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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, B.E. - Information Science and Engineering

Semester End Examination; February / March - 2022

Communication Networks

Time: 3 hrs *Max. Marks: 100*

Course Outcomes

The Students will be able to:

CO1: Describe the OSI model and TCP/IP model and brief the significance of digital signals.

CO2: Apply the knowledge of error detection mechanism and Classify different protocol mechanism of network layer.

CO3: Determine various unicast routing protocols and their applications.

CO4: Describes the mechanism of Multicasting Routing, TCP and UDP

CO5: List the various application layer protocols and their backend usage for internet service.

Note: ***I) PART - A*** *is compulsory.* ***Two*** *marks for each question.*

II) PART - B*: Answer any* ***Two*** *sub questions (from a, b, c) for Maximum of* ***18 marks*** *from each unit.*

Q. No.	Questions	Marks	BLs	COs	POs
	I : PART - A	**10**			
I a.	Define data communication. List any one advantage and disadvantage.	2	L1	CO1	PO2
b.	What is digital and analog transmission? Differentiate between them.	2	L3	CO2	PO1
c.	Mention any two advantages of transport layer.	2	L2	CO5	PO2
d.	What is a multicasting routing protocol?	2	L1	CO5	PO1
e.	Compare Wireless LAN and Virtual LAN.	2	L3	CO5	PO2
	II : PART - B	**90**			
	UNIT - I	**18**			
1 a.	Explain the layer and working of TCP/IP protocol suite.	9	L2	CO1	PO2
b.	Describe different layers of OSI connection model, layer-to-layer communication.	9	L2	CO1	PO2
c.	Brief about periodic analog signals.	9	L2	CO1	PO2
	UNIT - II	**18**			
2 a.	Briefly explain digital-to-analog and analog-to-digital conversion.	9	L2	CO2	PO2
b.	Define transmission media. Explain twisted cable.	9	L2	CO2	PO1
c.	Compare radio waves with infrared waves with example.	9	L3	CO3	PO2
	UNIT - III	**18**			
3 a.	Differentiate noisy and noiseless channels.	9	L3	CO3	PO2
b.	Define CRC checksum and explain with an example.	9	L2	CO3	PO2
c.	Explain in detail IPv4.	9	L3	CO3	PO2

Contd... 2

	UNIT - IV	**18**			
4 a.	Define point-to-point protocol. Explain framing techniques.	9	L2	CO4	PO1
b.	Explain distance vector routing protocol in detail.	9	L2	CO4	PO2
c.	Compare random access and controlled access.	9	L3	CO4	PO2
	UNIT - V	**18**			
5 a.	Differentiate between TCP and UDP with examples.	9	L2	CO5	PO1
b.	Define and explain any two addressing mechanism.	9	L2	CO5	PO2
c.	Explain file transfer in detail (FTP, E-mail, DNS).	9	L3	CO5	PO2

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