|  |  |  |
| --- | --- | --- |
| **University of Kerala** | | |
| Discipline: Computer Science | Time: 2 Hours (120 Mins.) |
| Course Code: UK1DSCCSC108 | Total Marks: 56 |
| Course Title: HEALTH INFORMATICS |  |
| Type of Course: DSC |  |
| Semester: 1 |  |
| Academic Level: 100-199 |  |
| Total Credit: 4, Theory: 4 Credit, Practical: 0 Credit |  |

Part A (6 Marks, Objective Type, 1 Mark Each)

Objective Type. 1 Mark Each. Answer All Questions

(Cognitive Level: Remember/Understand)

| **Qn. No** | **Question** | **Cognitive**  **Level** | **Course**  **Outcome (CO)** |
| --- | --- | --- | --- |
| 1 | Who are considered key players in Health Information Technology? | Remember |  |
| 2 | Define Health Informatics. | Remember |  |
| 3 | What is Clinical Data Warehouse (CDW)? | Remember |  |
| 4 | State one barrier to Health Information Technology adoption. | Understand |  |
| 5 | Differentiate between Informatics and Information Technology. | Understand |  |
| 6 | Name two Health Informatics resources. | Understand |  |

Part B. 10 Marks. Time: 20 Minutes

Two-Three sentences. 2 Marks Each. Answer All Questions

(Cognitive Level: Understand/Apply)

| **Qn. No** | **Question** | **Cognitive**  **Level** | **Course**  **Outcome (CO)** |
| --- | --- | --- | --- |
| 7 | What is the importance of Health Informatics? | Understand |  |
| 8 | Describe the challenges of healthcare data analytics. | Understand |  |
| 9 | Explain the purpose of Electronic Health Records (EHR). | Apply |  |
| 10 | Define the term "Computerized Physician Order Entry" (CPOE). | Apply |  |
| 11 | Briefly explain XML in the context of data standards. | Apply | CO4 |

Part C.

16 Marks. Time: 35 Minutes

Short Answer. 4 Marks Each.

Answer all 4 questions, choosing among options within each question.

(Cognitive Level: Apply/Analyse)

| **Qn. No** | **Question** | Cognitive  Level | Course  Outcome (CO) |
| --- | --- | --- | --- |
| 12 | 1. Differentiate between data, information, and knowledge.   OR | Analyse |  |
|  | b. Explain why Health IT sometimes fails. | Analyse |  |
| 13 | 1. Describe the Institute of Medicine's vision for EHRs.   OR | Analyse |  |
|  | b. Explain the importance of Clinical Decision Support Systems (CDSS). | Analyse |  |
| 14 | 1. Discuss HL7 and its role in healthcare data standards.   OR | Analyse |  |
|  | b. Describe DICOM and its significance in Health Informatics. | Apply |  |
| 15 | 1. Explain the basic security principles related to health data?   OR | Apply |  |
|  | b. Explain the role of the HITECH Act in healthcare data privacy. | Analyse |  |

Part D. 24 Marks. Time: 60 Minutes

Long Answer. 6 Marks Each.

Answer all 4 questions, choosing among options within each question.

(Cognitive Level: Analyse/Evaluate/Create)

| **Qn. No** | **Question** | **Cognitive**  **Level** |  |
| --- | --- | --- | --- |
| 16 | 1. Explain the barriers to adopting Health Information Technology.   OR | Analyse |  |
|  | b. Describe the future trends in Health Informatics. | Evaluate |  |
| 17 | 1. Explain the concept and need for Electronic Health Records.   OR | Evaluate |  |
|  | b. Discuss the steps in selecting and implementing an EHR. | Analyse |  |
| 18 | 1. Summarize the terminology standards, focusing on SNOMED-CT and RxNorm.   OR | Analyse |  |
|  | b. Describe the role of MEDCIN in healthcare data standardization. | Analyse |  |
| 19 | 1. Describe HIPAA and its impact on health data privacy.   OR | Analyse |  |
|  | b. Discuss the difficulties in applying medical ethics in a digital environment. | Analyse |  |