

January 2023

MCA - I SEMESTER

Computer Networks (MCA-20-103)

Time: 3 Hours

Max. Marks:75

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
  2. Answer any four questions from Part -B in detail.
  3. Different sub-parts of a question are to be attempted adjacent to each other.

<b>PART -A</b>			
Q1	(a)	What is baud rate?	(1.5)
	(b)	What is data encoding?	(1.5)
	(c)	How is digital signal different from analog signals?	(1.5)
	(d)	What do you mean by the bandwidth?	(1.5)
	(e)	What do you mean by the multiplexing?	(1.5)
	(f)	What do you mean by the token ring?	(1.5)
	(g)	What do you mean by the congestion in the network?	(1.5)
	(h)	What do you mean by the narrowband ISDN (Integrated Services Digital Network)?	(1.5)
	(i)	What is fast ethernet?	(1.5)
	(j)	What is world wide web?	(1.5)
<b>PART -B</b>			
Q2	(a)	What do you mean by computer network? Explain the different types of the computer network.	(8)
	(b)	What do you mean by the medium access control? Explain Carrier Sense Multiple Access with Collision Detection (CSMA/CD)	(7)
Q3	(a)	What is OSI model? Explain the functions of different layers of the OSI model in detail.	(10)
	(b)	Explain the asynchronous and synchronous transmission of data.	(5)
Q4	(a)	What is transmission media. Explain the different types of transmission media in computer network.	(10)
	(b)	What is frame relay? Explain the frame format of the frame relay.	(5)
Q5	(a)	Why is flow control needed? Explain the Selective Repeat Automatic Repeat Request (Selective Repeat ARQ) by taking suitable example.	(8)
	(b)	Explain the pulse code modulation technique by taking suitable example.	(7)

Q6	(a)	What is switching? Explain the different types of the switching mechanisms.	(9)
	(b)	What is routing? Explain the distance vector routing by giving suitable example?	(6)
Q7		Write short note on following (a) Switched Multi-megabit Data Services (b) Error Detection and Correction (c) Satellite Networks	(5*3)

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