Reg.No.:												

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 120005

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2024
Seventh Semester
Computer Science and Engineering
U19BMOE8 – MEDICAL INFORMATICS
(Common to EEE, ECE, IT, BT & CST)
(Regulation 2019)

Time: Three Hours Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	What are the information the case sheet should have in clinical data collections?	2	K1	CO1
2.	Give an example for application of Clinical Data.	2	K2	CO1
3.	State DICOM and where it is used.	2	K2	CO2
4.	How ECG serves as an evidence for heart diseases and its helps in treatment.	2	K2	CO2
5.	List out the Data structure for Clinical information System?	2	K2	CO3
6.	Why normalization is required in data collection and handling?	2	K2	CO3
7.	Give an example for Database which deals with the genetic variations and its relation to human health.	2	K2	CO4
8.	What is EDUCTRA project and how it helps medical professionals?	2	K2	CO4
9.	List out the advantages of Tele medicine.	2	K2	CO5
10.	What is Biometrics in Health informatics?	2	K1	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.		Questions	Marks	KL	CO
11.	a)	Discuss about the structure of clinical information system (CIS) and how it benefits professional in Clinical decision making.	13	K3	CO1
		(OR)			
	b)	What is computer based medical information retrieval and explain about MEDLARS and UMLS?	13	K3	CO1
12.	a)	Explain the benefits of Clinical information system in academic references and other clinical application like Internal medicine, Cancer and Obstetrics.	13	K4	CO2
		(OR)			
	b)	Discuss about the history and evolution of medical health record standards and highlight their advantages.	13	K4	CO2
13.	a)	Discuss about the different types of data acquisition processes for Clinical data management (CDM) and list out the advantages of programming language in CDM with example.	13	K3	CO3
		(OR)			
	b)	Discuss about the automation process in Clinical laboratories and its applications in clinical data records.	13	K3	CO3
14.	a)	Explain about the benefits of informatics in Clinical data management and Health care with suitable example.	13	K3	CO4
		(OR)			
	b)	Discuss the overview of patient oriented information system in clinical information system and how it benefits patients.	13	K3	CO4
15.	a)	Explain about the personalized e services and Cloud computing in personalized medicines.	13	K3	CO5
		(OR)			
	b)	What is GRID computing and elaborate the applications of GRID computing in clinical and biomedical research in detail.	13	K4	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.		Questions	Marks	KL	CO
16.	a)	Explain about the standards in Health information systems in detail and how it benefit the medical ecosystem.	15	K3	CO2
		(OR)			
	b)	Discuss about the virtual reality applications in medicines and Explain how its benefits professional in treatment planning and Diagnosis.	15	K4	CO5