



# 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; Feb. - 2021**

**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
<b>I : PART - A</b>		<b>10</b>			
I a.	Compare communication network and computer network.	2	L2	CO1	PO2
b.	Define Framing and Protocol.	2	L1	CO2	PO2
c.	What is meant by Error Correction and Error Detection?	2	L1	CO3	PO2
d.	List out any two advantages of transport layer.	2	L1	CO4	PO2
e.	Differentiate between UDP and IP.	2	L3	CO5	PO2
<b>II : PART - B</b>		<b>90</b>			
<b>UNIT - I</b>		<b>18</b>			
1 a.	Describe OSI reference model.	9	L2	CO1	PO2
b.	Mention and explain TCP / IP protocol suite.	9	L2	CO1	PO2
c.	Briefly explain digital-to-analog conversion.	9	L2	CO1	PO2
<b>UNIT - II</b>		<b>18</b>			
2 a.	Discuss block coding techniques with examples.	9	L2	CO2	PO1
b.	Define Cyclic code. Explain Cyclic Redundancy Checksum (CRC).	9	L2	CO2	PO2
c.	Compare Packet Switching and Circuit Switching.	9	L3	CO2	PO2
<b>UNIT - III</b>		<b>18</b>			
3 a.	Briefly explain debugging tools.	9	L2	CO3	PO1
b.	Explain unicast routing protocols.	9	L2	CO3	PO2
c.	Write a short notes on;				
	i) Distance Vector Routing	9	L2	CO3	PO2
	ii) RTP (Real Time Protocol)				

**UNIT - IV****18**

- |   |   |    |     |     |
|---|---|----|-----|-----|
| 4 a. Compare multicast and multicast routing protocols. | 9 | L3 | CO4 | PO2 |
| b. Discuss the principles of reliable data transfer.    | 9 | L2 | CO4 | PO1 |
| c. Write a short notes on;                              |   |    |     |     |
| i) Multiplexing   | 9 | L2 | CO4 | PO2 |
| ii) Demultiplexing                                      |   |    |     |     |

**UNIT - V****18**

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|---|---|----|-----|-----|
| 5 a. Differentiate between Web and HTTP.        | 9 | L3 | CO5 | PO2 |
| b. Explain FTP (File Transfer Protocol).        | 9 | L2 | CO5 | PO1 |
| c. Discuss the Electronic mail in the internet. | 9 | L2 | CO5 | PO2 |

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