



Doctorate Program
1st semester 2nd Term
Evaluation Course – 02809

Term Paper Activity

(Model Answer)

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Faculty of Nursing - Cairo University
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Academic level: 3rd level Program: Competency bylaw 2023-2024	Course name/code: Nursing Informatics NUR303	Time: 2hrs. Date:21/1/2026	Total marks: 50	No. of exam pages:7 No. of questions: 25
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General exam instructions for the students:

- Answer section 1, 2, 3 in the bubble sheet and section 4, 5 in the allowed space.
- Using only blue pen
- Not allowed to use corrector pen

**Section I. Read the Following Questions Carefully and Select the Correct Answer
(5 Marks, 1 Mark Each):**

1-A nurse leader analyzing staffing efficiency would most appropriately use:

- A. Clinical Decision Support Systems
- B. Nursing Workload Measurement Systems
- C. Telehealth service delivery Platforms
- D. Educational Simulation Tools

2- Nursing informatics is a specialty that integrates three fields of sciences. Involve:

- A. Nursing, health and technology.
- B-Health, computer and environment
- C. Nursing, computer and information
- D Data, knowledge and information.

3-Which system can use to reduce medication errors by using informatics:

- A. Personal Health Record (PHR)
- B. Bar-Coded Drug Administration
- C. Learning Management System
- D. Nurse Scheduling Software

4-Which from the following one disadvantage of electronic medical records:

- A. Avoid illegible record
- B. Increase medical errors
- C. Duplicate medical procedure
- D. Require extensive training

5-Which of the following considered one of computer system limitation:

- A. Does not take its own decisions.
- B. Has multi-processing features
- C. Has versatile nature
- D. Does not get tired or fatigued

Section II. True or False questions - Indicate whether each statement is True or False and correct the false statement (5 Marks, 1 Marks Each):

6-Informatics supports decision-making by transforming data into knowledge rather than storing information (T)

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7-Bar-coded medication systems primarily enhance workflow efficiency rather than patient safety. (F)

Correction: Bar-coded medication systems primarily enhance patient safety.

8- Increased use of health technology automatically improves nursing care quality.(F)

Correction: Health technology improves care quality only when used effectively.

9- Ethical nursing informatics practice requires balancing patient privacy with accessibility of information. (T)

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10- Consumer Health Informatics focuses exclusively on healthcare providers’ use of technology.(F)

Correction: Consumer Health Informatics focuses on patients’ use of technology

Section III. Match Column A (Nursing Informatics concepts) with the Correct Answer from Column B (Primary Purpose in nursing practice) (5 Marks, 1 Mark Each).

Column A: Nursing Informatics concepts	Column B: Primary Purpose in nursing practice
11-Electronic Health Record(C)	A. Develops clinical reasoning and decision making in a safe learning environment
12-Telehealth Nursing Services (D)	B. Analyzes nursing activities to support staffing and resource allocation decision
13- High- Fidelity Patient Simulation (A)	C. Provides integrated patient data to support continuity of care across settings
14-Consumer Health Informatics (E)	D. Delivers nursing care and follow up services to patients at a distance
15- Health Informatics Interoperability (F)	E. Enables patient to access health information and actively participate in the care
	F. Allows health information exchange between different healthcare systems

Section IV. Short Answer Questions (10 Marks, 2 Marks Each):

1. Mention **two** applications of nursing informatics in nursing education.
 - **E-learning platforms**
 - **Virtual simulation tools**

2. List **four** components of the "Metastructure" of Nursing Informatics.
 - **Data**
 - **Information**
 - **Knowledge**
 - **Wisdom**

3. Mention **two** advantages of electronic health record
 - **Improves data accessibility**
 - **Enhances continuity of care**

4. Enumerate **four** types of the health information technology
 - **Electronic Health Records**
 - **Clinical Decision Support Systems**
 - **Telehealth systems**
 - **Nursing Information Systems**

5. Mention **two** roles of nurse leader in interoperability
 - **Promote standardized documentation**
 - **Support staff training**

Section V. Essay Questions (25Marks, 5 Marks Each):

1. Discuss four types of cyber security categories.
 - **Network security:** is the practice of securing a computer network from intruders, whether targeted attackers or opportunistic malware.
 - **Application security:** focuses on keeping software and devices free of threats through the system update of the security software (utility programs).
 - **Information security:** protects the integrity and privacy of data, both in storage and in transit.
 - **Operational security:** includes the permissions users have when accessing a

network and the procedures that determine how and where data are accessed

- **Disaster recovery** and business continuity

2. Analyze the role of the information technology on improving quality of care.

Information technology improves quality of care by:

- **Enhancing patient safety:** Alerts for allergies, medication interactions, and abnormal lab results reduce errors.
- **Supporting evidence-based practice:** Provides access to guidelines and research for informed decisions.
- **Improving efficiency:** Streamlines documentation and communication, saving time for direct patient care.
- **Facilitating continuity of care:** Real-time access to patient data enables coordinated care across healthcare teams.
- **Enabling quality monitoring:** Electronic records allow tracking of outcomes and performance for quality improvement.

3. Discuss the challenges faced by nurses when using health information technology in clinical settings.

Nurses face several challenges when using HIT, including:

- **Technical issues:** System errors, slow performance, or software glitches can interrupt patient care.
- **Limited training:** Nurses may not receive sufficient training, affecting their confidence and efficiency.
- **Time constraints:** Electronic documentation can be time-consuming, reducing time for direct patient care.
- **Resistance to change:** Some nurses may prefer paper-based records and find adapting to technology difficult.
- **Workflow disruption:** Poorly integrated systems can cause duplicated tasks and reduce efficiency.
- **Data privacy concerns:** Protecting patient information is critical and can be challenging.

4. Explore the legal and ethical issues of nurses when using health information technologies.

Nurses face several legal and ethical considerations when using HIT:

- **Confidentiality and privacy:** Ensuring patient data is protected and shared only with authorized personnel.
- **Data security:** Preventing unauthorized access, breaches, or misuse of electronic records.
- **Accuracy of documentation:** Maintaining truthful and complete records to prevent legal consequences.
- **Informed consent:** Ensuring patients understand how their data is collected, stored, and used.
- **Professional accountability:** Nurses are responsible for proper use of HIT in compliance with laws and ethical standards.

5. Describe the impact of the information technology on nursing documentation within healthcare settings.

Health information technology positively affects nursing documentation by:

- **Improving accuracy and legibility:** Reduces errors caused by handwritten records.
- **Enhancing accessibility:** Patient information can be accessed in real-time by authorized staff.
- **Increasing efficiency:** Templates and automated functions save time and reduce repetitive tasks.
- **Supporting clinical decisions:** Alerts and reminders help prevent errors and guide patient care.
- **Facilitating quality improvement:** Electronic records allow data analysis for audits and research.
- **Ensuring legal compliance:** Time-stamped entries provide evidence for accountability and meet regulatory requirements.

**End of Questions
Good Luck!**