



**PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH, APPLIED SCIENCES AND NATURAL RESOURCES

Department Name: HEALTH SCIENCES

QUALIFICATION : BACHELOR OF SCIENCE IN HEALTH INFORMATION SYSTEMS MANAGEMENT	
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COURSE: INTRODUCTION TO HEALTH INFORMATICS	COURSE CODE: HIT611S
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FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
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THIS PAPER IS CONSISTS OF 7 PAGES

(Including this front page)

INSTRUCTIONS:

1. Answer ALL the questions.
2. Write clearly and neatly.
3. Number the answers clearly.

PERMISSIBLE MATERIALS:

1. Examination paper.
2. Examination script.

SECTION A MULTIPLE CHOICE

[15]

Write only the correct letter of your choice in the answer book.

1. A computer is an electronic device that consists of:
 - a) Hardware
 - b) People
 - c) Internet
 - d) Information

2. Which of the following is an example of a primary purpose of the medical record?
 - a) Education
 - b) Policy making
 - c) Research
 - d) Patient care management

3. Which term is defined as ensuring timely and reliable access to and use of information?
 - a) Availability
 - b) confidential
 - c) Integrity
 - d) security

4. A network that is worldwide and which is no one person or entity owns is called:
 - a) Internet
 - b) HTML
 - c) Extranet
 - d) Broadband

5. Which statement is true about data security?
 - a) Data availability means that data should be complete, accurate, consistent, up to date
 - b) Most data security problems are due to hackers and external threats
 - c) The privacy of data only concerns patient information
 - d) Data availability means that an organisation must be able to depend on the information systems

6. The instructions that make every computer work, regulate hardware, and allow several tasks to be done simultaneously are known as:
 - a) Java
 - b) Networks
 - c) Operating system
 - d) Hardware

7. What are the components of information system?
 - a) A combination of hardware, software, and communication technology
 - b) Collecting, maintaining, analyzing, and disseminating information
 - c) Computer servers, networks, and wiring along with personal computers
 - d) Data, people, and processes and a combination of hardware, software, and communications technology

8. A portable method of storage of health data is known as:
 - a) e-medicine
 - b) Smart card
 - c) e-health
 - d) e-care

9. Which of the following is the great benefit of EHR?
 - a) Improved efficiency
 - b) Costs
 - c) Fear of technology
 - d) Security concerns

10. Which of the following is an information system activity __?
 - a) Input
 - b) privacy
 - c) security
 - d) quality

11. Downtime procedures for both planned and unplanned system availability should be part of the regular IT infrastructure as well as incorporated into the security program, a data security program must:
 - a) Legal documentation
 - b) Communication measures
 - c) Protect informational privacy by ensuring that data cannot be accessed by unauthorised users
 - d) Billing and reimbursement

12. The main source(s) of data that go into hundreds of aggregate reports or queries that are often developed and used by providers and executives in healthcare organizations are:
 - a) Patient records
 - b) Uniform billing information
 - c) Discharge data sets
 - d) All the above

13. Raw unprocessed healthcare facts generally stored as characters, words, or symbols is known as:
- a) Health care data
 - b) Health care information
 - c) Health care text
 - d) Health care knowledge
14. What elements of a security program could help prevent system or access errors from occurring:
- a) Protecting the privacy of data
 - b) Extranet
 - c) Broadband
 - d) Programming errors
15. Using an abbreviation that has two different meanings is an example of a lack of:
- a) Data currency
 - b) Data consistency
 - c) Data precision
 - d) Data granularity

SECTION B True or False

[10]

Write TRUE OR FALSE answer in the answer book provided

1. The health record is the principal repository for data and information about the healthcare services provided to individual patients.
2. Use of the health record to study the effectiveness of a given drug is considered a primary use of the health record.
3. Data currency refers to the availability of medical information such as critical lab values to in a timely manner.
4. The primary benefit of an EHR in a hospital is quality improvement.
5. Health information exchanges (HIEs) can radically transform healthcare delivery.
6. A proper database design ensures that there are minimal redundant data in the database.
7. Education and reference software is not one category of application software.
8. Regulations in the healthcare industry is something that can constrain or control the industry.
9. Protection of the privacy of information may be defined as the safeguard of information from unauthorised access.
10. A computer worm is a program that copies itself and spreads through out a network.

SECTION C STRUCTURED QUESTIONS

[80]

Answer the following questions.

1. Define the following terminologies (14)
 - a. Health Information Management (HIM)
 - b. Medical transcription
 - c. Data Mining
 - d. Information Security
 - e. Master Patient Index
 - f. Information systems
 - g. Information technology

2. According to the Institute of Medicine (Dick et al. 1997, 77–78), the primary purposes of the health record can be classified into various categories: mention the categories and cite three of the function of each category. (20)

3. Identify four (4) benefits of implementing HIT at the local clinic or state hospital (4)

4. List three database approach commonly uses and state their differences (6)

5. A password is a collection of alphanumeric characters that the user enters the computer. Mention four (4) ways in which passwords can be compromised. (4)

6. Staff education is a key element for information and system security. Discuss three (3) of the components that health staffs need to be educated about systems security. (6)

7. Define data integrity and its relevance for healthcare services? (4)
1 mark for definition, 3 marks for relevance.

8. Discuss any three (3) measures that can be taken to decrease the likelihood of healthcare data input errors. (6)

9. Discuss the challenges health organisations encounters when using paper-based systems? (5)
10. Differentiate the following terms form each other: privacy, confidentiality, and security. (6)

---END OF EXAM---