



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING AND MIDWIFERY SCIENCES
BACHELOR OF SCIENCE IN NURSING
END OF SEMESTER EXAMINATIONS AUGUST 2021

UNIT CODE: BSN 222/BSM 222

UNIT NAME: **CLINICAL PHARMACOLOGY**

DATE: MONDAY 26TH JULY, 2021

TIME: 2 HOURS

Start: 9.00AM

Finish: 11.00AM

INSTRUCTIONS

1. Write your registration number in all answer pages
2. The exam is set out of 70 marks
3. Section A has 50 MCQs, each is one mark
4. For section A, select only one correct response
5. Section B has Short Answer Questions (SAQs) worth 20 marks
6. Answer all the questions in all sections

SECTION I: MULTIPLE ANSWER QUESTIONS (40 MARKS)

1. Which one of the following antifungal is commonly used for suppression of local candida infection?
 - A. Miconazole
 - B. Terbinafine
 - C. Nystatin
 - D. Fluconazole
2. A drug that stimulates beta1- and beta2-adrenergic receptors can be expected to cause:
 - A. A decrease in heart rate
 - B. A decrease in total peripheral resistance
 - C. A constriction of airway smooth muscle resistance
 - D. A decrease in renin release
3. This drug is effective in treating asthma but is most likely to produce tachycardia and arrhythmias
 - A. Salmeterol
 - B. Albuterol
 - C. Propranolol
 - D. Isoproterenol
4. The following statement is **TRUE** regarding receptor antagonists: -
 - A. Prevents agonists from binding to antagonists
 - B. Progressively inhibits agonist response to decreasing concentrations of antagonist
 - C. Binds to the receptor and activate it
 - D. Inhibits receptors to a degree proportionate to antagonist concentration
5. _____ Inhibits fungal squalene epoxidase.
 - A. Ketoconazole
 - B. Fluconazole
 - C. Terbinafine
 - D. Nystatin
6. Regarding first order kinetics, all of the following are true **EXCEPT**:-
 - A. First order kinetics means rate of reaction is proportional to concentration
 - B. First order kinetics is more common than zero order kinetics
 - C. First order kinetics generally apply to high plasma concentrations (>20 mg / 100ml) of ethanol
 - D. First order kinetics result in steady state concentrations after multiple dosing.

7. NSAIDs increase the risk of CNS adverse effects when taken with which group of antibiotics?
 - A. Macrolides
 - B. Penicillins
 - C. Aminoglycosides
 - D. Quinolones

8. The most dangerous metabolic side effect of general anesthesia that can occur during surgery is:
 - A. Hyperglycemia
 - B. Hyperthermia
 - C. Hypoglycemia
 - D. Hypothermia

9. All narcotics, regardless of their origin, reduce pain by:
 - A. Stimulating opiate receptors
 - B. Promoting the release of excitatory transmitters
 - C. Releasing large quantities of endorphin
 - D. Blocking the *mu* receptors

10. Which of the following is **NOT** effective in preventing the emergence or spread of antibiotic resistant pathogens:
 - A. Adherence to hand hygiene
 - B. Contact isolation during hospitalization for patients colonized with MRSA
 - C. Avoiding the use of antibiotics for viral infections
 - D. Treating infections for a longer duration

11. Among anticancer antibiotics: most toxic one is:-
 - A. Plicamycin (Mithramycin)
 - B. Dactinomycin (Cosmegen)
 - C. Doxorubicin (Adriamycin)
 - D. Bleomycin (Blenoxane)

12. Which of the following is a phase one reaction in drug Metabolism?
 - A. Reduction
 - B. Acetylation
 - C. Glucuronidation
 - D. Methylation

13. Which of the following is **NOT** a current example of clinically important antibiotic resistance?
 - A. Methicillin resistant *Staphylococcus aureus*
 - B. Penicillin resistant *Streptococcus pyogenes* (Group A Strep)
 - C. Fluoroquinolone resistant *P. aeruginosa*
 - D. Vancomycin resistant Enterococci

14. In regard to pharmacokinetics of doxycycline _____ is **CORRECT**.
- A. 60-70% absorption after oral administration
 - B. Absorption is impaired by antacids
 - C. Widely distributed especially into the CSF
 - D. Is eliminated via renal mechanisms
15. Which of the following drug inhibits DNA gyrase?
- A. Penicillin
 - B. Trimethoprim
 - C. Chloramphenicol
 - D. Ciprofloxacin
16. Overdoses of acetaminophen (Tylenol) causes damage to the: -
- A. Lungs
 - B. Liver
 - C. Kidney
 - D. Pancreas
17. A 14-year-old patient is diagnosed with absence epilepsy. Any of the following drugs could be considered a reasonable choice to prescribe **EXCEPT?**
- A. Ethosuximide
 - B. Phenobarbital
 - C. Carbamazepine
 - D. Valproic acid
18. A contraindication for topical corticosteroid usage in a male patient with atopic dermatitis (eczema) is:
- A. Parasite infection
 - B. Viral infection
 - C. Bacterial infection
 - D. Spirochete infection
19. Of the xanthines, _____ is the most effective bronchodilators.
- A. Caffeine
 - B. Cromolyn
 - C. Theobromine
 - D. Theophylline
20. _____ is the primary use of fluoxetine (Prozac).
- A. Treating obsessive-compulsive disorder
 - B. Management of morbid obesity
 - C. Treating endogenous depression
 - D. Management of alcohol withdrawal

