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UNIVERSITY EXAMINATIONS 2022/2023

SECOND YEAR, FIRST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION
FOR DEGREE OF BACHELOR OF SCIENCE IN NURSING

NND 3214: CLINICAL PHARMACOLOGY II

DATE: JUNE 2023

TIME: 3 HOURS

INSTRUCTIONS: *Answer all questions in the booklet provided*

Ensure that all your answers are properly numbered

Section A: Multiple Choice Questions (MCQs): Write the correct answer on the space provided in the answer booklet.

Section B: Short Answer Questions-Answer questions following each other on the answer booklet

section C: Long Answer Questions-Answer the questions on the answer booklet.

SECTION A (MULTIPLE CHOICE QUESTIONS (20 MARKS))

1. Activation of the sympathetic nervous system leads to:
 - a. Stimulation of peristalsis in the gut
 - b. Vasoconstriction in arterioles containing α 1-adrenoceptor
 - c. Release of adrenaline from sympathetic nerve terminals
 - d. A positive chronotropic effect in the heart
 - e. Constriction of bronchioles in the lungs
2. Which of the following secretions is not stimulated by acetylcholine?
 - a. Tear
 - b. Bile

- c. Pancreatic juice
 - d. Sweat
 - e. Mucus
3. The following classes of drug are used to improve Gastro Intestinal function
- a. Antiemetics
 - b. Obesity drugs
 - c. Lipostatins
 - d. Decongestands
 - e. Antidiarrheal and laxative drugs
4. The organophosphate produce irreversible inhibition of cholinesterase because:
- a. They bind to an allosteric site of the enzyme resulting in unfavorable on formation of esteratic site to bind acetylcholine.
 - b. Regeneration time of the phosphorylated enzyme is longer than the turnover time of the enzyme molecules
 - c. Phosphorylation results in rapid degradation of enzyme molecules
 - d. They are neither metabolized nor excreted from the body
 - e. Inhibition of carboxyl ester hydrolases, particularly acetylcholinesterase (AChE). Is suitably attained
5. The NSAID ibuprofen:
- a. Interferes with the prostaglandins involved in pain
 - b. Inhibits synthesis of prostaglandins peripherally and possibly centrally
 - c. Activates neurotransmitter synthesis and release during inflammation
 - d. It is neuromuscular junction blocker
6. Autacoids differ from hormones in that?
- a. Autacoids are involved only in the causation of pathological states
 - b. Autacoids do not have a specific cell/tissue of origin
 - c. Autacoids generally act locally at the site of generation and release
 - d. Autacoids are chemical mediators
 - e. Autacoids are also neurotransmitters
7. The following types of drugs are used to improve cardiovascular function?
- a. Inotropic drugs
 - b. Cholinergic agonists
 - c. Anticholinesterase drugs
8. Diuretics

9. Codeine is used clinically as?
- Analgesic
 - Antitussive
 - Antidiarrheal
 - Antispasmodic
 - Diaphoretic
10. In the following drugs identify loop diuretics
- Torsemide
 - Bendroflumethiazide
 - Hydrochlorothiazide
 - Ethacrynic Acid
 - Indapamide
11. Actions of growth hormone include the following except:
- Increased protein synthesis
 - Increased fat utilization
 - Increased carbohydrate utilization
 - Glucose intolerance
 - To stimulate production of insulin-like growth factors
12. The following classes of drugs are used to improve Gastro intestinal function
- Antiemetics
 - Obesity drugs
 - Lipostatsins
 - Decongestants
 - Antidiarrheal and laxative drugs
13. The prominent actions of bromocriptine include:
- Dopamine D2 agonism
 - Dopamine D2 antagonism
 - Dopamine D1 antagonism
 - Treatment of hyperprolactinemia
14. Which of the following drugs are a nondepolarizing neuromuscular blockers?
- Succinylcholine
 - Vecuronium
 - Decamethonium
 - Pancuronium

- e. Dantrolene sodium
15. The following classes of drugs are used in management of convulsive disorders
- Carboxylic Acid Derivatives
 - 1-(Aminomethyl) Cyclohexane Acetic Acid
 - 5-HT agonists
 - Hydantoins
 - Barbiturates
16. The primary mechanism by which general anaesthetics produce their action is:
- Affecting receptor operated ion channels in cerebral neurons
 - Blocking voltage sensitive Na^+ channels in neuronal membrane
 - Depressing metabolic activity of cerebral neurons
 - Blocking production of high energy phosphates in the brain
 - B & C above
17. Match the following drugs to their indicators
- | | |
|---------------------------------------|---------------------------------|
| a. Cardiac glycosides | Atrial fibrillation and flutter |
| b. Phosphodiesterase (PDE) Inhibitors | Heart failure |
| c. Nitrates | Arrhythmias |
| d. Calcium channel blockers | Prevent angina |
| e. Angiotensin II receptor blockers | Tachycardia |
18. Under physiological conditions the rate limiting enzyme in the generation of angiotensin II is:
- Renin
 - Angiotensin converting enzyme
 - Aminopeptidase
 - Angiotensinase
 - Protease enzyme
19. The following statements are true about topical non-steroidal anti-inflammatory drugs (NSAIDS) except:
- They can be used for osteoarthritis
 - Used for soft tissue rheumatism
 - The drug penetrates to the sub-adjacent tissues attaining high concentration in the affected muscles
 - They are marketed in the form of gels
 - They can also be applied on broken skin to relief pain

20. The following classes of oral antidiabetics to their drugs correctly
- First-generation sulfonylureas (such as acetohexamide, chlorpropamide, tolazamide, and tolbutamide)
 - Second-generation sulfonylureas (such as glimepiride, glipizide, and glyburide)
 - Thiazolidinedione drugs (pioglitazone and rosiglitazone)
 - Biguanides (Metformin)
 - Alpha-glucosidase inhibitors (acarbose and miglitol)
21. Absorption of oral iron preparations can be facilitated by co-administering:
- Antacids
 - Tetracyclines
 - Phosphates
 - Ascorbic acid
 - Caffeine

SECTION B (SHORT ANSWER QUESTIONS (40 MARKS))

1. Explain three advantages of the inhalational route of drug administration (6 Marks)
2. General anaesthetics produce immobility in response to painful surgical stimuli by acting primarily in which part of the Nervous system? (4 Marks)
3. State which anesthetic drug that produces dissociative anesthesia (4 Marks)
4. Describe two routes of drug administration that pass first-pass metabolism. (4 Marks)
5. Give three benefits of using β -adrenergic blockers in management of chronic heart failure (CHF) (4 Marks)
6. Name the class and give two examples of antibiotics that inhibit enzymes required for bacterial DNA synthesis? (6 Marks)
7. Define what is drug bioavailability. (4 Marks)
8. Name one general-purpose antidote used for various types of acute oral poisoning. (4 Marks)
9. State two drugs commonly used in treatment of opioid overdose. (4 Marks)

SECTION C (LONG ANSWER QUESTIONS (40 MARKS))

1. Explain the responses of antihistamines on the following effector organs/body systems. (20 Marks)
2. With examples in each group classify antipsychotics. (20 Marks)