Please write the correct answer on the multiple choice questions in your answer book.
Only one (1) answer is correct. (10)

2.1 Adrenergic drugs mimic the action of

- a. Acetylcholine
- b. Nor epinephrine
- c. Atropine
- d. Digoxin

2.2 Which adrenergic antagonist block B₁ and B₂ receptors

- a. Atenolol
- b. Sotalol
- c. Propanolol
- d. None of the above

2.3 Which of these findings would be most significant if a patient who is asthmatic was prescribed propranolol

- a) Apical pulse of 100 beats per minute
- b) Expiratory wheeze
- c) Urinary tract infection
- d) Headache

2.4 Which of these conditions, if identified in the history of a patient receiving a drug that blocks beta₁ adrenergic blocking agents would be a concern to the nurse

- a. Severe allergy to bee stings
- b. Atrioventricular Heart Block
- c. Tachycardia
- d. BP 100/60

SSAO MODULE CODE: FAV0001 – JULY 2019 SUPPLEMENTARY EXAMINATION
MODULE 1: BASIC PHARMACOLOGY IN NURSING

- 4-

- 2.5 An Alpha antagonist is prescribed for a patient with high blood pressure. State if the following is TRUE or False
- a) Because it increases TPR thus reducing blood pressure
 - b) Because it causes vasodilatation thus reducing blood pressure
- 2.6 A patient is receiving Methyldopa 250mg BD but the blood pressure persists to be $170/140$. State if the following is TRUE or FALSE
- a. The medication must be continued but the patient must be on bedrest
 - b. The medication must be discontinued and reviewed as a matter of urgency
- 2.7 Epinephrine is
- a. An alpha and beta blocker
 - b. An alpha and beta agonist
 - c. An alpha, beta and muscarinic agonist
 - d. A muscarinic and nicotinic antagonist
- 2.8 A patient who has been getting the same medication over a period of time but still experiences the same problem after the medication had been working for 5years. This may be an example of
- a. Addiction
 - b. Physical dependence
 - c. Tolerance
- 2.9 Drugs that are given to a patient and are absorbed easily are
- a. Water soluble
 - b. Lipid soluble
 - c. None of the above
- 2.10 Atenolol is drug that is a selective antagonist for the B₁ receptors that will lead to
- a. Hypotension and tachycardia
 - b. Hypertension and tachycardia
 - c. Hypotension and bradycardia
 - d. None of the above

QUESTION 3

Discuss Cholestyramine as a known antilipemic under the following headings:

- 3.1.1 Drug Class (1)
- 3.1.2 Mechanism of action (2)
- 3.1.3 Side Effects (2)
- 3.1.4 Health education to be given to a patient on antilipemics (5)

***[10]**

QUESTION 4

Yenzokuhle, is a 60-year old woman who has been under your care and presents with shortness of breath which has been progressive over the past five days. She has, however, experienced episodes of shortness of breath during the past four months, especially when she is exposed to dust and dog fur. She fatigues easily and has lost "all my energy to do anything." She also presents with cyanosis. She generally sleeps with two, sometimes three pillows. Vital Signs: Blood Pressure 160/92mmHg, Heart Rate 110/min; Respiratory Rate 30/min. Examination of the chest revealed wheezing, decreased air entry on both lungs. Analyse the scenario above and answer the questions below

4.1 Suggest four commonly used drugs from different drug classes that can be used for this Asthmatic patient and indicate why you would use them and show the benefits in this condition. (10)

4.2. Indicate the health education based on the medication that you can give to this patient. (10)

***(80)**