

**MARCH, 2017 KECHN
PHARMACOLOGY EXAM**

PART I: MULTIPLE CHOICE QUESTIONS (MCQs)

1. The term "pharmacokinetics" includes the study of?
 - a) Pharmacological effects of drugs
 - b) Unwanted effects of drugs
 - c) Chemical structure of a medicinal agent
 - d) Distribution of drugs in the organism.

2. The term "bioavailability" means?
 - a) The degree to which a drug binds to plasma protein
 - b) Permeability of a drug through the blood - brain barrier
 - c) Fraction of an uncharged drug reaching the systemic circulation after administration
 - d) Amount of a substance in urine relative to the initial dose

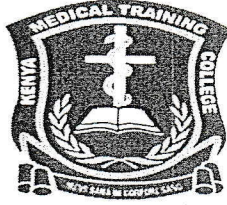
3. Which route of drug administration is most likely to lead to the first-pass effect?
 - a) Subcutaneous
 - b) Oral
 - c) Intravenous
 - d) Intramuscular

4. Pharmacodynamics involves the study of following EXCEPT:
 - a) Biological and therapeutic effects of drugs
 - b) Absorption and distribution of drugs
 - c) Mechanisms of drug action
 - d) Drug interactions

5. A drug that interacts with a receptor to produce maximal effects and has high efficacy is called:
 - a) Partial agonist
 - b) Antagonist
 - c) Agonist-antagonist
 - d) Full agonist

PART I: SHORT ANSWER QUESTIONS (SAQs)

1. Define the following terms:
 - a) Pharmacology (1 mark)
 - b) Drug (1 mark)
 - c) Toxin (1 mark)
2. Giving relevant examples, state five (5) sources of drugs (5 marks)
3. State five (5) routes of drug administration (5 marks)
4. Explain three (3) factors that influence absorption of a drug (6 marks)
5. List any two (2) routes of drug excretion (1 marks)
6. Explain the role of the nurse in management of controlled drugs in the hospital set up (5 marks)



KMTC/QP-8-TIS

**KENYA MEDICAL TRAINING COLLEGE FACULTY OF NURSING
COMMON PROMOTIONAL EXAMINATION**

CLASS: **KRCHN SEPTEMBER 2016 (B)**

PAPER 5: **PHARMACOLOGY**

DATE: **19th JULY 2017**

TIME ALLOWED: **3 HOURS (9.00AM – 12.00 PM)**

INSTRUCTIONS

- Enter exam number on each sheet of paper used
- All questions are compulsory
- Part I (MCQs) write the correct answer in capital letters in the answer sheet provided
- Part II (SAQs) answer the questions following one another
- Part III (LAQs) answer each question separately
- Number the questions/parts appropriately wrong numbering will warrant 10% deduction from the respective question or parts

NB: (a) No use of Mobile Phones in the Examination Hall
 (b) All candidates must sign their names while handing in their
 scripts

Part I – Multiple Choice Questions (20Marks)

- 1. Adverse effects of chloramphenicol include:-**
 - (a) Phlebitis and thrombosis when the drug is administered intravenously
 - (b) Dysphagia and oesophageal ulcers
 - (c) Depression of the bone marrow leading to aplastic anaemia
 - (d) Discolouration and inadequate calcification of primary teeth of the foetus

- 2. Chemical name of a drug:-**
 - (a) Is the name under which the drug is listed in official publication
 - (b) Is used to identify the company responsible for manufacturing the drug
 - (c) Is not capitalized, simpler and distinctive
 - (d) Indicates atomic or molecular structure of the drug

- 3. The first basic step in the management of a patient with drug poisoning is:-**
 - (a) Administer specific antidote
 - (b) Provide first aid for support
 - (c) Identify the poison
 - (d) Prevent further absorption

- 4. Non-narcotic analgesic include:-**
 - (a) Indomethacin, acetaminophen, acetylsalicylic
 - (b) Indomethacin, acetaminophen, demoral
 - (c) Butorphanol, acetaminophen, demoral
 - (d) Demoral, acetylsalicylic acid, butorphanol

- 5. A drug that is contraindicated in pre-existing hearing loss is:-**
 - (a) Streptomycin
 - (b) Sulphadiazine
 - (c) Erythromycin
 - (d) Tetracyclines

- 6. The commonly used anti-anxiety (anxiolytic) drugs are:-**
 - (a) Antihistamines
 - (b) Antidepressants
 - (c) Benzodiazepines
 - (d) Barbiturates

7. The drug Phenobarbital is classified under:-

- (a) Hydantoins
- (b) Aminoglycosides
- (c) Barbiturates
- (d) Antitussives

8. The anticholinergic agents:-

- (a) Oppose the action of acetylcholine
- (b) Oppose the action of noradrenalin
- (c) Anticonvulsants
- (d) Sulphonamide

9. Crystallization is a major adverse effect which may occur to patients on:-

- (a) Antispasmodics
- (b) Antidepressants
- (c) Anticonvulsants
- (d) Sulphonamide

