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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations

Programme: B.E.

Semester: IV

Branch: Medical Electronics Engineering

Duration: 3 hrs.

Course Code: 23MD4PCDCH

Max Marks: 100

Course: Data Communication in Healthcare

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.			UNIT - I	CO	PO	Marks
	1	a)	Summarize the relationship between the layers and addresses in TCP/IP model with a neat block diagram.	CO1	PO1	08
		b)	Briefly discuss the functions of various layers of the OSI model.	CO1	PO1	12
			OR			
	2	a)	Tabulate the status of various parameters with respect to different network topology.	CO1	PO1	12
		b)	Identify and explain the various network criteria.	CO1	PO1	08
			UNIT - II			
	3	a)	Summarize the unicast routing protocol with a neat figure.	CO1	PO2	10
		b)	Elaborate on the role of browser and server.	CO1	PO2	10
			OR			
	4	a)	Enumerate the multicast applications.	CO1	PO2	10
		b)	Summarize the various categories of open loop congestion control.	CO1	PO2	10
			UNIT - III			
	5	a)	Explain the CSMA/CA as used in wireless LANs with a neat flowchart.	CO2	PO2	10
		b)	Specify the significance of the logical link control(LLC) a sublayer of data link layer in the IEEE standard.	CO1	PO2	10
			OR			
	6	a)	Specify the role of each field in an 802.3 MAC frame.	CO2	PO2	10

		b)	Summarize the standard Ethernet implementations with respect to the following characteristics: Media, Maximum length, Line encoding.	CO2	PO2	10
			UNIT - IV			
	7	a)	Mention and explain the various fields that uses telemedicine.	CO3	PO2	10
		b)	Illustrate the transmission of analog physiological signals over telephonic line.	CO3	PO2	10
			OR			
	8	a)	Identify the central systems in the architecture of GSM and explain it briefly.	CO3	PO2	10
		b)	Summarize the advantages and disadvantages of CDMA.	CO3	PO2	10
			UNIT - V			
	9	a)	Mention the future trends in healthcare mobile app development.	CO4	PO2	06
		b)	Discuss the different types of mobile healthcare apps.	CO4	PO2	08
		c)	Specify the task accomplished by using the mobile devices in mHealth applications.	CO4	PO2	06
			OR			
	10	a)	Enumerates the challenges in healthcare mobile app development.	CO4	PO2	06
		b)	Identify the features that need to be present in a resource to term it as an ideal resource.	CO4	PO2	08
		c)	Enumerate the benefits of mobile apps developed for the hospital management.	CO4	PO2	06
