



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES
END OF SEMESTER AUGUST 2024 EXAMINATIONS**

COURSE CODE AND TITLE: BSN 416: HEALTH INFORMATICS

DATE: Monday 12th August 2024

Duration: 2 HOURS

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.

SECTION A: MULTIPLE CHOICE QUESTIONS

20 MARKS

1. The primary goal of health informatics;-
 - A. To treat patients
 - B. To manage health information
 - C. To conduct medical research
 - D. To administer healthcare facilities

2. The systematic representation of data in a specific domain of interest is;-
 - A. Information
 - B. Knowledge
 - C. Data
 - D. Taxonomy

3. Electronic Health Records (EHRs) differ from Electronic Medical Records (EMRs) primarily in:
 - A. Their level of accessibility
 - B. Their focus on individual versus population health
 - C. Their storage format
 - D. Their ability to store lab results

4. The difference between data and information is;-
 - A. Data is raw facts, and information is processed data
 - B. Data is qualitative, and information is quantitative
 - C. Data is digital, and information is analog
 - D. Data is stored, and information is transmitted

5. Taxonomy in Medical Informatics primarily involves:
 - A. Classifying medical conditions
 - B. Sorting patient records
 - C. Organizing health information systems
 - D. Categorizing medical equipment

6. The following represent a security breach;-
 - A. Animals straying in one's garden resulting into distress
 - B. A health-worker colleague delaying with the laptop you lent her
 - C. A Records clerk bringing the report earlier than requested
 - D. A Record clerk discussing the report with a friend before it is delivered

7. The role health informatics play in policy development is;-
- A. It provides evidence for healthcare policy decisions
 - B. It ensures compliance with legal regulations
 - C. It monitors healthcare spending
 - D. It facilitates communication between healthcare providers
8. Communicating effectively in health informatics involves:
- A. Using technical jargon
 - B. Tailoring information for different audiences
 - C. Avoiding data sharing
 - D. Conducting frequent meetings
9. The source that provides primary health information directly from patients is;-
- A. Healthcare providers
 - B. Electronic health records
 - C. Patient-reported outcomes
 - D. Medical literature
10. The key challenge in the storage of health information is;-
- A. Data encryption
 - B. Interoperability
 - C. Data collection
 - D. Data analysis
11. The following best describes Electronic Health Records (EHRs) is;-
- A. Paper-based records used for patient documentation
 - B. Digital versions of patient medical records
 - C. Systems used for managing hospital finances
 - D. Communication tools for healthcare providers
12. The branch of health informatics that focuses on the application of information technology to public health practice is;-
- A. Nursing informatics
 - B. Dental informatics
 - C. Bioinformatics
 - D. Public health informatics

13. The informatics skill that involves organizing information in a logical and coherent manner is;-

- A. Communicating
- B. Structuring
- C. Questioning
- D. Searching

14. The analytical technique that involves discovering patterns and trends in large datasets is;-

- A. Statistical analysis
- B. Machine learning
- C. Data mining
- D. Natural language processing

15. The type of health information that includes data such as diagnoses, medications, and allergies is;-

- A. Demographic information
- B. Medical history
- C. Clinical assessments
- D. Research data

16. The following is NOT a potential source of health information;-

- A. Patient medical records
- B. Social media posts
- C. Clinical trials
- D. Employee performance evaluations

17. Public health surveillance data typically include information about:

- A. Individual patient medical records
- B. Disease outbreaks and epidemiological trends
- C. Clinical trial results
- D. Employee demographics

18. The following is **not** a standard in healthcare informatics;-

- A. Data exchange standards
- B. Vocabulary and communications standards
- C. Computerized systems standards
- D. Billing standards

19. At what level of the health sector are health policies developed;-

- A. District
- B. Province
- C. National
- D. Ministry of health

20. The information a clinical officer require in delivering care services is;-

- A. Household surveys
- B. Census data
- C. Patient history
- D. Demographic data

SECTION II: SHORT ANSWER QUESTIONS**(30 MARKS)**

1. Explain FIVE (5) processes involved in data processing (5 marks)
2. Outline five (5) different techniques the analyst uses for fact finding and requirements elicitation. (5 marks)
3. State five (5) key informatics skills (5 marks)
4. Outline five (5) various source of health information (5 marks)
5. Outline five (5) possible causes of security breaches in health information system (5 marks)
6. Outline five (5) measures that can be put in place to help overcome the causes of security breaches in health information system (5 marks)

SECTION III: LONG ANSWER QUESTION –**(20 MARKS)**

1. The security of patient data and information, and indeed of health informatics as whole, should be a policy requirement. Discuss ten (10) ethical issues in health informatics. (20marks)