



(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS 2021/2022
ACADEMIC YEAR**

SECOND YEAR FIRST TRIMESTER

MAIN EXAMINATION

**FOR BACHELOR OF SCIENCE IN
NURSING DEGREE**

COURSE CODE: NUR 217

**COURSE TITLE: CLINICAL PHARMACOLOGY & THERAPEUTICS
II**


DATE: 21/12/2022

TIME: 9.00 – 12.00PM

INSTRUCTIONS TO CANDIDATES

Answer ALL Section one (1) MULTIPLE CHOICE QUESTIONS and ALL Section two (2) SHORT ANSWER QUESTIONS and any one (1) section THREE (3) LONG ANSWER QUESTION.

TIME: 3 Hours

This paper consists of 10 printed pages. Please Turn Over 
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SECTION 1: MULTIPLE CHOICE QUESTIONS – ANSWER ALL QUESTIONS (50 MARKS)

1. What does the term “antibiotics” mean?
 - a) Non-organic or synthetic substances that selectively kill or inhibit the growth of other microorganisms
 - b) Substances produced by some microorganisms and their synthetic analogues that selectively kill or inhibit the growth of another microorganisms
 - c) Substances produced by some microorganisms and their synthetic analogues that inhibit the growth of organism cells
 - d) Synthetic analogues of natural substances that kill protozoa and helminthes

2. Select the drug belonging to antibiotics group oftetracyclines:
 - a) Doxycycline
 - b) Streptomycin
 - c) Clarithromycin
 - d) Amoxicillin

3. Select the drug belonging to antibiotics-aminoglycosides:
 - a) Erythromycin
 - b) Gentamicin
 - c) Vancomycin
 - d) Polymyxin

4. Choose the antimycobacterial drug belonging to first-line agents:
 - a) PAS
 - b) Isoniazid
 - c) Kanamycin
 - d) Pyrazinamide

5. Drug acts by inhibiting DNA synthesis is:
 - a) Ketoconazole
 - b) Griseofulvin
 - c) Fluconazole
 - d) Itraconazole

6. Which of the following combination is correct?
 - a) Penicillin: inhibition of cell wall synthesis
 - b) Cephalosporin: inhibition of protein synthesis
 - c) Aminoglycoside: inhibition of cell wall synthesis
 - d) Fluoroquinolones: inhibition of cell wall synthesis

7. What is a common feature among the following group of antibiotics like Penicillin, Cephalosporins, Carbapenems, and Monobactams?
- They all bind penicillin-binding protein-1 and inhibit their transpeptidase activity
 - They all have a β -lactam ring as a part of their biological interaction
 - None of them can penetrate the central nervous system
 - All of the above
8. Ototoxicity, vestibulo-toxic impairment, and nephrotoxicity are seen as major adverse effects of
- Aminoglycosides
 - Macrolides
 - Fluoroquinolones
 - All of the above
9. Random use of broad-spectrum antibiotics is contraindicated. They ...
- Are extremely nephrotoxic
 - Can produce dependency and psychogenic symptoms
 - Can induce anaphylactoid reactions
 - Can interfere with indigenous microbiota
10. Which of the following group of antibiotics show bacteriostatic action?
- Fluoroquinolones
 - Aminoglycosides
 - Macrolides
 - Monobactams
11. Select the drug used for malaria chemoprophylaxis and treatment:
- Chloroquine
 - Quinidine
 - Quinine
 - Sulfonamides
12. Choose the drug used for leishmaniasis treatment:
- Pyrimethamine
 - Albendazole
 - Sodium stibogluconate
 - Tinidazole
13. What is the mechanism of action of praziquantel?
- Blocking acetylcholine transmission at the myoneural junction and paralysis of helminthes

