



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES
END OF SEMESTER DECEMBER 2022 EXAMINATIONS**

COURSE CODE AND TITLE BSN 416: HEALTH INFORMATICS

DATE: 7TH DECEMBER 2022

Duration: 2 HOURS

Start: 2:00 PM

Finish: 4:00 PM

INSTRUCTIONS

1. This exam is out of 70 marks
2. This Examination comprises **THREE** Sections. Section I: Multiple Choice Questions (20 marks)
Section II: Short Answer Questions (30 marks) and Section III: Long Answer Questions (20 marks)
3. Answer **ALL** Questions.
4. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

1. Which one is an example of supportive care in health informatics and eHealth
 - a. Answering a question in an e-consultation
 - b. Giving feedback within a self-help course
 - c. Helping patients and healthcare professionals manage their use of antibiotics in order to decrease the spread of resistant bacteria.
 - d. Patients self-monitoring their blood sugar levels to improve self-management
2. The component of eHealth that gives opportunity for creation of new links between the patient and health expert, towards a true corporation, where choices are made mutually
 - a. Equity
 - b. Equality
 - c. Encouragement
 - d. Electronics
3. The perspective of eHealth that is concerned with involving patients, care providers and other stakeholders in the development process is
 - a. Telemedicine perspective
 - b. Technological perspective
 - c. User perspective
 - d. Organization of healthcare perspective
4. An example of a wearable technology is
 - a. Mobile apps
 - b. Websites
 - c. Patient portals
 - d. Health sensors
5. A form of eHealth that integrates technology and services into a home environment in order to improve the inhabitants' quality of living and of life is
 - a. Domotics
 - b. Smart watches
 - c. Health sensors
 - d. Emotional intelligent
6. The domain of health informatics in which the patient or consumer is in the lead, for example, using a website or app to find health-related information is
 - a. Supportive care
 - b. Societal health
 - c. Domotics
 - d. Self-care and prevention
7. Application of nursing informatics to clinical practice include
 - a. Work lists to remind staff of planned nursing interventions
 - b. Automated staff scheduling.
 - c. E-mail for improved communication.
 - d. Distance learning- web based courses and degree programs.

8. Karen, a nursing officer at St. Karen Hospital, was asking for a computerized system that is designed to meet the information needs on patient information processing and patient registration. She is referring to what system
 - a. Health management
 - b. Clinical and hospital information system
 - c. Patient information management
 - d. Records management
9. The computer-based system is designed for collecting, storing, manipulating, and making clinical information important to the health care delivery process is;
 - a. Clinical and hospital information system
 - b. Patient information system
 - c. Clinical information system
 - d. Electronic health record
10. Data acquisition refers to:
 - a. Saving data so that it can be retrieved
 - b. Capturing quality data
 - c. Use of analyzed data
 - d. Using graphs and charts to present information
11. Movement of data from the point where it was collected to a point where it can be collated and prepared for analysis is referred to as;
 - a. Application
 - b. Intervention
 - c. Processing
 - d. Analysis
12. A nursing student used computers in problem identification and located current literature about the problem. Which scope of nursing informatics is this?
 - a. Nursing practice
 - b. Nursing administration
 - c. Nursing education
 - d. Nursing research
13. Nurses use passwords and codes for their respective computers during their duty at their respective wards. This is
 - a. Confidentiality
 - b. Security
 - c. Privacy
 - d. Precaution
14. Telehealth provides alternative method of providing care to the patients in various places. Which of the following legal issues that can implicate this practice?
 - a. Different culture may not accept telehealth nursing
 - b. No legal implications
 - c. Language barrier may play a major legal implication in the deliverance of care
 - d. The license of a practitioner from one place may not be honored by in the area from where the client is residing

15. Which one of the following may constitute patient identifier?
- Weight
 - Height
 - Gender
 - Age
16. Which of the following can be considered as major development in Community Health Nursing in terms of information technology?
- Prevention of epidemiological diseases through quality care
 - Patient Monitoring
 - Telehealth
 - Medication dispensing
17. ----- refers to a collective term of a system of data records and activities that process and translate the data to information in an automated process.
- Information system
 - Health information technology
 - Nursing informatics
 - Informatics
18. Consumer health informatics deals with;
- Health literacy and consumer education
 - Clinical decision support to visual images
 - Applied clinical informatics
 - Surveillance and reporting
19. Which of the following is true about nursing informatics?
- It is a study of processing, management and retrieval of information
 - The study of complex system, interaction and social science
 - Use of information technology in relation to any nursing functions
 - It's no longer useful in the face of internet technology
20. Informatics is
- Computer systems
 - Multimedia technologies
 - Science of information
 - Information communication technologies

SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

1. State five (5) qualities of a good health website (5 marks)
2. Outline five (5) risks of online health information (5 marks)
3. List five (5) examples of eHealth solutions that can be employed in hospitals (5 marks)
4. Name five (5) ways in which e-Health can be applied in societal health (5 marks)
5. Outline five (5) ethical challenges with health informatics (5 marks)
6. Outline five (5) reasons that has led to increase in popularity of online health information (5 marks)

SECTION III: LONG ANSWER QUESTION – (20 MARKS)

- 1 a) Discuss the characteristics of eHealth as outlined by Eysenbach, 2001 (10 marks)
b) Describe the limitations of eHealth (10 marks)

Marking KEY

SECTION I: MULTIPLE CHOICE QUESTIONS

(20 MARKS)

1. Which one is an example of supportive care in health informatics and eHealth
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SECTION II: SHORT ANSWER QUESTIONS (30 MARKS)

21. State five qualities of a good health website (5 marks)

- a. Disclosure of authorship
 - b. Disclosure of ownership
 - c. Sources clear
 - d. Disclosure of sponsorship
 - e. Disclosure of advertising
 - f. Statement of purpose
 - g. General disclosures
 - h. Date of creation disclosed
 - i. Date of last update disclosed
 - j. Authors credentials disclosed
 - k. Easy navigation
 - l. Internal search engine present
22. Outline five risks of online health information (5 marks)
- a. Inaccurate or incorrect (information is unregulated)
 - b. Incomplete (does it tell the whole story?)
 - c. Overwhelming
 - d. Misinterpreted by readers
 - e. Inappropriate requests for treatment or interventions
 - f. Incorrect self-diagnoses
 - g. Delayed treatment
 - h. Poor adherence to treatment or participation in screening
 - i. Mistrust of health professional advice
 - j. Unnecessary anxiety and stress
23. Define eHealth (2 marks)
- a. is the use, in the health sector, of digital data-transmitted, stored and retrieved electronically- for clinical, educational and administrative purposes, both at the local site and at a distance
24. Outline three core are of eHealth (3 marks)
- a. Delivery of health information, for health professionals and health consumers, through the Internet and telecommunications.
 - b. Using the power of IT and e-commerce to improve public health services, e.g. through the education and training of health workers.
 - c. The use of e-commerce and e-business practices in health systems management.
25. List five examples of eHealth solutions that can be employed in hospitals (5 marks)
- a. Electronic health records
 - b. Telemedicine
 - c. eVisits
 - d. Electronic messaging
 - e. Remote vital signs monitoring
 - f. Patient portals
26. Outline five ethical challenges with health informatics
- a. Privacy
 - b. Transparency
 - c. Quality of information
 - d. Self-regulation
 - e. User literacy
27. Outline five reasons that has led to increase in popularity of online health information (5 marks)

- a. Self-diagnosing
- b. To avoid a GP visit
- c. To prepare for a GP visit or to complement it
- d. To help others
- e. Its easy to do
- f. Its private

SECTION III: LONG ANSWER QUESTION – (20 MARKS)

28. Discuss the characteristics of eHealth as outlined by Eysenbach, 2001 (10 marks)

- a. Extending
- b. Ethics
- c. Education
- d. Encouragement
- e. Evidence based
- f. Efficiency
- g. Empowerment
- h. Enabling

29. Describe the limitations of eHealth (10 marks)

- a. poor infrastructure,
- b. low literacy,
- c. inadequate technical expertise,
- d. unreliable power supply,
- e. limited funding,
- f. and lack of government involvement in most eHealth projects
- g. The financial barrier in procurement
- h. Cost challenges in common
- i. Shortage of IT and clinical resources
- j. Trouble in learning and using the software
- k. Personnel costs