



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF **MEDICAL SCIENCES**
DIPLOMA IN PHARMACEUTICAL TECHNOLOGY
(DPT 11M)

APM 2261 : DRUG SUPPLY & MANAGEMENT I

SPECIAL/SUPPLEMENTARY: EXAMINATIONS

SERIES: February 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.**

Answer all questions in section **A** and **B** and choose **THREE** out of **FIVE** questions in section **C.**

*This paper consists of **10 PRINTED** pages*

SECTION A (40MARKS)

1. All the following are false concerning consumption based quantification method of procurement; except;
 - a) Is the most complex method
 - b) Is the most time consuming method
 - c) Is the most reliable predictor of future consumption
 - d) Data on morbidity is used together with standard treatment guidelines to project drug needs.

2. A brand name of a given medicine may also be referred as:
 - a) Non-proprietary name
 - b) Generic name
 - c) Proprietary name
 - d) Trade name

3. Which of the following is not a function of the drug supply management cycle?
 - a) Use
 - b) Surveillance
 - c) Selection
 - d) Distribution

4. The national drug policy aims to achieve all the following objectives; except:
 - a) Makes essential drugs available and affordable to all
 - b) Ensure safety , efficiency , and quality of all medicines
 - c) Provides health services at no cost in all public hospitals
 - d) Improves prescribing and dispensing practices

5. The following are major criteria of drug selection except:
 - a) Relevance to pattern of prevent disease
 - b) Ease of local production and import
 - c) Proven efficacy and safety
 - d) Adequate scientific data

6. Which of the following is not a rationale of quantification of medicines?
 - a) Avoid stock out and ensure continuous availability of drugs
 - b) Avoid waste due to overstocking
 - c) Avoid poor inventory management practices
 - d) Make the best of scarce resources and budget within means

7. The period between order initiation and reception of goods or services is called :
 - a) Lead time
 - b) Procurement period
 - c) Average monthly consumption

- d) Purchasing time
8. A factor not considered when drawing an essential drug list is:
- The manufacture's name
 - Single compound formulations
 - Patterns of prevalence of disease
 - Training and experience of health workers
9. Morbidity methods of quantification estimates the need for specific drugs based on the following except:
- Expected number of attendances
 - Incidence of common disease
 - Standards of treatment patterns of diseases considered
 - Drug consumption and utilization
10. The concept that international non-proprietary names (INN's) have a common suffix, such as Benzodiazepines ending with-zepam is a consideration of:-
- Price of the drug
 - Quantify of the drug
 - Class of the drug
 - Demand for the drug
11. Of the factors below, which one is not a key consideration when selecting essential drugs
- Relevance to the prevailing diseases
 - Ability to constitute combined therapies
 - Good pharmacokinetic properties
 - Possibility for local manufacture
12. Which of the following does not affect patient's adherence to treatment?
- Cultural beliefs
 - Attitude towards the prescriber or dispenser
 - Nature of communication
 - Lack of objective drug information
13. The following are functions of a store keeper
- Keeping records
 - Issuing records
 - Stock taking
 - Awarding tenders
14. Which of the following reasons is not true regarding drug supply in primary health care programmes.
- Drugs saves lives and improve health
 - Drugs promote trust
 - Cost of drugs is high
 - Drugs are like other consumer products
15. Identify among the following factors, the prescriber related factors that influence irrational use of drugs.

