



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH AND APPLIED SCIENCES

DEPARTMENT OF HEALTH SCIENCES

QUALIFICATIONS: BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT	
QUALIFICATION CODE: 07BHIS	LEVEL: 6
COURSE CODE: EHR621S	COURSE NAME: ELECTRONIC HEALTH RECORDS
SESSION: JANUARY 2020	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SUPPLEMENTARY / SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
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INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly in the answer book provided.3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. None

THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)

SECTION A – MULTIPLE CHOICE QUESTIONS

[8 Marks]

Choose the correct answer. Only one answer per question is correct. Each question carries two marks.

1. An Electronic Patient Record represents a type of system that:
 - A. Allows patient information to be shared within a single institution.
 - B. Allows patient information to be shared by both patients and their employers.
 - C. Both A and B.
 - D. None of the above.

2. Which of the following statements best describe health geography?
 - A. Health geography can provide vital information about the health of a population.
 - B. Health geography facilitates planning and decision making.
 - C. With health geography, it is possible to know the demand and supply of healthcare resources.
 - D. All of the above.

3. One of the following is relevant to initiate GIS for public health projects
 - A. Capability exploration.
 - B. Assessment.
 - C. Judgement.
 - D. Mathematical analysis.

4. Interoperability standards are important in Electronic Health Records because:
 - A. It can facilitate the sharing of information across criminal organisations.
 - B. It can facilitate adoption of Electronic Health Records.
 - C. It will slow down the data capturing process.
 - D. Both A and B

SECTION B – TRUE/FALSE QUESTIONS

[12 Marks]

Two marks for each question.

Write “T” or “F” to indicate if the following statements are true or false.

- a. An Electronic Health Record can be in form of a web based application. **(2 marks)**
- b. It is very easy to do data analysis with paper based records. **(2 marks)**
- c. It is efficient to have both paper-based records and electronic health records **(2 marks)**
- d. Mobile devices such as tablets **CAN** be used for capturing patient health information at first point of care. **(2 marks)**
- e. Politics play an important in the functioning of an Electronic Health Record System of Systems. **(2 marks)**
- f. Data security **CANNOT** be comprised with paper-based records. **(2 marks)**
- g. An Electronic Patient Record represents a type of system that allows patient information to be shared within a single institution. **(2 marks)**

SECTION C – SHORT ANSWER QUESTIONS

[30 Marks]

1. Define the following terms in relation to Electronic Health Records **(6 marks each)**
 - a. Gold standards **(2 marks)**
 - b. Data quality **(2 marks)**
 - c. Electronic Health Records **(2 marks)**
2. In terms of Electronic Health Records System of Systems, briefly explain the importance of governance? **(3 marks)**
3. In what scenarios would you endorse an open Electronic Health Record System of Systems? **(2 marks)**
4. Mention **five (5)** benefits of Electronic Health Records to medical practitioners. **(5 marks)**
5. Briefly describe **three (3)** HIPAA Enforcement requirements for organisations adopting HIPAA standards? **(6 marks)**
6. Highlight **three (3)** unique identifiers used for transactions according to HIPAA Unique Identifiers Rule. **(6 marks)**
7. Briefly explain the importance of unique identifying numbers for patient records. **(2 marks)**

SECTION D – OPEN ENDED QUESTIONS

(50 marks)

1. Describe in details, **seven (7)** methods for evaluating data quality in Electronic Health Records. **(14 marks)**

2. It is recommended that Electronic Health Records adopt the SOAP format when capturing data. However, in certain instances, this could be a challenging process to follow. Discuss **one (1)** instance when SOAP may not be adequate in capturing patient health information. Also discuss briefly, **one (1)** method to address the challenge in the scenario identified which Be sure to elaborate your answers. **(16 marks)**

3. Memo Mental Hospital currently uses paper based systems for recording patient information, the management of Memo Mental Hospital has consulted you as a Health Information Systems Manager to convert the paper based system to electronic health records, preferably, they want a web-based application. This is to facilitate accessibility and flexibility. The current form used by Memo Mental Hospital is shown in Figure 1 below. The instructions for designing the web-based application are as follows:
 - a. Convert the form (patient registration form) in Figure 1 below to a web-based electronic health record. Use HTML to write the code. The HTML code should be written in your answer book. **(20 marks)**

MEMO MENTAL HOSPITAL

28 Runa Street, Windhoek
PATIENT REGISTRATION FORM

Is this your first time in this hospital?

Yes

No

First Name _____

Last Name _____

Middle Name _____

Date of Birth _____

Sex Male Female

Name of Medical Aid

- NMC
- Named
- Bailo
- I don't have medical aid

Name of employer _____

Marital Status

- Never married
- Married
- Divorced
- Widow
- Widower

Allergies _____

Referral hospital _____

Figure 1: Patient registration form