21. _____ are serious adverse effects of oral contraceptives.
- Increase in skin oil followed by acne
 - Headache and dizziness
 - Early or mid-cycle bleeding
 - Thromboembolic complications
22. Which of the following statement regarding second messengers is **TRUE**?
- cAMP has no role in calcium homeostasis
 - cAMP exerts most of its effects by stimulating cAMP-dependent protein kinases
 - Inhibition of adenylyl cyclase results in increased cAMP
 - Phospholipase C is situated in the cell nucleus
23. Reye's syndrome, a potentially fatal illness associated with liver failure and encephalopathy, is due to the administration of which of the following over-the-counter (OTC) medication?
- Acetaminophen (Tylenol)
 - Ibuprofen
 - Aspirin
 - Brompheniramine
24. The following adverse effects is specific to metformin (Glucophage) therapy:-
- Hypoglycemia
 - Diarrhea
 - Lactic acidosis
 - Somnolence
25. The following patient response is correct on why anticholinesterase drug is taken 45-60 minutes before meals: -
- "The medication can cause nausea and vomiting. By waiting a while to eat after you have taken the medication, you are less likely to vomit."
 - "The timing allows the medication to have its greatest effect so it is easier for you to chew, swallow, and not choke."
 - "The timing prevents your blood sugar level from dropping too low and causing you to be at risk for falling."
 - "The medication is very irritating to your stomach and you could develop ulcers if you take it too early before meals."
26. The following drug is a selective 5-HT₄ agonist:
- Buspirone
 - Sumatriptan
 - Cisapride
 - Clozapine

27. Anticancer drug that is also used to treat psoriasis and rheumatoid arthritis is:-
- A. Mercaptopurine (6-MP)
 - B. Methotrexate
 - C. Procarbazine (Matulane)
 - D. Allopurinol (Zyloprim, Purinol)
28. The following drug causes urine to turn orange as a side effect:-
- A. INH (Isoniazid)
 - B. Rifampin
 - C. Bleomycin
 - D. Pantoprazole
29. The following drug is contraindicated in a patient with high cholesterol and asthma.
- A. Albuterol
 - B. Lorazepam
 - C. Pantoprazole
 - D. Metoprolol
30. Giving atropine before anesthesia helps to prevent:-
- A. Anxiety
 - B. Bradycardia
 - C. Dry mouth
 - D. Hypertension
31. The antidote for midazolam overdose is: -
- A. Diazepam (valium)
 - B. Flumazenil (Romazicon)
 - C. Florinef (Fludrocortisone)
 - D. Naloxone (Narcan)
32. The following nursing action is appropriate for a patient on silver sulfadiazine cream: -
- A. The nurse tells the patient, "I'm going to apply the cream the doctor ordered. It won't hurt a bit."
 - B. The nurse checks the patient's chart for allergies to sulfa medications
 - C. The patient signs a consent form to be able to apply the cream
 - D. The nurse gives the patient pain medication after the cream has been applied
33. _____ is a 5-lipoxygenase inhibitor.
- A. Zafirlukast
 - B. Montelukast
 - C. Zileuton
 - D. Salbutamol

34. The following drug is associated with dental hyperplasia:-
- A. Ethosuximide
 - B. Clonazepam
 - C. Primidone
 - D. Phenytoin
35. The volume of distribution of a drug _____.
- A. Relates the amount of a drug in the body to its plasma concentration
 - B. Is large for a drug extensively bound to plasma proteins
 - C. Never exceeds 42 litres
 - D. Is not affected by albumin concentration
36. A patient on Mono Amine Oxidase Inhibitors (MAOI) is advised to avoid:-
- A. Chocolates
 - B. Peanut butter.
 - C. Ice cream
 - D. Fresh milk
37. While administering an unpleasant-tasting liquid medication to a child, a nurse should:-
- A. Tell the child the medication will not taste bad
 - B. Use a dropper to place the medication between the gum and cheek
 - C. Prepare the medication in the child's favorite food
 - D. Put the medication in 2 mls of apple juice
38. The following response to a patient is appropriate on when Fluoxetine Hcl (Prozac) starts to work:-
- A. "Prozac works as soon as you take it and should be working now."
 - B. "It should be another day or two. Then you will feel much better."
 - C. "Prozac needs three months to work, so you will need to give it more time."
 - D. "In another two weeks, you should start to feel a difference in your mood."
39. Metronidazole is commonly used to treat:-
- A. Amoebiasis
 - B. Giardiasis
 - C. Trichomoniasis
 - D. All the answers are correct
40. Before administering codeine containing antitussive, the nurse should assess: -
- A. Pulse oximeter reading
 - B. Lung sounds
 - C. Respiratory rate
 - D. Sputum consistency

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

1. Outline five (5) nursing considerations for a patient on Benzyl penicillin **(5 Marks)**
2. List **Five (5)** indications and **Five (5)** contraindications of Heparin **(5 Marks)**
3. Outline five (5) drugs used in managing Organophosphate poisoning **(5 Marks)**
4. State five (5) drugs used in management of COVID-19 **(5 Marks)**
5. Explain **Four (4)** mechanisms of action of drugs used in treatment of Gout **(4 Marks)**
6. State **Six (6)** Rights of Drug Administration **(6 marks)**

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