



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN PHARMACEUTICAL TECHNOLOGY

APM 2311: DRUG SUPPLY AND MANAGEMENT IV

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date Select Month Pick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **THREE** Section(s). Attempt All questions in section A and B and any two questions in section C.

Circle the correct answer in section A.

Section A

1. The type of efficiency in health management which applies to the distribution of services within the population may be termed as:

- A. Technical efficiency
- B. Operational efficiency
- C. Therapeutic efficiency
- D. Allocative efficiency

2. A function of logistics cycle that encompasses storage and transport is called

- A. serving customer

- B. forecasting and procurement
- C. management support
- D. Inventory management

3. The type of data collected relating to quantities of products dispensed to clients may be termed

- A. Consumption data
- B. issue data
- C. transaction data
- D. inventory records

4. Which one of the following method is used to prevent a gritty feel when solids are incorporated into dermatologic or ophthalmic ointments and suspensions.

- A. Pulverization by intervention
- B. Levigation
- C. Sifting
- D. Tumbling

5. If you are to make 350g of lotion that contains 15% calamine. Which of the following is the amount of calamine you will use?

- A. 52.50g
- B. 3.50g
- C. 35.00g
- D. 15.00g

6. An injection solution contains 0.5% w/v of active ingredient. How much of active ingredient is needed to prepare 500L of solution?

- A. 5.00kg

- B. 0.25kg
- C. 1.00kg
- D. 2.50kg

7 Security deposits in the form of negotiable fiscal documents that may be required at the time a contract is awarded and which serve to guarantee that the supplier will fulfill the contract obligations is termed:

- A. performance bond
- B. contract guarantee
- C. bid bonds Mri
- D. performance contract

8. The approach to tracking the quantity of commodities actually in stock that involves dividing inventory into counting groups, and one group counted each week, with reconciliation of discrepancies is called:

- A. cyclic counting
- B. rota counting
- C. inventory turnover
- D. tracking

9. One of the statements below is false about management. Which one?

- a) It is a resource
- b) It is a profession and a career
- c) It is an art and a science
- d) It involves achieving results individually

10. In the ABC value analysis technique, class C drugs:-

- a) Have high value items
- b) Have low value items

c) Constitute 80% of the budget allocated

d) Constitute 20-30% of the items

11. Pharmaceutical products are recognized as different from ordinary items of commerce and require special handling by trained professionals. Which of the following aspects is least granted to the legal authority to regulate

a) Availability

b) Marketing

c) Prescribing

d) Monitoring

12. The deliberate sale of remedies known to be worthless may precisely be described as :-

a) Malpractice

b) Fraud

c) Conning

d) Charlatanism

13. At the center of the drug management cycle are to be found the following key activities, except:-

a) Procurement

b) Organization

c) Financial and sustainability

d) Information management

14. High level commitment to pharmaceutical sector improvements can be stimulated by the following except:-

a) Discontent among health staff and public about drug shortages

b) Concern in the ministry of finance about rising drug expenditure

c) Publicity about poor drug quality

d) Patient apparent ignorance

15. The total variable costs for drug acquisition has all the following components, except:-

- a) Acquisition prices
- b) Inventory Holding costs
- c) Selling costs
- d) Shortage costs

16. Which of the following tools is not used for limiting the drug procurement list as a cost effective approach to health service delivery:-

- a) VEN analysis
- b) Therapeutic category analysis
- c) ABC analysis
- d) XYZ analysis

17. With regard to drug distribution, which of the following is not a transport cost?

- a) Airfreight
- b) Demorage
- c) Port clearing
- d) Expiries

18. The kit system as a drug distribution strategy is useful in the following situation., except:-

- a) Improvement of drug supply in rural areas
- b) When flexibility in quantities of drugs is desired
- c) When theft in the distribution system is common
- d) When drug needs are similar throughout the regions to be supplied

19. Which of the following has a positive effect on controlling demand for prescription medicines?

- a) Increase the cost of medicines
- b) Increase the waiting time
- c) Decrease quality of services
- d) Increase targeted patient education

20. Vital drugs with reference to VEN in drug supply systems refers to drugs that :-

- a) Are potentially life - saving
- b) Have significant withdrawal side effects
- c) Are crucial to providing basic health services
- d) Have a comparatively high cost of marginal therapeutic advantage.