10. Indicate True or False in the following statements:-

- i. Drug addiction is characterized by an overpowering desire but not compulsion to continue taking the drug
- ii. Beta lactam antibiotics include penicillin and sulphonamides

11. Osmotic diuretics include:-

- (a) Mannitol, acetazolamide
- (b) Furosemide, bumetanide
- (c) Cyclopentiazide, hydroflumethiazide
- (d) Spironolactone, triamterene

12. Mast cell stabilizers include:-

- (a) Adrenaline
- (b) Sodium chromoglycate
- (c) Astemizole
- (d) Phenergan

13. Antidote of Heparin is:-

- (a) Warfarin
- (b) Protamine sulphate
- (c) Vitamin K
- (d) Calcium gluconate

14. Drugs used in peptic ulcer disease classified as H2 receptor blockers include:-

- (a) Ranitidine, famotidine
- (b) Omeprazole, bismuth chelate
- (c) Tetracycline, cimetidine
- (d) Aluminium hydroxide, magnesium hydroxide

15. An anti-tuberculosis that induces liver enzymes is:-

- (a) Rifampicin
- (b) Pyrazinamide
- (c) Streptomycin
- (d) Ethambutol

16. Vitamin K dependent factors include:-

- (a) II, V, VII, X
- (b) II, VII, IX, X
- (c) V, VII, IX, X
- (d) II, V, VII, IX

17. The standard treatment of tuberculosis is:-

- (a) 2ERH 4RH
- (b) 2ERHZ 4RH
- (c) 6EH
- (d) 8ERH

18. A drug that can be used in pheochromocytoma include:-

- (a) Labetolol
- (b) Gentamicin
- (c) Chlorpheniramine
- (d) Bismuth chelate

19. The dosage for chlorpheniramine meclizine in an adult with pruritis is: -

- a) 4mg tds
- b) 40mg tds
- c) 4mg od
- d) 40mg od

20. Steroids acts by:-

- (a) Blocking cyclo-oxygenase
- (b) Blocking phospholipase
- (c) Increasing body fluids
- (d) Decreasing fibrous tissue in the body

Part II – Short Answer Questions (40Marks)

1. State five (5) classifications of antibiotics by mechanism of action. **(5Marks)**
2. State five (5) indications of anticonvulsants **(5Marks)**
3. State five (5) indications of lergactil (chlorpromazine) **(5Marks)**
4. Define the following terms:-
 - (a) Hypnotics **(1Mark)**
 - (b) Sedatives **(1Mark)**
 - (c) Synergistic drug effect **(1Mark)**
 - (d) Cumulative effect **(1Mark)**
 - (e) Systemic action **(1Mark)**
5. State five health messages you would share with a patient on anti-tuberculous drugs **(5 marks)**
6. Explain the mechanism of action for the following drugs
 - (a) Omeprazole
 - (b) Streptomycin **(5 marks)**
7. Draw and label a diagram to show four sites of action for Diuretics **(5 marks)**
8. State five (5) indications of Histamine - H1 receptor blockers **(5 marks)**

Part III – Long Answer Questions (40Marks)

1. **Using the following sub-headings:-**

- (a) 4 indications
- (b) 3 contraindications
- (c) 3 adverse effects

Write short notes on the following:-

(i) Morphine

(10 marks)

(ii) Streptomycin

(10marks)

2. **Using the following sub-headings:-**

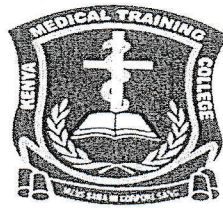
- (a) Classification
- (b) Mechanism of action
- (c) Indication
- (d) Common side effects

Write short notes on:-

(a) Propranolol

(b) Captopril

(20 marks)



**KENYA MEDICAL TRAINING COLLEGE FACULTY OF NURSING
COMMON PROMOTIONAL EXAMINATION**

CLASS: KECHN SEPTEMBER 2016

PAPER 4: BIOLOGICAL SCIENCES

DATE: 20th JULY 2017

TIME ALLOWED: 3 HOURS (2.00PM – 5.00 PM)

INSTRUCTIONS

- Enter exam number on each sheet of paper used
- All questions are compulsory
- Part I (MCQs) write the correct answer in capital letters in the answer sheet provided
- Part II (SAQs) answer the questions following one another
- Part III (LAQs) answer each question separately
- Number the questions/parts appropriately wrong numbering will warrant 10% deduction from the respective question or parts

**NB: (a) No use of Mobile Phones in the Examination Hall
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Part I: Multiple Choice Questions (20marks)**1. The term "pharmacokinetics" includes:**

- a) Study of mechanisms of drug action
- b) Drug biotransformation in the organism
- c) Influence of drugs on metabolism processes
- d) Study of unwanted effects of drugs

2. The main site of drug excretion in the body is:

- a) Kidney
- b) Lungs
- c) Skin
- d) Liver

3. Local anesthetics produce:

- a) Analgesia, amnesia, loss of consciousness
- b) Loss of pain sensation without loss of consciousness
- c) Alleviation of anxiety and pain with an altered level of consciousness
- d) A stupor or somnolent state

4. The following drugs is a non-selective beta receptor antagonist

- a) Metoprolol
- b) Atenolol
- c) Propranolol
- d) Acebutolol

5. An appropriate drug for lowering blood cholesterol levels is:

- a) Carvedilol
- b) Methyldopa
- c) Atorvastatin
- d) Nitroglycerine

6. The following is an indication for Ranitidine :

- a) Peptic ulcer disease.
- b) Pregnancy vomiting.
- c) Exophthalmic goitre.
- d) Toxic nodular goitre.

