Shri Shankaracharya Institute of Professional Management & Technology
Department of Electronics and Telecommunication Engineering
Class Test – II   Session- July – Dec, 2022   Month- January
Sem- ET 5th   Subject- Digital Communication - C028511(028)
Time Allowed: 2 hrs   Max Marks: 40

Note: -   *Attempt any 5 Questions.*

Q. NO.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	Draw the following data format for the bit stream 1100110 in Polar NRZ, Unipolar RZ and AMI Also Derive the expression for PSD of Polar Signalling and also draw its characteristics	8	Apply	CO3
2.	Write a short note on Scrambling. Give example to explain scrambling	8	Understanding	CO3
3.	What do you mean by Error Probability? Derive the expression for Detection of error probability for polar signal	8	Apply	CO3
4.	Explain the generation and detection of QPSK along with block diagram and waveform.	8	Understanding	CO4
5	Explain in detail with an example DPSK Transmitter and Receiver.	8	Understanding	CO4
6	Differentiate among ASK, FSK and PSK	8	Understanding	CO4

Shri Shankaracharya Institute of Professional Management & Technology

Department of Electronics and Telecommunication Engineering

Class Test – II   Session- July– Dec, 2022 Month- Jnauary

Sem- ET&T 5th Subject- Design of Electronics Circuit – C028512(28)

Time Allowed: 2 hrs   Max Marks: 40

Note: -   Attempt any 5 question. All questions carry equal marks.

Q. NO.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	Draw the internal block diagram of 555 timers in monostable mode and explain its operation with proper waveform.	[8]	Understanding	CO4
2.	Draw the circuit diagram of an astable multivibrator to generate the frequency of 1 kHz and duty cycle of 75% (C=0.1 μF).	[8]	Applying	CO4
3.	Discuss the various application of PLL.	[8]	Applying	CO4
4.	Explain voltage controlled oscillator VCO IC 566.	[8]	Understanding	CO4
5.	Explain voltage to time conversion type A to D converter.	[8]	Understanding	CO5
6.	What is the important specification of digital to analog converter?	[8]	Understanding	CO5
7.	Draw neat diagram for 4-bit R-2R ladder D/A converter and weighted resistor type D/A converter compare them.	[8]	Understanding	CO5

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Department of Electronics and Telecommunication Engineering
Class Test – II   Session- July-Dec, 2022 Month- January

Sem- ET&T 5th Subject-   Microcontroller & Embedded System

Time Allowed: 2 hrs   Max Marks: 40

Note: -   Solve any five question.

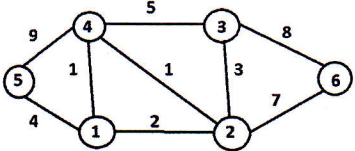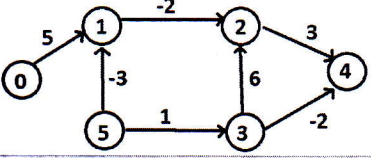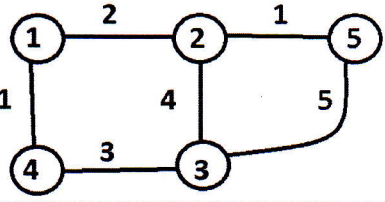| Q. No.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	Interface 8051 with memory a) 8 KB Prog. ROM b) 16KB data RAM c) 32KB SRAM	[8]	Apply	CO3
2.	WAP to monitor the switch and ferform the following a) if switch=0 send message"HELLO" b) if switch =1 send message "GOOD BYE" Assume that switch is canceled to pin P2.1 and baud rate 9600	[8]	Apply	CO3
3.	WAP to interface seually the message "FOOD MORNING" Continuassy at boud rate 57600.	[8]	Apply	CO4
4.	WAP to generate two sq. wve on of 5KH₃ feeq at P1.2 annther of 25KH₃ at P2.2 assume cryted feeq 22MH₃ use timer in mode 2.	[8]	Apply	CO4
5.	In the crt (interfacing 8051 with BAC 0808) a switch is connected. WAP to do the following a) sw=0 starecose b) sw=0 trianguls wone.	[8]	Apply	CO4

Shri Shankaracharya Institute of Professional Management & Technology
Department of Electronics and Telecommuication Engineering
Class Test – II   Session- July. – Dec, 2022 Month- Jan

