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DAYANANDA SAGAR COLLEGE OF ENGINEERING

(An Autonomous Institute Affiliated to VTU, Belagavi)

ShavigeMalleshwara Hills, Kumaraswamy Layout, Bengaluru-560078

Department of Computer Science & Engineering

Continuous Internal Assessment Test - 1

Course: Computer Networks — Course Code**:** 18CS5DCCNW

Semester & Sec:5 & A, B, C, D, E — Maximum marks: **50**

		Marks		
1.	**(i)** SNR of Noiseless channel is_____. (a) Zero (b) Infinity (c) One (d)Two **(ii)** _____is the technique to convert digital to digital. (a) PCM (b) ASK (c) PSK (d) POLAR NRZ **(iii)** How many octets are there in IPv4 ? (a)8 (b) 2 (c) 4 (d) 6 **(iv)** Waki taki is an example for _____ (a)Full duplex (b)Half duplex (c) Simplex (d)Multiplex **(v)** internet layer is present in_____model (a)OSI (b)ISO (c)TCP/IP (d)SOI **(vi)** Which of the following is not a MAC address? (a)a01c:2b3d:9fdc (b) fde:acde:17bd (c) 90af:afdb:5467 (d) 1dfe:9e2c:afdc **(vii)** How many data flow layers are there in OSI model? (a) 7 (b) 3 (c) 4 (d) 5 **(viii)** A signal having fmax=4000Hz,what is Nyquist rate? (a)4KHZ (b)8KHZ (c)80KHZ (d) 400KHZ **(ix)** How Bandwidth related to Shannon channel capacity? (a) Directly proportional (b)Inversely proportional (c) No impact (d)None of these **(x)** Physical layer responsibly is to_____ (a) Transfer bits (b)Forward segments (c)Forward Packet (d)Forward Frames	1x10		
2.	What is the total delay (Latency) for a frame size of 10 million bits that is being sent on a link with 15 routers each having a queuing time of 2 μs and a processing time of 1μs.The length of the link is 3000 km. The speed of light inside the link is $2X10^8$ m/s. The link has a bandwidth of 6Mbps. Which component of the total delay is dominant? Which one is negligible?	10	CO1	L3
3.	Represent the digital data 01110011010 in the following formats with bit frequency 5KHZ. a) Bipolar NRZ b) Polar NRZ c) Polar Manchester D) Bipolar RZ	10	CO2	L3
4.	Convert the digital data 11001110001 into analog data with fmax=4KHZ.	10	CO2	L2
	(OR)			
	a) A network with bandwidth of 10Mbps can pass only an average of 12,000 frames per minute with each frame carrying an average of 10,000 bits. What is the throughput of this network?	6	CO2	L3
	b) A signal travels from point A to point B. At point A, the signal power is 1000 W. At point B, the power is 200 W. What is the attenuation in decibels?	4		

5	Explain OSI Model in detail.	10	CO1	L2
	(OR)			
	Elaborate the following terms with an example a) Throughput b) Attenuation c) Bitrate d) SNR e) Bandwidth	10	CO1	L2