7. The following anti-protozoa is effective against intestinal and extra intestinal amoebiasis.

- a) Metronidazole
- b) Chloroquine
- c) Iodoquinol
- d) Paromomycin

8. The following is true about aminoglycosides

- a) They are bacteriostatic
- b) They are bactericidal
- c) Inhibits DNA synthesis
- d) They are teratogenic.

9. The following is true about anti-clotting drugs:

- a) Warfarin is given orally.
- b) Heparin can be given orally.
- c) Heparin is safe in pregnancy
- d) Their major side effect is clotting.

10. The most appropriate intervention for a drowsy patient on anti- anxiety drugs is:

- a) Withhold drug and notify physician
- b) Let him take drugs with food and milk
- c) Let him arise slowly from a sitting position
- d) Ask him not to operate dangerous machinery

11. Antiparkinsonian agents act through restoring the natural balance of:

- a) Dopamine and serotonin neurotransmitters
- b) Serotonin and adrenaline neurotransmitters
- c) Acetylcholine and dopamine neurotransmitters
- d) Dopamine and noradrenaline neurotransmitters.

12. The following is a first line drugs used in the treatment of acute asthma:

- a) B- adrenergic agonists
- b) Methylxanthines
- c) Anticholinergics
- d) Corticosteroids

13. The following vitamins is responsible for integrity of epithelial cells:

- a) Vitamin A
- b) Vitamin C
- c) Vitamin D
- d) Vitamin K

14. Nutrients are classified as:

- a) Essential and essential nutrients
- b) Vitamin and minerals
- c) Macro and micro nutrients
- d) Carbohydrates and lipids

15. The other name for weaning is:

- a) Transitional foods
- b) Complementary foods
- c) Family foods
- d) Nutritional foods

16. The following is not associated with nutritional disorders of carbohydrates.

- a) Kwashiorkor
- b) Cardiovascular diseases
- c) Rickets
- d) Obesity

17. Simple sugars include the following :

- a) Galactose and maltose
- b) Glucose and maltose
- c) Glucose and fructose
- d) Glucose and lactose

18. The following foods is of a high biological value:

- a) Spaghetti
- b) Corn-meal
- c) Espresso tea
- d) Egg omellete

19. The following agents is used to treat acute opioid poisoning:

- a) Meperidine
- b) Buprenorphine
- c) Naloxone
- d) Butorphanol

20. The following drugs is used for relief of acute asthmatic attack:

- a) Formoterol
- b) Salbutamol
- c) Nedocromil
- d) Zileuton

Part II: Short Answer Questions (40marks)

1. Explain any five (5) routes of drug administration **(5 Marks)**
2. State five (5) sources of drug using relevant examples **(5 Marks)**
3. Explain your role as a nurse while administering insulin to a diabetic patient. **(4 Marks)**
4. State three (4) side effects of each of the following drugs.
 - a) Nevirapine **(3 Marks)**
 - b) Pethidine **(3 Marks)**
5. State three (3) nursing responsibilities for a patient on vincristine **(3 Marks)**
6. Explain the mechanism of action of three classes of drugs used in treating bronchial asthma. **(6Marks)**
7. List four(4) basic general functions of nutrients **(2marks)**
8. Explain three(3) factors that influence the choices of food among individuals and families **(6marks)**
9. State three(3) factors that promote good nutrition **(3marks)**

Part III: Long Answer Question (40marks)

1. Mr. x aged 50 years is diagnosed with bacterial pneumonia and is admitted in male medical ward.

- a) Differentiate between a bacteriostatic and a bactericidal agent. **(4Marks)**
- b) With an example in each case, list six classes of antibiotics **(6Marks)**
- c) Explain the mechanism of action for each class named above. **(6Marks)**
- d) Describe four (4) ways in which resistance to antibiotics occurs. **(4Marks)**

2. Mary is supposed to prepare a dinner for a family of four, comprises of mother, father teenage boy and a toddler. She is requesting you to assist in budget preparation and enlightenment on food nutrients and their functions to the body.

- a) List four reasons why she should prepare a budget **(4 Marks)**
- b) Explain six factors she should consider during preparations of budget **(6 Marks)**
- c) Highlight FIVE factors that influence food purchasing practices **(5 Marks)**
- d) Explain four (5) functions of lipids to our body **(5 Marks)**