



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF HEALTH AND APPLIED SCIENCES**

**DEPARTMENT OF HEALTH SCIENCES**

<b>QUALIFICATION:</b> BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT	
<b>QUALIFICATION CODE:</b> 07BHIS	<b>LEVEL:</b> 6
<b>COURSE CODE:</b> EHR621S	<b>COURSE NAME:</b> ELECTRONIC HEALTH RECORDS
<b>SESSION:</b> NOVEMBER 2018	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>FIRST OPPORTUNITY EXAMINATION</b>	
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<b>MODERATOR:</b>	Dr Suama Hamunyela

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Answer ALL the questions.</li><li>2. Write clearly and neatly in the answer book provided.</li><li>3. Number the answers clearly.</li></ol>

**THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)**

## SECTION A – TRUE/FALSE QUESTIONS

### Question 1

Total Marks = 12

- 1.1 Write “T” or “F” to indicate if the following statements are true regarding OpenMRS. (12 marks)
- a. OpenMRS can only be implemented in developing countries. (2 marks)
  - b. OpenMRS also has a paper based version. (2 marks)
  - c. With the use of OpenMRS, there is less need for expert programming skills. (2 marks)
  - d. OpenMRS is **NOT** an open source software. (2 marks)
  - e. OpenMRS does **NOT** have any provision for clinical observations. (2 marks)
  - f. Open MRS has a graphic user interface. (2 marks)

## SECTION B – SHORT ANSWER QUESTIONS

### Question 2

Total Marks = 23

- 2.1 Re-arrange the list of terms with the right description. If the correct description for a term is not available, please indicate. Also indicate if more than one description fits one term. (8 marks)

Term	Description
Computer-based Patient Records	Strict requirement to ensure that patients' health information are recorded and deleted by one organisation
Continuity of Care Records	A benefit of implementing electronic health records
Log review	A technique for measuring data quality in electronic health records
Lack of electronic health records adoption by physicians	Contains information relating to patients' education and qualification

- 2.2 As a health information systems management professional, why would you recommend the implementation of an Electronic Health Record instead of an Electronic Patient Record. (4 marks)
- 2.3 Being a health information management professional, what **five (5)** components would you recommend to be included in an Electronic Health Record System of Systems for it to be considered as fully functional. (5 marks)
- 2.4 Why is OpenMRS classified as having a Behaviour Driven Design feature? (2 marks)

- 2.5 One of the challenges of transitioning from paper records to electronic records is the time required to transfer patient health information into electronic records. Briefly discuss how to overcome this challenge. **(4 marks)**

### SECTION C – OPEN ENDED QUESTIONS

#### Question 3

**Total Marks = 65**

- 3.1 Per the HIPAA Security Rule requirements, a health institution decides to implement the integrity requirement **ONLY**, leaving out confidentiality and availability. What are the consequences of leaving out confidentiality and availability? Be sure to explain in details giving relevant examples. **(10 marks)**

- 3.2 Discuss two **(2)** mechanisms for improving data quality in Electronic Health Records. **(10 marks)**

- 3.3 Observe the following scenario:

*Mr. James was involved in a car accident and has been severely injured. He has been rushed to the emergency unit at the Metropolitan State Hospital. The hospital uses paper based records, although Mr. James has visited the hospital twice in the last ten years, the doctors at the emergency unit have no access to his previous health record. The doctor currently at the emergency unit examines and treats Mr. James at the first point of care and recommends two medications.*

*Mr. James is allergic to the two medications recommended and this was indicated in the paper based record stored in the hospital when he previously visited the hospital's dental and psychiatry units. After taking the medications, he reacted negatively to the medications.*

- a. As a Health Information Manager with experience in Electronic Health Records and its benefits, how would this error be prevented in the future? Give relevant examples. **(15 marks)**
- b. List **two (2)** information and communication technologies that could be adopted at emergency point of care units in health institutions. **(2 marks)**
- c. Discuss in depth why these technologies listed in question **3.3 b** above are appropriate at emergency point of care units. **(8 marks)**
- 3.4 SOAP in relation to Electronic Health Records stands for Subjective, Objective, Assessment, Plan. For each of the components, briefly describe what type of information is included when medication practitioners follow this format in taking notes during observing a patient. **(12 marks)**

3.5 Discuss **four (4)** benefits of Geography Information Systems Mapping in supporting health services. **(8 marks)**