



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF REHABILITATION MEDICINE
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
END OF EXAMINATIONS SEPTEMBER TO DECEMBER 2025

UNIT CODE: PHT 414

UNIT NAME: Health systems for rehabilitation (Main exam)

DATE: 9th DECEMBER 2025

TIME: 9am-11am

INSTRUCTIONS

1. All students will have two (2) hours to complete the examination
2. Attempt all questions as per the instruction
3. It is the student's responsibility to report any page and number missing in this paper.
4. Check that the paper is complete
5. Total number of pages is 7 including the cover.
6. Read through the paper quickly before you start.

Section One: Multiple Choice Questions. Answer all the question (30mks)

1. Definition of health information system:
 - a. A system that captures images of body structures
 - b. A system that captures stores and manages health related information
 - c. A system that handles body parts
 - d. None above
2. A health system information system handling personnel data:
 - a. Financial health information system
 - b. Laboratory information system
 - c. Human resource information system
 - d. Master patient index
3. Benefits derived from health information system:
 - a. Stores data correctly and systematically
 - b. Eliminate forgery of prescriptions
 - c. Reduce operational costs
 - d. All the above
4. Reasons for a strong health information system:
 - a. Uses more resources
 - b. Restricts data collection
 - c. Reduces of medical errors
 - d. Minimize health awareness
5. Which statement best describes data?
 - a. Unprocessed facts
 - b. It is contextualized
 - c. Best presented in graphs
 - d. Reports are examples of data
6. A secondary data source includes:
 - a. Interview
 - b. Census data
 - c. Experiments
 - d. Survey

7. Health information concerned with population statistics:
 - a. Research
 - b. Medical records
 - c. Public health
 - d. Survey
8. A patient can access appointment information from which health information system?
 - a. Practice management system
 - b. Electronic medical record
 - c. Facility management system
 - d. Patient portal
9. When wording questionnaire items:
 - a. Use clear and concise language
 - b. Use leading questions
 - c. Use long sentences
 - d. None above
10. When conducting a pilot study:
 - a. Consider time required to fill the questionnaire
 - b. Correct errors
 - c. Detect repeated questions
 - d. All the above
11. Where is gender captured in the levels of data measurement?
 - a. Interval
 - b. Nominal
 - c. Ratio
 - d. Ordinal
12. Research design utilizing measures of central tendency in data analysis:
 - a. Qualitative
 - b. Phenomenography
 - c. Quantitative
 - d. Naturalistic

13. The following are ways of reporting qualitative data:
- Story like format is constructed to increase readers understanding
 - Bar graphs
 - Frequency tables
 - Measures of central tendency
14. A data storage which combines two or more methods:
- External hard drives
 - Hybrid storage
 - File storage
 - Optical storage
15. Specific data required by a physiotherapist to plan treatment for low back pain patient:
- Appointment scheduling
 - Billing data
 - Immunization records
 - Imaging data
16. A challenge encountered in designing a health information system:
- Interoperability
 - Regulatory compliance
 - Functionality
 - Data quality
17. Cost benefit analysis in health information systems evaluation means:
- Tracking systems key indicators
 - Monitoring workflow and system usage to identify potential issues
 - Assessment of the systems costs against revenue gains
 - Collecting user feedback
18. Challenges when using data in information technologies in clinical outcomes management:
- Cost
 - Data integration
 - Data access
 - Technical expertise

19. Non maleficence related to ethical issues in health information management means:
- Protecting patient data during electronic transmission
 - Obtaining proper patient consent
 - Informing patients during data breach
 - Preventing unauthorized access to patient data to avoid harm
20. Data minimization as a mitigating measure of ethical issues in health information management means:
- Collecting and storing necessary patient information
 - Implementing robust encryption
 - Training health care providers on ethical data handling
 - Carry out privacy impact assessment survey
21. Use of artificial intelligence in health care delivery and management:
- Provision of health services to remote locations
 - Utilized in education
 - Provides fast and accurate patient diagnosis
 - Provides safe data storage
22. The internet as an emerging technology in health care delivery and management:
- Allows patients data access to other hospitals
 - Acts as a life saver for chronic conditions
 - Frees data from hackers
 - Improves data transparency and traceability
23. _____ is the most comprehensive level of data measurement:
- Ratio
 - Nominal
 - Interval
 - Ordinal
24. A potential challenge of electronic medical records use in health organizations:
- Underutilization by health staff
 - High implementation cost
 - Lack of management support
 - Reimbursement issues

25. The following are telemedicine services
- Digital communication
 - Remote monitoring
 - Visual consultations
 - All the above
26. A current and future trend in information technology in health care industry includes:
- Quantum computing
 - Ultra sound
 - ECG
 - Endoscopy
27. Which of the following conditions are managed through standardized enabled healthcare pathways?
- Fractures
 - Pediatrics
 - Diabetes
 - Meningitis
28. In the health care industry edge computing helps in:
- Surgical guides
 - Improving real – time decision making
 - Analysis of data quickly
 - Protecting against cyber threats
29. Key components of Kenya’s health information system include:
- DHIS2
 - Electronic community health information system
 - Primary health care networks
 - All the above
30. Benefits of technology enabled health care pathways:
- Increases care costs
 - Encourages team work
 - Enhances patient engagement
 - Reduces manpower

Section Two: Short Answer Questions (20marks)

1. Explain five challenges encountered in retrieving physiotherapy data (5marks).
2. Describe five issues to consider when implementing a health information system. (5marks).
3. Discuss five privacy issues related to health information systems (5marks).
4. Describe how technology enabled health care pathways are implemented (5marks).

Section Three: Long Answer Questions. Attempt any of the two (20marks)

1. (a) Discuss characteristics of five health information systems directly related to patient care (5marks).
(b) Explain challenges faced when integrating health information systems to health services delivery in Kenya (5marks).
2. (a) Discuss five ways of disseminating physiotherapy data (5marks).
(b) Explain five challenges in physiotherapy data dissemination (5marks).
3. (a) Discuss how data in information technology is utilized in clinical outcomes management (5marks).
(b) Explain benefits of using information technology data in clinical outcomes management (5marks).