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DAYANANDA SAGAR COLLEGE OF ENGINEERING

(An Autonomous Institute Affiliated to VTU, Belagavi)

ShavigeMalleshwara Hills, Kumaraswamy Layout, Bengaluru-560078

Department of Telecommunication Engineering

Online Continuous Internal Assessment Test - III

Course: **MIMO Technologies** Date: **05/01/2021**

Course Code**: 17TE7DCMTN** Maximum marks: **50**

Semester: **VII - 'A' &'B'** Duration: **90 Min**

Note: Answer 5 full questions.		**Marks**
1	a) Turbo codes are ---- --- i) Convolution Code ii) FEC codes iii) Channel Code iv) all of mentioned b) -------, a technique for making forward error correction more robust with respect to burst errors i) Interleaving ii) puncturing iii) equalization iv) source coding c) Trellis termination is an important method for improving performance of --------- by periodically adding tail bits into information sequence. i) Reed Solomon Code ii) BCH Code iii) Hamming Code iv) Turbo Code d) --------- is where the fading process is approximately constant for a number of symbol intervals. i) Block fading ii) Flat fading iii) FS fading iv) Rayleigh Fading e)A channel can be ------ block-fading' when it is block fading in both the time and frequency domains. i) octople ii) single iii) quadruple iv) double f) Channel Tap is certain delay on delay line on -------. i) Time Axis ii) Frequency axis iii) Fourier Axis iv) Complex axis g) -------- is the time duration over which the channel impulse response is considered to be not varying i) Channel Time ii) Coherence time iii) Equalization Time iv) Interference Time h) The ------ algorithm is an algorithm for maximum a posteriori decoding of error correcting codes defined on trellises i) BCJR ii) Viterbi iii) MAP iv) Priori i) -------is process of adjusting the spatial attribute of a sound in order to perceive	1x10

	desired 3D sound sensation i) Spatial Equalization ii) Temporal Equalization iii) ISI iv) ISI-Tap j) -------is transceiver architecture for offering spatial multiplexing over multiple-antenna wireless communication systems i) D Blast ii) BLAST iii) V Blast iv) K-Blast	
2	Write about SOVA Decoder in Concatenated STBC.	10
3	Verify the Frequency Selective Frequency Channel Information Rates with Gaussian Inputs.	10
4	Elaborate APP Decoder for Concatenated STBC	10
	(OR)	
5	Evaluate Full Diversity Code for MIMO FS Channels.	10
6	Demonstrate Detection Algorithms for Spatial Multiplexing Systems for Threaded STC.	10
	(OR)	
7	Verify Diversity/Multiplexing Gain Trade-off with plots and examples.	10

Faculty: Dr. SAYED ABDULHAYAN No. of copies: 85