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**Question Paper Code: 45401**

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

Fifth Semester

Electronics and Communication Engineering

14UEC501 - DIGITAL COMMUNICATION

(Regulation 2014)

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. Draw the block diagram of digital communication systems and explain each block in detail. (8)
12. Explain any two encoding methods for analog sources. (8)
13. Define Inter-symbol interference? Obtain the nyquist criteria for Distortion less Base-band binary transmission system. (8)
14. Explain the generation and detection of binary PSK. Also derive the probability of error for PSK. (8)
15. Briefly explain the generation of PN sequence with the properties of maximum length sequence. (8)