Question Paper Code: U9B73

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Open Elective

Biomedical Engineering

21UBM973-COMPUTER APPLICATION IN MEDICINE

(Common to All branches)

(Regulations 2021)

Duration: Three hours   Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1.	Define the function of a sound card in a computer system.	CO1- U
2.	List out the significance of a network card in a computer.	CO1- U
3.	Write a short notes on data acquisition and control.	CO1- U
4.	Sketch the diagram for GPIB Connector.	CO1- U
5.	How does interactive multimedia education improve learning outcomes in medicine?	CO1- U
6.	Name one advantage of using robotic systems in surgery compared to conventional surgical techniques.	CO1- U
7.	What does it mean by "Health Online," and what are the advantages for both patients and medical professionals?	CO1- U
8.	The way does the automated intensive care unit (ICU) improve the care of patients in critical condition?	CO1- U
9.	Identify the purpose of the EHR serves.	CO1- U
10.	In what ways might electronic health records compromise security?	CO1- U

PART – B (5 x 16= 80 Marks)

11. (a) Using a clear diagram, explain how connect a keyboard and mouse to a computer.   CO1 - U   (16)

Or

(b) Describe the steps you would take to choose and install a Bluetooth adapter, and explain how you would ensure compatibility with the computer system.   CO1 - U   (16)

12. (a) Explain the data acquisition by using serial interfaces with neat diagram?   CO1 - U   (16)

<div align="center">Or</div>

(b) Describe how MEDLARS assists healthcare professionals and researchers in accessing relevant medical literature. Provide examples of its applications in medical research and clinical practice.   CO1 - U   (16)

13. (a) Elaborate the types involved in computer assisted Instruction and also its advantages, disadvantages and features.   CO1 - U   (16)

<div align="center">Or</div>

(b) Provide a note explaining the Visible Human Project's role and significance in the larger context of computer-aided instruction (CAI).   CO1 - U   (16)

14. (a) Explain the various applications of computer technology in critical care settings, such as telemedicine, electronic health records, decision support tools, and monitoring systems.   CO1 - U   (16)

<div align="center">Or</div>

(b) Consider the possible repercussions of false information and pseudoscience in internet health resources.   CO1 - U   (16)

15. (a) Explain at least three key benefits of implementing EHR systems for healthcare providers, patients, and healthcare organizations.   CO1 - U   (16)

<div align="center">Or</div>

(b) Explain the importance of data security and privacy in the architecture of an EHR system and describe how these concerns are typically addressed within the system.   CO1 - U   (16)

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