QUALIFICATION : BACHELOR OF HEALTH INFORMATION SYSTEM MANAGEMENT	
QUALIFICATION CODE: **07BSHM**	LEVEL: **5**
COURSE: **FOUNDATIONS OF HEALTH INFORMATION MANAGEMENT**	COURSE CODE: **FOH521S**
DATE: **NOVEMBER 2023**	SESSION: **1**
DURATION: **3 HOURS**	MARKS: **100**

FIRST OPPORTUNITY: QUESTION PAPER

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MODERATOR:	**MS ELIZABETH NDAKUKAMO**

INSTRUCTIONS Answer all questions on the separate answer sheet.

1. Please write neatly and legibly.
2. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
3. No books, notes and other additional aids are allowed.
4. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS

1. None

ATTACHMENTS

1. None

paper consists of 7 pages including this front page

QUESTION 1: (10)

Select the most appropriate answer from the given possibilities used in the health information system. Fill in the appropriate letter next to the number of the correct statement on your **ANSWER SHEET**.

1.1. HIM has been recognized as an allied health profession since:

   a. 1910

   b. 1918

   c. 1928

   d. 2006

1.2. What evolving role assesses quality in health record banking?

   a. Physician group consultant

   b. Health record reviewer

   c. Health data analyst

   d. Terminology manager

1.3 Which term is defined as ensuring timely and reliable access to and use of information?

   a. Availability

   b. Confidentiality

   c. Integrity

   d. Security

1.4. The traditional model of HIM practice was:

   a. Department based

   b. Information based

   c. Electronically based

   d. Analytically based

1.5. The new model of HIM practice is:

    a. Information focused

    b. Record focused

    c. Department focused

    d. Traditionally focused

1.6. What is an information system?

    a. A collection of related components that interact to perform a task in order to accomplish a goal

    b. The integration of several elements in a business process to affect a specific outcome

    c. A process that refines raw facts into meaningful information

    d. All of the above

1.7. What are the components of an information system?

    a. Computer servers, networks, and wiring along with personal computers

    b. A combination of hardware, software, and communications technology

    c. Data, people, and processes and a combination of hardware, software, and communications technology

    d. Collecting, maintaining, analyzing, and disseminating information

1.8. What is the difference between data and information?

    a. Data are composed of numbers, and information is composed of words.

    b. Data represent raw facts and figures, and information represents the meaningful interpretation of data.

    c. There is no difference between data and information.

    d. All of the above.

1.9. Which of the following is an information system activity?

    a. privacy

    b. security

    c. quality

    d. input

1.10. A physician ordering a lab test is an example of:

    a. business process

    b. input

    c. output

    d. storage

SECTION B: TRUE/FALSE QUESTION   [10 MARKS]

QUESTION 2: TRUE/FALSE QUESTIONS   (10)

Evaluate the statements and select whether the statement is true or false. Write the word **'True' or 'False'** next to the corresponding number on your ANSWER SHEET. A mark for each question.

2.1. Data granularity does not require that the attributes and values of data be defined at the correct level of detail for the intended use of the data.

2.2. Data represent the basic facts about people, processes, measurements.

2.3. Physicians, nurses, and other caregivers don't care about using the information in individual health records as the basis for making diagnoses and choosing treatment options.

2.4. Passive surveillance often gathers disease data from all potential reporting healthcare workers.

2.5. Health is defined as an integral method of functioning that is oriented toward maximizing personal health.

2.6. One of the assumptions of the wellness approach to living is that individuals must ultimately be responsible for their own wellness.

2.7. One must pass a health education specialist exam to become a certified health educator.

2.8. Data accessibility means that the data are easily obtainable.

2.9. Data comprehensiveness means that all the required data elements are included in the health record.

2.10   Data consistency means that the data are not reliable.

SECTION C: SHORT/LONG ANSWER QUESTIONS   [40MARKS]

QUESTION 3   (40)

3. Nangula and her family live in a rural area in Namibia where over 52 per cent of the estimated 2.3million people live. Nangula has recently been diagnosed with Type 2 diabetes. This happened almost by chance, when she was visiting the nearest health Centre with her daughter for a routine. During the discussion with the doctor, Nangula reporting feeling frequently tired herself. The doctor requested a blood test, which led to the diagnosis. It takes Nangula and her family, including six children over three hours to walk to the health Centre, which has a visiting doctor from one of the regional hospitals. Nangula has not met this doctor before and they are unlikely to meet again because the doctor will only be at the clinic for one day and has over 100 patients to see and children to immunize.

While the doctor is administering the childhood immunization to her daughter, Nangula mentions she is more tired than usual. The doctor orders a blood test which shows that Nangula is experiencing the onset of Type 2 diabetes. Nangula's doctor has only one minute to explain to her what Type 2 diabetes is and how to manage her symptoms. There is no paper-based information to give her, and thus she must rely on the doctor and community health worker present to give her the information she needs very quickly.

Walking back to her village from the clinic with her children, Nangula is confused, and does not understand the implications of the diagnosis or how to manage her condition. She has no access to written or electronic information on diabetes (such as information available via the Internet that she could access from her mobile phone. Forgetting about her diagnosis, she

does not change her diet or level of exercise or receive further support for her condition. Over time Nangula notices that she is becoming even more tired and is experiencing tingling in the toes of her left foot and blurred vision. She is no longer able to walk the three hours to the health center, and the complications from her Type 2 diabetes are becoming more serious. She is now at great risk of blindness, heart disease, nerve damage and loss of blood flow to her limbs, as well as kidney disease. Having access to Nangula's EHR means that the visiting mobile community- based health worker would no longer have to ask Nangula for her health information each time they meet. This record would also be available to other medical professionals that Nangula may interact with either in person or by phone.

In this scenario, Nangula is now much more successful in managing her Type 2 diabetes and in avoiding the serious complications, because there is adequate monitoring of her condition and control of her blood sugar levels. This means that her quality of life and life expectancy will be dramatically improved, and she will be able to continue to work, and care for her family.

3.1 Summarise the benefit of eHealth/mHealth based on the scenario above. **(15)**

3.2 Elucidate the advantages of electronic health record (EHR). **(15)**

3.3 Founded in 1987, Health Level Seven International (HL7) is a not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services. HL7 is supported by more than 1,600 members. Enumerate five **(5)** keys' points about HL7. **(10)**

SECTION D: SHORT/LONG ANSWER QUESTIONS [40 MARKS]

QUESTION 4 (20)

4.1 Discuss five (5) data quality management models (10)

4.2 Elucidate the factors affecting health record data accuracy. (10)

QUESTION 5 (20)

5.1 Before implementing a security program, it is important to understand the potential threats to data security. Threats from a number of sources can cause the loss of informational privacy, compromise data integrity and/or the availability of data. Elaborate five (5) categories' threats to data security from people. (20)

END OF QUESTION PAPER