



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES
KENYA REGISTERED COMMUNITY HEALTH NURSING
END OF SEMESTER AUGUST 2024 EXAMINATIONS**

COURSE CODE AND TITLE DNS 121: PHARMACOLOGY II

DATE: Monday 12th August 2024

TIME: 2 HOURS

Start: 0900 HOURS

Finish: 1100 HOURS

INSTRUCTIONS

- 1. This exam will be marked out of 70 Marks**
- 2. ALL Questions are compulsory.**
- 3. The Examination has Three Sections: Section I- Multiple Choice Questions, Section II: Short Answer Questions, Section III: Long Essay Questions**
- 4. Answer all Questions in the ANSWER BOOKLET provided**
- 5. Do not write anything on the question paper**
- 6. Use the back of your booklet for rough work if need be.**

SECTION I: MULTIPLE CHOICES QUESTIONS (20 MARKS)

1. One of the following conditions increases a patient's risk of developing lithium toxicity:
 - a) Hypertension
 - b) Hyperthyroidism
 - c) Renal impairment
 - d) Asthma
2. Proton pump inhibitors act by:
 - a) Neutralizing stomach acid
 - b) Blocking H₂ receptors
 - c) Inhibiting gastric proton pumps
 - d) Enhancing gastric mucosal barrier
3. Corticosteroids should be tapered off to:
 - a) Maintain drug efficacy
 - b) Prevent adrenal insufficiency
 - c) Ensure patient compliance
 - d) Minimize side effects
4. Calcium channel blockers are contraindicated in patients with:
 - a) Atrial fibrillation
 - b) Heart failure with reduced ejection fraction
 - c) Stable angina
 - d) Hypertension
5. The hormone produced by the alpha cells in the pancreas: -
 - a) Insulin
 - b) Glucagon
 - c) Somatostatin
 - d) Amylin

6. The main adverse effect of Thiazolidinediones (TZDs)
 - a) Weight loss
 - b) Hyperinsulinemia
 - c) Hepatotoxicity
 - d) GI disturbance
7. The antidote for opioid overdose is:
 - a) Flumazenil
 - b) Naloxone
 - c) Atropine
 - d) Protamine
8. A common side effect of thiazide diuretics: -
 - a) Hyperkalemia
 - b) Hyperglycemia
 - c) Hypotension
 - d) Hypertension
9. Beta-blockers reduce blood pressure by: -
 - a) Increasing cardiac output
 - b) Decreasing heart rate and cardiac output
 - c) Increasing sodium reabsorption
 - d) Decreasing peripheral vascular resistance
10. The primary mechanism of action of ACE inhibitors in treating hypertension:
 - a) Blocking beta-adrenergic receptors
 - b) Increasing sodium excretion
 - c) Inhibiting the conversion of angiotensin, I to angiotensin II
 - d) Blocking calcium channels
11. Beta-blockers reduce blood pressure by: -
 - a) Increasing cardiac output
 - b) Decreasing heart rate and cardiac output
 - c) Increasing sodium reabsorption
 - d) Decreasing peripheral vascular resistance

12. Hydralazine is most often used in combination with which drug class to counteract its side effects: -
- a) Calcium channel blockers
 - b) Diuretics
 - c) Beta-blockers
 - d) ACE inhibitors
13. The primary mechanism of action of carbonic anhydrase inhibitors: -
- a) Inhibition of Na⁺ reabsorption
 - b) Inhibition of K⁺ reabsorption
 - c) Inhibition of bicarbonate reabsorption
 - d) Inhibition of Ca²⁺ reabsorption
14. A diuretic that is effective in the management of glaucoma: -
- a) Loop diuretics
 - b) Osmotic diuretics
 - c) Thiazides
 - d) Potassium-sparing diuretics
15. The adverse effect that is common with Misoprostol use is: -
- a) Hypertension
 - b) Diarrhea
 - c) Hyperglycemia
 - d) Weight gain
16. A diuretic that is considered to be a high-ceiling diuretic: -
- a) Hydrochlorothiazide
 - b) Spironolactone
 - c) Furosemide
 - d) Acetazolamide

17. Diuretic class that is effective in reducing intracranial pressure: -

- a) Loop diuretics
- b) Thiazides
- c) Osmotic diuretics
- d) Potassium-sparing diuretics

18. Salbutamol is a: -

- a) Corticosteroid.
- b) Alpha-adrenergic receptor agonists.
- c) Beta-adrenergic receptor agonist.
- d) Anticholinergic.

19. One of the following drugs is leukotriene-modifying drug indicated in the management of bronchial asthma: -

- a) Triamcinolone acetonide
- b) Budesonide
- c) Zafirlukast
- d) Flunisolide

20. Loop diuretics exert their action primarily in which part of the nephron: -

- a) Proximal tubule
- b) Thin descending limb of Loop of Henle
- c) Thick ascending limb of Loop of Henle
- d) Distal tubule

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

1. Giving one example of each, outline four (4) classes of oral hypoglycemic agents. (8 marks)
2. Explain the mechanism of action of Beta 2 agonist in management of asthma. (5 marks)
3. Giving one example of each, outline three (3) classes of diuretics. (6 marks)
4. State five (5) classes of antihypertensive drugs. (5 marks)
5. Explain six (6) lifestyle modifications that can be used in the management of hypertension. (6 marks)

SECTION III: LONG ANSWER QUESTIONS (20 MARKS)

1. Mr. Katege 44 years is admitted in the medical with a diagnosis of Peptic Ulcer Disease (PUD). On examination, the nurse notes that she has peripheral pitting edema.
 - a) State four (4) differences between stomach ulcers and duodenal ulcers. (4 marks)
 - b) Giving examples outline four (4) classes of drugs that can be used in treatment of PUD. (8 marks)
 - c) Explain the mode of action of each class stated in the above question the mode of actions. (8 marks)