- b) Inhibiting microtubule synthesis in helminthes and irreversible impairment of glucose uptake
 - c) Increasing cell membrane permeability for calcium, resulting in paralysis, dislodgement and death of helminthes
 - d) Inhibiting oxidative phosphorylation in some species of helminthes
14. All of the following drugs act by reducing gastric acid secretion, **Except:**
- a) Omeprazole
 - b) Famotidine
 - c) Pirenzepine
 - d) Sucralfate
15. Which of the following is the most effective drug for motion sickness?
- a) Hyoscine scopolamine
 - b) Chlorpromazine
 - c) Prochlorperazine
 - d) Haloperidol
16. All of the following are examples of stimulant purgatives, **Except**
- a) Lactulose
 - b) Bisacodyl
 - c) Senna
 - d) Castor oil
17. All of the following antiviral drugs are antiretroviral agents, **EXCEPT:**
- a) Acyclovir
 - b) Zidovudine
 - c) Zalcitabine
 - d) Didanosine
18. Choose the drug used for HIV infection treatment, a derivative of nucleosides:
- a) Acyclovir
 - b) Zidovudine
 - c) Gancyclovir
 - d) Trifluridine
19. Select the anticancer alkylating drug, a derivative of chloroethylamine:
- a) Methotrexate
 - b) Cisplatin
 - c) Cyclophosphamide
 - d) Carmustine

20. Select the antibiotic for cancer chemotherapy:

- a) Cytarabine
- b) Doxorubicin
- c) Gentamycin
- d) Etoposide

21. Select an endocrine drug which is a steroidal derivative:

- a) Gonadorelin
- b) Insulin
- c) Levothyroxine
- d) Hydrocortisone

22. Which of the following hormones is produced by the thyroid gland?

- a) Thyroid-stimulating hormone
- b) Thyrotropin-releasing hormone
- c) Triiodothyronine
- d) Thyroglobulin.

23. Currently used antithyroid drugs include the following, EXCEPT:

- a) Propylthiouracil
- b) Diatrizoate sodium
- c) Methimazole
- d) Potassium perchlorate

24. Insulin cannot be administered by:

- a) Oral route
- b) Intravenous route
- c) Subcutaneous route
- d) Intramuscular route.

25. Insulin causes reduction in blood sugar level by the following mechanisms, EXCEPT:

- a) Increased glucose uptake in the peripheral tissue
- b) Reduction of breakdown of glycogen
- c) Diminished gluconeogenesis
- d) Decreased glucose absorption from the gut

26. All of the following statements about oral contraceptives are true, EXCEPT:

- a) The "combination pill" contains both estrogen and progestin
- b) Ethinyl estradiol and mestranol are commonly used in oral contraceptives
- c) The "minipill" contains progestin alone

- d) The "triphasic pill" contains estrogen, progestin, and luteinizing hormone (LH)
27. Thiazolidinediones act by: a) Diminishing insulin resistance by increasing glucose uptake and metabolism in muscle and adipose tissues b) Reducing the absorption of carbohydrate from the gut c) Stimulating the beta islet cells of pancreas to produce insulin d) All of the above
28. The action of insulin is potentiated by:
- a) Sulphonylureas
 - b) Glucagon
 - c) Biguanides
 - d) None of the above
29. Main complications of insulin therapy include the following:
- a) Hypoglycemia
 - b) Insulin allergy
 - c) Lipodystrophy at an injection site
 - d) All of the above
30. Which of the following statements about estrogens are True?
- a) Estrogens are required for normal sexual maturation and growth of the female
 - b) Estrogens decrease the rate of resorption of bone
 - c) Estrogens enhance the coagulability of blood
 - d) All of the above
31. The major natural progestin is:
- a) Estradiol
 - b) Estron
 - c) Progesterone
 - d) Estriol
32. Glucocorticoids are hormonal steroids:
- a) Having an important effect on intermediary metabolism, cardiovascular function, growth, and immunity
 - b) Having principally salt-retaining activity
 - c) Having androgenic or estrogenic activity
 - d) All of the above
33. Which of the following glucocorticoids is a short- to medium-acting drug?
- a) Prednisolone
 - b) Dexamethasone
 - c) Triamcinolone
 - d) All of the above

