G. PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY::KURNOOL
DEPARTMENT OF ECE

Class: III-B.Tech I Sem **Mid: II (OBJECTIVE)**
Branch: ECE **Date:08-11-2017**
Subject: Digital Communication Systems **Time: 20 min**
Invigilator Signature_____ Max. Marks: 10 Roll No.:_____

SET-1

Choose correct answer

1. The code rate of an (n, k) block code is…….. [ ]
   A).k/n B). n/k C). 1-k/n D).none
2. The minimum distance in hamming code is [ ]
   A).3 B).2 C). 1 D).none
3. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
4. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A & B D). none
5. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
6. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A). $E_s=NE_b$ B). $E_b=NE_s$ C). $E_s=E_b$ D). none
7. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
8. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
9. In (n, k) block code the number of redundant bits=…… [ ]
   A). n-k B).n+k C). n D). none
10. Bit error rate (BER) for all systems……monotonically with increase in E_b/N_0 [ ]
    A). increases B).decreases C). constant D). none

11. To detect 's' errors per word $d_{min} \geq$……

12. In Viterbi algorithm discrepancy b/w received signal & decoded signal is called…….

13. The number of surviving paths in viterbi algorithm =……

14. Bandwidth of QPSK=B_T =…….……

15. Error probability of BPSK =P_e =……..

16. Bandwidth of BFSK = B_T =.....

17. The quadrature and M-ary systems increase the bandwidth T/F

18. Gram-schmith orthogonalization procedure finds the orthonormal basis functions T/F

19. In systematic block code message bits appear at the beginning of the code word. T/F

20. Due to white gaussian noise random errors occur . T/F

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SET-1

Choose correct answer

1. The code rate of an (n, k) block code is…….. [ ]
   A).k/n B). n/k C). 1-k/n D).none
2. The minimum distance in hamming code is [ ]
   A).3 B).2 C). 1 D).none
3. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
4. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A & B D). none
5. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
6. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A). $E_s=NE_b$ B). $E_b=NE_s$ C). $E_s=E_b$ D). none
7. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
8. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
9. In (n, k) block code the number of redundant bits=…… [ ]
   A). n-k B).n+k C). n D). none
10. Bit error rate (BER) for all systems……monotonically with increase in E_b/N_0 [ ]
    A). increases B).decreases C). constant D). none

11. To detect 's' errors per word $d_{min} \geq$……

12. In Viterbi algorithm discrepancy b/w received signal & decoded signal is called…….

13. The number of surviving paths in viterbi algorithm =……

14. Bandwidth of QPSK= B_T =…….……

15. Error probability of BPSK =P_e =……..

16. Bandwidth of BFSK = B_T =.....

17. The quadrature and M-ary systems increase the bandwidth T/F

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SET-2

Choose correct answer

1. The minimum distance for hamming code is [ ]
   A).3 B).2 C). 1 D).none
2. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A and B D). none
3. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A). $E_s=NE_b$ B). $E_b=NE_s$ C). $E_s=E_b$ D). none
4. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
5. The bit error rate(BER) for all systems…monotonically with increase in E_b/N_0 [ ]
   A). increases B).decreases C). constant D). none
6. The code rate of an (n, k) block code is…….. [ ]
   A).k/n B). n/k C). 1-k/n D).none
7. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
8. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
9. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
10. In (n, k) block code the number of redundant bits=…… [ ]
    A). n-k B).n+k C). n D). none

11. In Viterbi algorithm discrepancy b/w received signal & decoded signal is called……
12. Bandwidth of QPSK = B_T =……
13. Bandwidth of BFSK = B_T =……
14. To detect ‘s’ errors per word $d_{min} \geq$……
15. The number of surviving paths in viterbi algorithm =……
16. Error probability of BPSK=P_e =……
17. Gram-schmith orthogonalization procedure finds orthonormal basis functions. T/F
18. Due to white gaussian noise random errors occur. T/F
19. The quadrature and M-ary systems increases the bandwidth . T/F
20. In systematic block code message bits appear at the beginning of the code word. T/F

