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Total No. of Pages : 01

Total No. of Questions : 08

M.Tech(ECE)(Wireless communication)(2018 Batch) (Sem.-1)**ADVANCED COMMUNICATION SYSTEMS****Subject Code : MTWC-PE2A-18****Paper ID : [75800]****Time : 3 Hrs.****Max. Marks : 60****INSTRUCTIONS TO CANDIDATES :****1.Attempt any FIVE questions out of EIGHT questions.****2.Each question carries TWELVE marks.**

- Q1. a) Why digital communication systems are preferred over analog communication systems?
b) Define the orthogonal signal and explain the energy of sum of orthogonal signals in detail.
- Q2. a) Explain the BER performance over AWGN and Rayleigh fading in communication system.
b) Derive the generalized expression for Error Probability of Optimum Receivers.
- Q3. a) Discuss the Optimum Receiver Matched Filter in detail.
b) Explain the vector decomposition of White Noise Random Process in detail.
- Q4. Explain the block diagram of QPSK system with its working and compare the band width of QPSK system with BPSK system.
- Q5. What are Band-limited channels? Explain the Pulse shaping for channels with ISI and Nyquist's First Criterion for Zero ISI in the communication system.
- Q6. Explain the different multiple access techniques in detail.
- Q7. a) Explain the Gram-Schmidt Orthogonalization procedure.
b) What are cross links and how they are useful in satellite communication?
- Q8. Write short notes on followings :
- a) PAPR
 - b) Geometric Interpretation of Signals
 - c) WDM