

UPES

End Semester Examination, December, 2023

Course: Computer Networking

Program: MCA

Course Code: CSEG 8004

Instructions:

Semester : 3rd

Time : 03 hrs.

Max. Marks: 100

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Define big Endian and small Endian architecture. Illustrate them with examples.	4	C01
Q 2	Outline the role and structure of SCTP? Describe its role in process to process data delivery? How does it compare with Unix/LINUX sockets?	4	C02
Q 3	Describe the role of file sharing applications in the development and popularization of the Internet.	4	C03
Q 4	How is network addressing done in IP for IPv4? Why did we need IPv6?	4	C05
Q 5	Describe the role of UDP in process to process data transfer.	4	C01

SECTION B
(4Qx10M= 40 Marks)

Q 6	Detail the channelization protocol CDMA. Illustrate it with appropriate examples and diagrams.	10	C02
Q 7	Describe distance vector routing. Illustrate its problems. Describe it with examples and diagrams.	10	C05
Q 8	Outline the role and mechanism of link state routing on network layer. Describe it with examples and diagrams.	10	C05
Q 9	Describe Linear Codes, Hamming Distance, Hamming Code and conditions for error detection and correction. Provide appropriate diagrams and examples to illustrate your points. Or Illustrate the role of transport layer in the success of different file sharing services like Bittorrent. What kind of design changes will make it even more relevant.	10	C03

SECTION-C (2Qx20M=40 Marks)			
Q 10	<p>Describe slow start, AIMD and closure of a connection for TCP. What is the role of windowing mechanism in managing congestion? Who came with the idea of acknowledgement?</p> <p style="text-align: center;">or</p> <p>What are error correcting codes? Describe CRC. How are they implemented? HDLC uses FCS. How is FCS related to Error correcting codes?</p>	20	C06
Q 11	<p>Describe all three different ARQs. Who was the inventor behind ARQs? Compare the pros and cons of all three different ARQs with appropriate diagrams and examples.</p> <p style="text-align: center;">or</p> <p>Describe HDLC and PPP diagram in detail. Show proper time diagrams and connection set up, role of REJ and closure of a connection. What kind of networking uses PPP?</p>	20	C04