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**Question Paper Code: 35401**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fifth Semester

Electronics and Communication Engineering

01UEC501 – DIGITAL COMMUNICATION

(Regulation 2013)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. What is necessary for digital communication?
  - (a) Precision timing
  - (b) Frame synchronization
  - (c) Character synchronization
  - (d) All the above
2. Disadvantages of Digital Communication System is
  - (a) Increased bandwidth
  - (b) Reliable communication
  - (c) Easy multiplexing
  - (d) Integration of transmission and switching
3. The process in which the top of each pulse in the output samples retains the shape of the analog segment is called as
  - (a) Natural sampling
  - (b) Ideal sampling
  - (c) Aliasing
  - (d) none of these
4. The process of converting continuous time signal to discrete time sequence is called as
  - (a) Sampling
  - (b) Quantisation
  - (c) Encoding
  - (d) Decoding
5. Noise figure measures the
  - (a) Power degradation
  - (b) Noise degradation
  - (c) SNR degradation
  - (d) None of these

6. What is symbol rate packing?
  - (a) Maximum possible symbol transmission rate
  - (b) Maximum possible symbol receiving rate
  - (c) Maximum bandwidth
  - (d) Maximum ISI value allowed
  
7. Which modulation scheme is also called as on-off keying method?
  - (a) ASK
  - (b) FSK
  - (c) PSK
  - (d) GMSK
  
8. The coherent modulations techniques are
  - (a) PSK
  - (b) FSK
  - (c) ASK
  - (d) All the above
  
9. Pseudorandom signal \_\_\_\_\_ predicted.
  - (a) Can be
  - (b) Cannot be
  - (c) Both (a) and (b)
  - (d) None of these
  
10. The properties used for pseudorandom sequence are
  - (a) Balance
  - (b) Run
  - (c) Correlation
  - (d) All the above

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Explain the geometric representation of signals. (8)
12. With neat block diagram, explain pulse code modulation and demodulation. (8)
13. Derive and Explain the Nyquist first criterion to minimize ISI. (8)
14. Describe with diagrams the generation and detection of coherent binary FSK. Explain the probability of error for this scheme. (8)
15. List and prove the properties of PN sequence. (8)