



**PAMIBIA 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> 5
<b>COURSE CODE:</b> IHI521S	<b>COURSE NAME:</b> INTRODUCTION TO HEALTH INFORMATICS
<b>SESSION:</b> JANUARY 2020	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>SUPPLEMENTARY / SECOND OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	MS. SINTE MUTELO
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<b>INSTRUCTIONS</b>
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

<b>PERMISSIBLE MATERIALS</b>
Pen, pencil and eraser

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

**SECTION A: MULTIPLE CHOICE**

**[10]**

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

1. Health informatics incorporates processes, procedures and theories and concept from which combination of fields: [1]
  - a) Computer Science, Information Science, Architecture, and Health Sciences
  - b) Computer Science, Information Science, Social Science and health Science
  - c) Computer Science, Health Science and Agricultural Science
  - d) All of the above
  
2. Data can be considered? [1]
  - a) Raw facts
  - b) Data with meaning
  - c) Data with no meaning
  - d) Data processed
  
3. Other tools used to process data include these except for : [1]
  - a) Paper
  - b) Pen
  - c) Pencil
  - d) Content bases records
  
4. A system of interconnected computers that share a central storage system and various peripheral devices such as a printers, scanners, or routers is called? [1]
  - a) Internet
  - b) Computer systems
  - c) Extranet
  - d) Broadband
  
5. The first computers in healthcare used prior to 1960s were: [1]
  - a) Faster
  - b) Handled
  - c) Slim and light
  - d) Vacuum tubes

6. Identify a device commonly used for data entry into a computer: [1]
- a) Mouse
  - b) Keyboard
  - c) Printer
  - d) Hardware
7. The two major element of computer systems are? [1]
- a) Data and information
  - b) Output and input
  - c) Knowledge and information
  - d) Hardware and software
8. This network type typically use a communications standard called Ethernet: [1]
- a) WAN
  - b) LAN
  - c) WLAN
  - d) MAN
9. Basic functions of an Operation systems includes .... But not...? [1]
- a) Keeping track of files and folders
  - b) Communication to peripherals devices such as printers
  - c) Sharing data
  - d) Security concerns
10. .... are errors that can be attributed to a mistake or discrepancy in adherence to standard operating procedures or systems: [1]
- a) Spelling
  - b) Systematic errors
  - c) Coding
  - d) Treatment

**SECTION B: True or False**

**[10]**

**Write TRUE OR FALSE answer in the answer book provided**

1. Destruction of data, hardware and software by natural disaster include: damage by water, fire, earthquake or chemical; electrical power outages disk failure an exposure to magnetic fields. [1]
2. A primary source is the original source of that information. [1]
3. Decision support is a computer-based application that collects, organises and analyses business data to facilitate quality business decision-making for management, operations and planning. [1]
4. A bibliographic database is a specific type of database designed to store information about articles, books, and author, abstract and printed material. [1]
5. Doctors, Nurses, Pharmacists and Patients are not allowed to access and secure patient's relevant medical information electronically. [1]
6. Problems of ensuring privacy and confidentiality of data include data protection and data integrity. [1]
7. A Hardware is the most important program that runs on a computer. [1]
8. A Hospital Information System can be regarded as the memory and nervous system of a hospital. [1]
9. The Data-Definition Language (DDL)-defines the properties of data. [1]
10. A metropolitan (MAN) is a type of network with distance limitation. A building or small campus environment might use WAN. [1]

**SECTION C    STRUCTURED QUESTIONS**

**[80]**

**Answer the following questions.**

1. Define the following terminologies
  - a. Software [2]
  - b. Training [2]
  - c. Information technology [2]
  - d. Information systems [2]
  - e. Connectivity [2]
2. Differentiate the with discussing following computerised health systems [10]
  - i. Health information Exchange (HIE)
  - ii. Health information Management systems (HISM)
  - iii. Computerised Clinical Order Entry (CCOE)
  - iv. Electronic Prescribing (e-prescribing)
  - v. Master Patient Index (MPI)
3. Healthcare Computer storages comprise a place or space for holding data and application programs. Identify and discuss the two (2) computer storages. [2]
4. List any four (4) operating systems for PCs? [4]
5. Give and describe five (5) example of the major type of computer application or programs available on shelf. [5]
6. Identify the four (4) basic elements of an Information System? [4]
7. List the five (5) major concerns arising with electronically stored data? [5]
8. Information attributes apply to all information from any source. Identify and discuss five (5) information attributes [10]
9. In order to protect data from unauthorised use, destruction, or disclosure, organisation should take the following steps: (Give only five). [5]
10. Discuss five challenges you consider critical and limits healthcare organisation from implementing Health information systems [5]
11. Information literacy is one of the various overlapping technology-related skills required by all professional healthcare providers. Discuss the overlapping relationships of health, technology and basic literacy? [10]

12. Explain how Cloud Computing and Data Mining techniques can be utilised to solve problems with regards to Big Data in healthcare? [10]

---END OF EXAM---