Program: BE Electronics Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: EXC505

Course Name: Digital Communication

Time: 1 hour Max. Marks: 50

===========================================================================

|  |  |
| --- | --- |
| Q1. | The difference between the sample value expected and the estimates value of the parameter is called as? |
| Option A: | bias |
| Option B: | error |
| Option C: | contradiction |
| Option D: | difference |
|  |  |
| Q2. | Previous probabilities in Bayes Theorem that are changed with help of new available information are classified as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | independent probabilities |
| Option B: | posterior probabilities |
| Option C: | interior probabilities |
| Option D: | dependent probabilities |
|  |  |
| Q3. | What is the mean and variance for standard normal distribution? |
| Option A: | Mean is 0 and variance is 1 |
| Option B: | Mean is 1 and variance is 0 |
| Option C: | Mean is 0 and variance is ∞ |
| Option D: | Mean is ∞ and variance is 0 |
|  |  |
| Q4. | Find λ in Poisson’s distribution if the probabilities of getting a head in biased coin toss as 34 and 6 coins are tossed. |
| Option A: | 3.5 |
| Option B: | 4.5 |
| Option C: | 5.5 |
| Option D: | 6.6 |
|  |  |
| Q5. | Normal Distribution is applied for \_\_\_\_\_\_\_\_\_\_\_ |
| Option A: | Continuous Random Distribution |
| Option B: | Discrete Random Variable |
| Option C: | Irregular Random Variable |
| Option D: | Uncertain Random Variable |
|  |  |
| Q6. | A stationary stochastic process has |
| Option A: | Finite energy signal |
| Option B: | Infinite zero signal |
| Option C: | Zero energy signal |
| Option D: | Zero power signal |
|  |  |
| Q7. | The capacity of a channel is given by |
| Option A: | Number of digits used in coding |
| Option B: | Volume of information it can take |
| Option C: | Maximum rate of information transmitted |
| Option D: | Bandwidth requires information |
|  |  |
| Q8. | The power spectral density function of the stochastic process is |
| Option A: | Real |
| Option B: | Odd |
| Option C: | Real & odd |
| Option D: | even |
|  |  |
| Q9. | A nyquist pulse is the one which can be represented by \_\_\_\_\_ shaped pulse multiplied by another time function. |
| Option A: | Sine |
| Option B: | Cosine |
| Option C: | Sinc |
| Option D: | Even  |
|  |  |
| Q10. | The minimum Nyquist bandwidth for the rectangular spectrum in raised cosine filter is |
| Option A: | 2T |
| Option B: | 1/2T |
| Option C: | T2 |
| Option D: | 2/T |
|  |  |
| Q11. | FSK reception is |
| Option A: | Phase Coherent |
| Option B: | Phase non coherent |
| Option C: | Phase Coherent & non coherent |
| Option D: | Frequency coherent |
|  |  |
| Q12. | In non-coherent reception \_\_\_\_\_ is measured. |
| Option A: | Phase |
| Option B: | Energy |
| Option C: | Power |
| Option D: | Time  |
|  |  |
| Q13. | If we correlate the received signal with any one of the two orthogonal function, the obtained inner product will be |
| Option A: | In phase |
| Option B: | Quadrature |
| Option C: | Zero |
| Option D: | Out of phase |
|  |  |
| Q14. | Which has same probability of error? |
| Option A: | BPSK and QPSK |
| Option B: | BPSK and ASK |
| Option C: | BPSK and PAM |
| Option D: | BPSK and QAM |
|  |  |
| Q15. | Which system uses QAM? |
| Option A: | Digital microwave relay |
| Option B: | Dial up modem |
| Option C: | Digital microwave relay & Dial up modem |
| Option D: | Fiber technique |
|  |  |
| Q16. | In which waveform logic 1 is represented by half bit wide pulse and logic 0 is represented by absence of pulse? |
| Option A: | Unipolar RZ |
| Option B: | Bipolar RZ |
| Option C: | RZ-AMI |
| Option D: | Manchester coding |
|  |  |
| Q17. | Which of the following is not a linear modulation technique? |
| Option A: | OQPSK |
| Option B: | π/4 QPSK |
| Option C: |  FSK |
| Option D: | BPSK |
|  |  |
| Q18. |  QPSK has \_\_\_\_\_\_\_\_ the bandwidth efficiency of BPSK. |
| Option A: | Twice |
| Option B: | Same |
| Option C: | Half |
| Option D: | Four times |
|  |  |
| Q19. | QPSK is a modulation scheme where each symbol consists of |
| Option A: | 4 bits |
| Option B: | 2 bits |
| Option C: | 1 bit |
| Option D: | M number of bits, depending upon the requirement |
|  |  |
| Q20. | BPSK system modulates at the rate of |
| Option A: | 1 bit/ symbol |
| Option B: | 2 bit/ symbol |
| Option C: | 4 bit/ symbol |
| Option D: | 3 bit/ symbol |
|  |  |
| Q21. | If the channel is noiseless information conveyed is \_\_\_ and if it is useless channel information conveyed is \_\_\_ |
| Option A: |  0,0 |
| Option B: | 1,1 |
| Option C: | 0,1 |
| Option D: | 1,0 |
|  |  |
| Q22. | Quantization is a \_\_\_\_\_ process. |
| Option A: | Few to few mapping |
| Option B: | Few to many mapping |
| Option C: | Many to few mapping |
| Option D: | Many to many mapping |
|  |  |
| Q23. |  Which of the following is used by IS-95? |
| Option A: | DSSS |
| Option B: | FHSS |
| Option C: | THSS |
| Option D: | Hybrid |
|  |  |
| Q24. | ser data in IS-95 is spread to a channel chip rate of \_\_\_\_\_\_\_\_ |
| Option A: | 1.2288 Mchip/s |
| Option B: | 9.6 Mchip/s |
| Option C: | 12.288 Mchip/s |
| Option D: | 0.96 Mchip/s |
|  |  |
| Q25. | Which is more bandwidth efficient? |
| Option A: | Direct sequence spread spectrum |
| Option B: | Frequency hopping spread spectrum |
| Option C: | Time hopping spread spectrum |
| Option D: | Frequency divion multiple access |