Sem- ET&T 5th sem   Subject- Advance Data Structure and Algorithm - C022535(022)

Time Allowed: 2 hrs   Max Marks: 40

*Note: - **Attempt any all questions.***

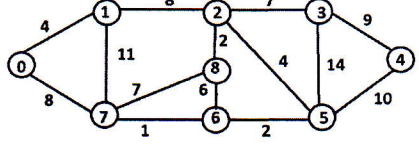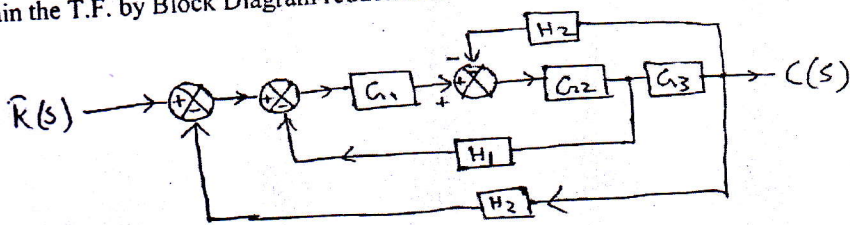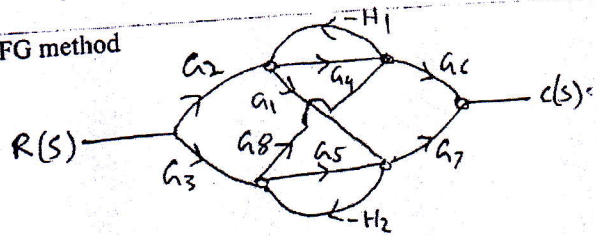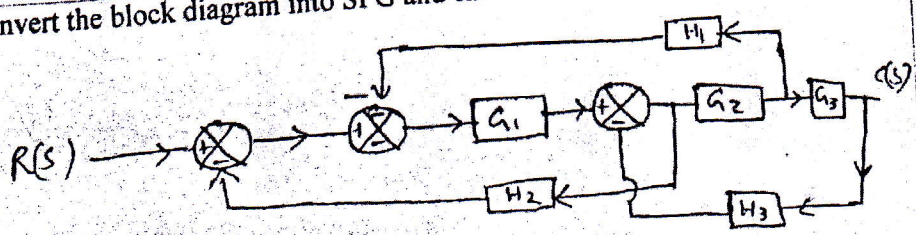| Q. NO.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	What is the difference.between Graph and Tree data structure?	[2]	Understanding	CO1
2.	What is an Algorithm analysis and what are the Asymptotic notation	[2]	Understanding	CO2
3.	Explain, Depth first and breadth first traversal?	[4]	Understanding	CO1
4.	What is Minimum Spanning Tree, and solve for MST?	[4]	Remembering	CO1
5.	Explain the following with an example: (1) Merge sort and quick sort (2) Binary search and greedy algorithm	[7]	Remembering	CO2
6.	Solve the problem for shortest path using, Bellman-ford algorithm	[7]	Understanding	CO1
7.	Solve the problem for shortest path using, Dijkastra algorithm.	[7]	Understanding	CO1
8..	If the keys are 10, 20, 30, 40, 50, 60, 70. Solve using, Optimal binary search tree? **OR** Solve for MST using, Kruskal algorithm?	[7]	Understanding	CO2

Shri Shankaracharya Institute of Professional Management & Technology
Department of Electronics and Telecommunication Engineering
Class Test –II, January 2023

Sem- ET&T 5th Subject- ACS

Time Allowed: 2 hrs   Max Marks: 40

Note: - Attempt any 5 question. All questions carry equal marks.

Q. NO.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	Construct Nyquist Plot and comment on stability $G(s) = 10/s^2(s+1)$	[8]	Application	1
2.	Construct Nyquist Plot and comment on stability $G(s) = 10/s(s+1)(s+2)$	[8]	Application	1
3.	Construct Nyquist Plot and comment on stability $G(s) = 10/s^3(s+1)(s+2)$	[8]	Application	1
4.	Obtain the T.F. by Block Diagram reduction method	[8]	Application	2
5.	Obtain the T.F. by SFG method	[8]	Application	2
6.	Convert the block diagram into SFG and calculate the T.F.	[8]	Application	2