- a) Inadequate training
 - b) Availability of inappropriate drugs
 - c) Outdated practices due to lack of continuous education
 - d) Lack of objective drug information
16. The last of the major activities in the dispensing process is ‘issue medicines to patients with clear instructions and advice’. The advice to the patient may emphasize all the following except;
- a) When to take the medicines
 - b) How to take the medicine
 - c) Where and how to obtain the medicine on completing the dispensed course.
 - d) How to store and care for the dispensed medicines.
17. The rationale for the selection and use of a limited list of essential drugs is that it lead to all the following except.
- a) Improved supply of drugs
 - b) More rational prescribed
 - c) Lower cost of drugs
 - d) Reduced rational prescribing
18. Which of the following is not an educational strategy to improve drug use?
- a) Prescribing restrictions
 - b) Quality training for prescribers
 - c) Availability of printed materials to enrich and update prescribers
 - d) Approaches based on face to face contact with prescribers, patients and opinion leaders
19. The average drug consumption rate is referred to as
- a) A quantification method
 - b) A selection method
 - c) A factor in reorder level
 - d) A factor for identification
20. Which one is NOT true about outpatient pharmacy
- a) Stock extra items such as stationery
 - b) Dispenses medications for inpatients
 - c) Fills prescriptions for outpatients
 - d) May fill prescriptions for employees
21. The term “ Rational Drug use’ is used in the biomedical context that includes the following criteria EXCEPT:
- a) Correct drug use
 - b) Appropriate indication
 - c) Use of proprietary names
 - d) Patient adherence to treatment
22. Which of the following is the heart of the drug supply system ?
- a) Selection

- b) Planning
 - c) Manufactures
 - d) Inventory control
23. Community Health worker educates the people on the following except
- a) Sanitation
 - b) Mutation
 - c) Family planning
 - d) Use of anti-retrival drugs
24. Which of the following is NOT one of the principles of good pharmaceutical procurement?
- a) Procurement by genetic name
 - b) Limitation of procurement to essential drug list
 - c) Procurement in bulk
 - d) Procurement from local pharmaceutical manufactures only
25. Which of the following is Not true about primary health care?
- a) The word assembly adopted a social objective of attainment by all people of the world by the year 200 a level of health that would permit them to lead a social and economics productive life
 - b) Primary Health care was declared a means or strategy for achieving health for all by the year 2000.
 - c) The Alma Ata conference identified essential element of primary health care through which the global objective of health for all was to be achieved
 - d) The alma Ata conference came up with a declaration that free care is essential for all school going age children
26. Which of the following forms the last step in drug distribution cycle?
- a) Dispensing to the patient
 - b) Requisition of supplies
 - c) Reporting consumption
 - d) Receipt and inspection
27. The guide for action containing the goal set by the government for the pharmaceutical sector and the main strategies and approaches for attaining them may be described as:
- a) Treatment guidelines
 - b) Treatment protocol
 - c) National Drug policy
 - d) Formulary system
28. A factor not considered when drawing an essential drug list is
- a) The manufacture's name
 - b) Single compound formulation
 - c) Patterns of prevalence's of disease
 - d) Training and experience of health workers
29. Identify a factor which does not affect purchasing of drugs

- a) Cost
 - b) Trademark
 - c) Quality
 - d) Delivery
30. Which of the following procurement method is highly preferred and recommended in public sector?
- a) Open tender
 - b) Restricted tender
 - c) Competitive negotiation
 - d) Direct procurement
31. The following are all possible funding sources for drugs in public sector EXCEPT?
- a) The waiver system
 - b) Government revenues
 - c) Direct payments to patients
 - d) Health insurance
32. The following aspect are among those that the pharmaceutical legislation may address EXCEPT
- a) Type or product to be imported
 - b) Who is legally qualified to prescribe dispense
 - c) Patient compliance
 - d) Advertising and promotion
33. Which of the following statement is NOT true about the national drug policy ?
- a) Provides a sound foundation for managing drug supply
 - b) It gives guidelines on trainings
 - c) Contains the goals set by government for pharmaceutical sector
 - d) Has significant impact on availability and use of pharmaceuticals
34. Identify what is NOT a basic requirement to register a pharmacy premise
- a) Lockable shelves
 - b) Taps and sink
 - c) Weighing balance, tile slab, mortar pestle
 - d) Computer for proper record keeping
35. All systematically developed document below assist prescribers in deciding appropriate treatment for specific clinical problems except
- a) Standard treatment guidelines
 - b) Treatment protocol
 - c) Clinical guideline
 - d) Formulary
36. The following are basic functions of drug management cycle EXCEPT
- a) Selection
 - b) Distribution
 - c) Management support
 - d) Rational drug use
37. The period between order initiation and reception of goods or services is called