21 The following aspects can be addressed by pharmaceutical legislation , except:-

- a) Patient compliance
- b) Advertising and promotion
- c) Types of products to be imported
- d) Who is legally qualified to dispense

22. A drug distribution system where each level of the system determines what type of drugs is needed and places orders with the supply source is known as:-

- a) Allocation system
- b) Requisition system
- c) Ration system
- d) Push system

22. All the following factors may promote theft of drugs in public health care facilities, except:-

- a) High demand for drugs in private sector

- b) Weak inventory control systems
- c) Limit access to stores to relevant staff only
- d) Poor physical security in stores.

24. Which of the following statements best describe the term "inventory"?

- a) The supply system's purpose and type of distribution system
- b) The function of supply management that aims to provide sufficient stock of drugs at the lowest cost
- c) The management of routine ordering process
- d) The total stock kept on hand at any storage point to protect against uncertainty

25. The sum of stock on hand and stock on order, subtract any stock back-order to clients will give:-

- a) Maximum stock level
- b) Service level
- c) Stock position
- d) Safety stock

26. The managerial strategies to improve rational prescribing include all the following, except:-

- a) Price control
- b) Prescribing and dispensing in a structured manner
- c) Selection, procurement and distribution
- d) Providing limited drug list

27. Which of the following is not an educational strategy to improve drug use?

- a) Prescribing restrictions
- b) Quality training for prescribes
- c) Availability of printed materials to enrich and update the prescribers
- d) Approaches based on face-to-face contact with prescribers, patients and opinion leaders.

28. The target stock level which is needed to satisfy demand until the next order after one is received may be described as:-

- a) Re-order level
- b) Maximum stock level
- c) Stock position
- d) Safety stock

29. .In perpetual purchasing model:-

- a) The buying organization places an order at least once a year
- b) There are periodic orders, for example every three months
- c) Orders are placed whenever stock falls to a specific level
- d) All the above choices

30. Which of the following forms the last step in the drug distribution cycle?

- a) Dispensing to the patient
- b) Requisition of supplies
- c) Reporting consumption
- d) Receipt and inspection

31. Which of the following methods of organizing drugs is unsuitable for small drug store outlets?

- a) Clinical indication
- b) Dosage form
- c) Level of use
- d) Therapeutic and pharmacological

30. The following are all stock holding costs. Which is not?

- a) Expiry
- b) Obsolescence
- c) Loss of goodwill
- d) Spoilage

32. A structure or room where commodities are kept for safety and are available of users as and when required is called:-

- a) Warehouse
- b) Store
- c) Depot
- d) Inventory collection point

33. Which of the statements below is not true about "dependent demand systems"?

- a) Manage inventory requirements for finished products
- b) Manage inventory requirement for raw materials
- c) Also known as material requirement planning
- d) Depends on the production schedule

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Section B

41. Name any four requirements that govern the size of drug store **(4 marks)**

42. Drug distribution may be hampered by certain constraints like :-

- a) Seasonal variations causing road closure during heavy rains **(2 marks)**
- b) Lack of vehicles or fuel for the vehicles. Suggest possible solutions to constraints (a) and (b) above

43. Explain any two methods of paying for health care. -

44. State any four advantages of course-of-therapy pre-packing **(4 marks)**

45. Outline any four factors that influence an individual's adherence to treatment of disease. **(4 marks)**

46. State the four core components of management support systems at the centre of the drug management cycle. **(4 marks)**

47. Outline four criteria that individual products approved for sale must meet as prerequisite for drug registration. **(4 marks)**

48. Explain the following terms as applied in the strategies for encouraging appropriate use of drugs:-

- a) Public centered approach **(2 marks)**
- b) Patient centered approach **(2 marks)**

49. List any four types of hidden cost associated with poor performance by the supplier.

50. Explain any four benefits of holding stocks **(4 marks)**

Section C (for pharmacy only)

51. (a) Explain why managers and policymakers collect data about drug utilization. **(8 marks)**

(b) Explain how health systems and prescribers can contribute to irrational use of drugs. **(12 marks)**

52. a) Outline any four steps involved in port clearing **(4 marks)**

b) Explain why delay in import- clearing can be very costly **(6 marks)**

c) Explain the four stages in the evaluation of drug registration system. **(10 marks)**

53. Discuss stock zoning under the following sub-headings:-

a) Fixed location **(20 marks)**

b) Fluid location

c) Semi- fluid location