

Code: 20EC4601D

**III B.Tech - II Semester – Regular / Supplementary Examinations  
APRIL 2024**

**COMPUTER NETWORKS  
(ELECTRONICS & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
<b>UNIT-I</b>					
1	a)	Draw the architecture of OSI-ISO model and explain it.	L3	CO1	7 M
	b)	Differentiate between broad band and narrow band ISDN.	L3	CO2	7 M
<b>OR</b>					
2	a)	List out various network topologies. Illustrate architecture of bus and tree topologies and compare its performance.	L3	CO1	7 M
	b)	Draw the structure of ATM and discuss it.	L3	CO2	7 M
<b>UNIT-II</b>					
3	a)	Compare the performance of Stop and wait and Sliding window protocol.	L3	CO3	7 M
	b)	What is CSMA/CD and describe it?	L2	CO3	7 M
<b>OR</b>					

4	a)	Illustrate the data link layer design issues.	L3	CO2	7 M
	b)	Contrast the differences between repeater, bridge, router and gateway.	L4	CO4	7 M
<b>UNIT-III</b>					
5	a)	Compare and contrast between virtual circuit and datagram approach.	L3	CO1	7 M
	b)	Sketch and explain fields in the internet protocol (IPv4) header.	L3	CO3	7 M
<b>OR</b>					
6	a)	Illustrate the format of IP address for class A, class B, and class C.	L3	CO2	7 M
	b)	Infer various methods of implementing broadcast routing algorithm and discuss it.	L4	CO4	7 M
<b>UNIT-IV</b>					
7	a)	Write the differences between TCP and UDP in terms of performance and specifications.	L3	CO3	7 M
	b)	What is congestion? Illustrate leaky bucket congestion control algorithm.	L3	CO3	7 M
<b>OR</b>					
8	a)	Infer TCP time out and retransmission policy.	L4	CO4	7 M
	b)	Discuss the functions and services of transport layer.	L2	CO1	7 M

**UNIT-V**

9	a)	Illustrate the message format of DNS and also draw the header format.	L3	CO2	7 M
	b)	What is world wide web? Illustrate it.	L3	CO3	7 M
<b>OR</b>					
10	a)	Articulate the message header in e-mail.	L3	CO2	7 M
	b)	Illustrate loss less audio compression techniques.	L3	CO4	7 M