- a) Lead time
 - b) Procurement monthly consumption
 - c) Average monthly consumption
 - d) Purchasing time
38. The function of a drug management cycle that involve customs clearing , stock control, store management and delivery to drug depot and health facilities may be described as:
- a) Procurement
 - b) Use
 - c) Distribution
 - d) Selection
39. Drug names that are coined by a researcher following world Health Organization guidelines which provide the suffice while the researcher chooses the prefix may be described as:
- a) Trade names
 - b) Generic name s
 - c) Trivial names
 - d) Proprietary names
40. Sustainable improvement in the pharmaceutical sector depend on the following except
- a) High level national commitment to improvement
 - b) Technically sound plans based on accurate situation analysis
 - c) Technical and financial resources to implement proposed changes
 - d) Single sourcing of pharmaceuticals
41. Pharmaceutical products are recognized as being different from ordinary items of commerce and require special handling by untrained professionals. Which of the following aspect is LEAST granted to the legal authority to regulate?
- a) Availability
 - b) Marketing
 - c) Prescribing
 - d) Monitoring
42. Which of the following is a common source of ventilation for a drug store ?
- a) Door
 - b) Windows
 - c) Fume cupboard
 - d) Vents
43. The security risks that should be prevented in drug inventory system include all the following EXCEPT
- a) Theft
 - b) Bribery
 - c) Fraud

- d) Fire
44. The quantity of remaining stock that triggers a need to replenish an item is called
- Safety stock
 - Re-order level
 - Stock position
 - Economic order quantity
45. Inventory control models used to manage purchasing must address ALL the following EXCEPT?
- Safety stock
 - Lead time
 - Re-order frequency
 - Re-order quantity
46. One of the statement below is FALSE about management. Which one?
- It is a resource
 - Management is a profession and a career
 - It is an art and a science
 - It involves achieves results individually
47. Stock that should always be on hand to prevent stock out is
- Minimum stock
 - Safety stock
 - Maximum stock
 - Working stock
48. The use of international non proprietary names in procurement and prescribing carries the following considerations EXCEPT
- Clarity
 - Quality
 - Manufactures
 - Price
49. A fully developed information system for inventory control has the following components except?
- A performance monitoring
 - Stock control system
 - Ideal inventory control model
 - Inventory management system

SECTION B (Answer ALL questions)

- Describe TWO main methods used in drug quantification **(4marks)**
- List FOUR qualities of an effective drug quantification **(4marks)**
- Differentiate between procurement and purchasing **(4marks)**

4. Explain the meaning of the following abreaction as applied in stock rotation
 - a) FEFO
 - b) FIFO

(4marks)
5. Theft of drug is common in developing countries health facilities. Give FOUR factors that contribute to this.

(4marks)
6. Drug distribution may be hampered by certain constrains like:
 - a) Seasonal venations causing road closure during heavy rains **(2marks)**
 - b) Lack of vehicle or fuel for the vehicles . Suggest possible solutions to constrains (a) and (b) above . **(2marks)**
7. List FOUR main component of national drug policy **(4marks)**
8. Outline any FOUR principles of good pharmaceutical procurement practice. **(4marks)**
9. Differentiate between “procurement” and “purchasing” **(4marks)**
10. Outline the WHO criteria for selection of essential drugs **(4marks)**
11. State the objectives (FOUR) of managing drug supply **(4marks)**

SECTION C

1. (a) Discuss FIVE major reason why the use of a limited list of essential drugs is preferred

(10marks)

 (b) Explain the criteria outlined by WHO for selection of essential drugs **(10marks)**
2. Describe in detail Drug management cycle **(20marks)**
3. Briefly illustrate the SEVEN steps used in the determination of quantity to order **(20marks)**
4. Discuss the VEN and ABC analysis as employed in the systematic cost reduction of drugs

(20marks)