34. Neuroleptics are used to treat:

- a) Neurosis
- b) Psychosis
- c) Narcolepsy
- d) Parkinsonian disorders

35. Which of the following antipsychotic drugs is typical?

- a) Clozapine
- b) Quetiapine
- c) Haloperidol
- d) Olanzapine

36. Which of the following agents is related to tricyclic antidepressants?

- a) Nefazodon
- b) Amitriptyline
- c) Fluoxetine
- d) Isocarboxazid

37. Indicate the agents of choice in the treatment of most anxiety states:

- a) Barbiturates
- b) Benzodiazepines
- c) Lithium salts
- d) Phenothiazines

38. Restlessness, anxiety, orthostatic hypotension, generalized seizures, severe tremor, vivid hallucination, and psychosis are possible symptoms of:

- a) Tolerance
- b) Withdrawal
- c) Drug interactions between barbiturate and diazepam
- d) None of the above

39. Which of the following physiologic signs is a characteristic of cannabis intoxication?

- a) Bradycardia
- b) Reddening of the conjunctiva
- c) Miosis
- d) Nausea and vomiting

40. Which of the following general anesthetics belongs to inhalants?

- a) Thiopental
- b) Desflurane
- c) Ketamine
- d) Propofol

41. All of the following drugs used for iron deficiency anemia EXCEPT:

- a) Ferrous sulfate
- b) Folic acid
- c) Ferrous gluconate
- d) Ferrous fumarate

42. Which of the following drugs has low-molecular weight?

- a) Dicumarol
- b) Enoxaparin
- c) Phenprocoumon
- d) Heparin

43. All of these drugs are antiplatelet agents EXCEPT:

- a) Aspirin
- b) Urokinase
- c) Ticlopidine
- d) Clopidogrel

44. Mechanism of aspirin action is:

- a) Converts inactive plasminogen into active plasmin
- b) Inhibits COX and thus thromboxane synthesis
- c) Enhances the interaction between antithrombin III and both thrombin and the factors involved in the intrinsic clotting cascade
- d) Inhibits the glycoprotein IIb/IIIa complex

45. Hypertriglyceridemia denotes high blood levels of triglycerides. It has been associated with atherosclerosis, even in the absence of hypercholesterolemia (high cholesterol levels). This consideration is:

- a) True
- b) False

46. The major mineralocorticoids are the following, EXCEPT:

- a) Aldosterone
- b) Deoxycorticosterone
- c) Fludrocortisone
- d) Hydrocortisone

47. The most effective drug for stopping generalized tonic-clonic status epilepticus in adults is:

- a) Lamotrigine
- b) Ethosuximide
- c) Diazepam

d) Zonisamide

48. Which of the following agents is the precursor of dopamine?

- a) Bromocriptine
- b) Levodopa
- c) Selegiline
- d) Amantadine

49. Alcohol may cause:

- a) CNS depression
- b) Vasodilatation
- c) Hypoglycemia
- d) All of the above

50. Narcotics analgesics should:

- a) Relieve severe pain
- b) Induce loss of sensation
- c) Reduce anxiety and exert a calming effect
- d) Induce a stupor or somnolent state

**SECTION 2: SHORT ANSWER QUESTIONS – ANSWER ALL QUESTIONS
(30 MARKS)**

1. Classify oral glucose lowering agents and give an example in each category (5 marks)
2. Name the types of insulin and mention an example in each class (5 marks)
3. What are the major classes of drugs used to treat hyperthyroidism (5 marks)?
4. Name three examples of oxytocics and indicate their use (5 marks)
5. Classify lipid lowering medications (5 marks)
6. List the major principles that guide the management of diarrhea and vomiting including drugs (5 marks)

**SECTION 3: LONG ANSWER QUESTIONS – ANSWER ANY ONE
QUESTION (20 MARKS)**

1. As a nurse it is vital to be aware of the official drug regulations. Write some notes about:
 - a. Rational drug use; drug handling and storage (7.5 marks)
 - b. drug procurement and supply (10 marks)
 - c. pharmaco-economics (2.5 marks)
2. Diabetes mellitus is a major non-communicable disease that requires interdisciplinary management. Nurses are key in this regard.
 - a. State five indications of insulin therapy (5 marks)
 - b. Explain the use of insulin and the oral glucose lowering agents indicating their modes of action, classes, side effects and antidotes in cases of overdose (15 marks)