



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF **MEDICAL SCIENCES**

DIPLOMA IN MEDICAL LABORATORY SCIENCE

DML 12S (REGULAR) , DMLS 13J (MID)

AMD 2130 : PHARMACOLOGY AND PHARMACOGNOSY

SPECIAL/SUPPLEMENTARY : EXAMINATIONS

SERIES: OCTOBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this examination

- *Answer booklet*

This paper consists of **THREE sections A, B and C.**

Section A : Multiple Answer Questions Answer All

Section B. Short Essay Questions. Answer ALL

Section C has TWO essay Questions Answer BOTH questions

This paper consists of **8 PRINTED** pages

SECTION A (40MARKS)

1. Pharmacology refers to
 - a) Study of body organs and ologies
 - b) Study of crude drugs
 - c) Study of the science of drugs which deals with interation of exogenously administered chemical molecules with living system
 - d) Study of treatment of systemic infections/malignancy with specific drugs that have selective foxiety for the interacting organism.

2. The following is a route of administration except
 - a) Intravenous
 - b) Nasal route
 - c) Oral route
 - d) Receptor route

3. The following are different types of transport except
 - a) Pussive diffusion
 - b) Efflux
 - c) Active transport
 - d) Biological membrane

4. Volume of distribution is defined as
 - a) Total drug in the body
 - b) Size of a compartment which will account for the total amount of drug in the body if it were present in same concentration as plasma
 - c) Total concentration of the drug that is present in blood plasma only
 - d) All of the above are right

5. The formular for volume (apparent) of distribution is gives as:
 - a) $V_a = C/A$
 - b) $V_a = C \times A$
 - c) $V_d = C + A$
 - d) $V_d = \frac{A}{C}$

6. After a 10mg dose of a drug was given to a patient, a measured concentration of 2.5mg/l was found in his plasma what is the volume of distribution
 - a) 25L
 - b) 4L
 - c) 4mg/l
 - d) 25mg/m

7. The approximate volume of the body for a health matore person is estimated at
 - a) 100L
 - b) 70L

- c) 1000L
 - d) 7 L
8. The following are a class of antibiotics except
- a) Alkylating agents
 - b) Fluoroquinolones
 - c) Aminoglycosides
 - d) Macrolides
9. The following are anti-malarial drugs except
- a) Biguanides
 - b) Steroids
 - c) Tetracycline
 - d) Evidence
10. The penicillin mechanism of action is
- a) Cidal action on the fungus
 - b) Interfere with synthesis of bacterial cell wall
 - c) Inhibit cell divisions
 - d) DNA polymerase reversing
11. The following is used for treatment of diabetes mellitus except
- a) Glimepiride
 - b) Metformin
 - c) Insulin
 - d) Glipizide
 - e) Proguanil
12. The following is a factor that influences absorption of drugs to system circulation
- a) Solubility
 - b) Half-life
 - c) Pharmacology
 - d) Chemoprophylaxis
13. Which of the following is a NSAID
- a) Ibuprofen
 - b) Paracetamol
 - c) Dexamethasone
 - d) Morphine
14. The following is a neurotransmitter
- a) Insulin
 - b) Acetyl choline
 - c) Alanine
 - d) Choline esterase
15. The following are clinical uses of alcohol except
- a) Antiseptic
 - b) Rubefacient in joint pains

- c) Drinking
 - d) As sponges to reduce body temperature in fever
16. Pharmacognosy refers to:
- a) Study of the field drugs like rice and maize
 - b) Study of cultivation, production extraction and use of crude drugs,
 - c) Study of the different mechanisms of action of crude drug
 - d) Study of drying of crude drugs
17. The following climatic conditions influence drug cultivation
- a) Rainfall patterns
 - b) Machines used
 - c) Altitude
 - d) Population
 - e) Both a and C
18. The following drug is obtain from leaves except:
- a) Digitalis
 - b) Cannabis
 - c) Khati
 - d) Zingiberacea
19. The following solvents can be used for extraction of a drug except
- a) Benzene
 - b) Alcohol-ethyl accrual
 - c) Water
 - d) Phenol/ phthalate
20. The following is one of the methods used for evaluation of crude drug
- a) Microscopic evaluation
 - b) Extraction evaluation
 - c) Real evaluation
 - d) Excellent evaluation
21. The following are methods used for classification of drugs except
- a) Alphabetical classification
 - b) Pharmacological
 - c) Chemical classification
 - d) Routine classification
22. The following are flowering organized drugs except
- a) Clove
 - b) Saffron
 - c) Santonica
 - d) Coca
23. Which of the following has a group of an organized drugs.
- a) Dried later, opium, papain
 - b) Hair and fibra-cotton, Hemp

- c) Hems eugot, ephedua
 - d) Roots and Rhizome – Gaulic, iperac
24. The following are underground drugs
- a) Rhizoms
 - b) Tubers
 - c) Bulbs
 - d) Legumes
25. The following are methods of plant propagation
- a) Seeds, layering, grafting
 - b) Weeding, slashing, migration
 - c) Spraying, extraction, drying
 - d) Selection, storage, culturation
26. The following can be used to control pests except
- a) Spraying pesticides
 - b) Migration
 - c) both a and b
 - d) none of the above
27. The following influence and affect cultivation of crude dry
- a) Altitude
 - b) Temperature
 - c) Insects
 - d) Rainfall patterns
 - e) All of the above
28. Kenya is renowned for production of
- a) Clove
 - b) Khati
 - c) Poppy seeds
 - d) Cincaona
29. Adulteration is
- a) Having sexual intercourse between a man and woman who are hot married
 - b) Channing positions of plants and crude drugs
 - c) Substituting original crude drug partially or abbolly with other a similar looking substances
 - d) Chemical reactions that change drug to a more active one
30. Cultivation of crude can be beneficial
- a) Econormically
 - b) Pharmalogically after processing
 - c) In drug trafficking
 - d) Soil sancervation
 - e) A, b and d

SECTION B (40 Marks)

Answer ALL questions

1. List FIVE classes of antibiotics and give an example of each **(5marks)**
2. State the mechanism of action of any FIVE classes of antibiotics **(5marks)**
3. Define these terms
 - a) Pharmacokinetics
 - b) Bioavailability
 - c) Half-life
 - d) Loading dose
 - e) Toxicant
4. Classify ant-cancer drugs giving an example **(5marks)**
5. Explain briefly the following terms drugs **(5marks)**
 - a) Rhizorus
 - b) Bulbs
 - c) Seeds
 - d) Leaves
 - e) Gums
6. List FIVE methods of drug evaluation **(5marks)**
7. Explain briefly the following methods of plant propagation **(5marks)**
 - a) Plant layering **(2marks)**
 - b) Grafting **(2marks)**
 - c) Seed planting **(1mark)**
8. Differentiate organized and unogawide drugs **(5marks)**

SECTION C (ASSAY)

1. State and explain different factors that modify drug actions **(10marks)**
2. Explain the different types of transport systems of drugs across the membranes **(10marks)**
3. Explain different methods of drug extraction **(10marks)**