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SET-2

Choose correct answer

1. The minimum distance for hamming code is [ ]
   A).3 B).2 C). 1 D).none
2. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A and B D). none
3. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A). $E_s=NE_b$ B). $E_b=NE_s$ C). $E_s=E_b$ D). none
4. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
5. The bit error rate(BER) for all systems…monotonically with increase in E_b/N_0 [ ]
   A). increases B).decreases C). constant D). none
6. The code rate of an (n, k) block code is…….. [ ]
   A).k/n B). n/k C). 1-k/n D).none
7. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
8. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
9. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
10. In (n, k) block code the number of redundant bits=…… [ ]
    A). n-k B).n+k C). n D). none

11. In Viterbi algorithm discrepancy b/w received signal & decoded signal is called……
12. Bandwidth of QPSK = B_T =……
13. Bandwidth of BFSK = B_T =……
14. To detect ‘s’ errors per word $d_{min} \geq$……
15. The number of surviving paths in viterbi algorithm =……
16. Error probability of BPSK=P_e =……
17. Gram-schmith orthogonalization procedure finds orthonormal basis functions. T/F
18. Due to white gaussian noise random errors occur. T/F
19. The quadrature and M-ary systems increases the bandwidth . T/F
20. In systematic block code message bits appear at the beginning of the code word. T/F

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SET-3

Choose correct answer

1. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
2. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
3. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
4. In (n, k) block code the number of redundant bits=…… [ ]
   A). n-k B).n+k C). n D). none
5. The bit error rate(BER) for all systems…monotonically with increase in E_b/N_0 [ ]
   A). increases B).decreases C). constant D). none
6. The minimum distance for hamming code is [ ]
   A).3 B).2 C). 1 D).none
7. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A and B D). none
8. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A). $E_s=NE_b$ B). $E_b=NE_s$ C). $E_s=E_b$ D). none
9. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
10. The code rate of an (n, k) block code is…….. [ ]
    A).k/n B). n/k C). 1-k/n D).none

11. The number of surviving paths in viterbi algorithm =……

12. Bandwidth of QPSK = B_T =…….

13.To detect ‘s’ errors per word $d_{min} \geq$……

14. Error probability of BPSK=P_e =……..

15.In Viterbi algorithm discrepancy b/w received signal and decoded signal is called…….

16. Bandwidth of BFSK= B_T =…….……

17. Due to white gaussian noise random errors occur. T/F

18. Gram-schmith orthogonalization procedure finds orthonormal basis functions. T/F

19. In systematic block code message bits appear at the beginning of the code word. T/F

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SET-3

Choose correct answer

1. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
2. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
3. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
4. In (n, k) block code the number of redundant bits=…… [ ]
   A). n-k B).n+k C). n D). none
5. The bit error rate(BER) for all systems…monotonically with increase in E_b/N_0 [ ]
   A). increases B).decreases C). constant D). none
6. The minimum distance for hamming code is [ ]
   A).3 B).2 C). 1 D).none
7. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A and B D). none
8. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A). $E_s=NE_b$ B). $E_b=NE_s$ C). $E_s=E_b$ D). none
9. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
10. The code rate of an (n, k) block code is…….. [ ]
    A).k/n B). n/k C). 1-k/n D).none

11. The number of surviving paths in viterbi algorithm =……

12. Bandwidth of QPSK = B_T =…….

13.To detect ‘s’ errors per word $d_{min} \geq$……

14. Error probability of BPSK=P_e =……..

15.In Viterbi algorithm discrepancy b/w received signal and decoded signal is called…….

16. Bandwidth of BFSK= B_T =…….……

17. Due to white gaussian noise random errors occur. T/F

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SET-4

Choose correct answer

1. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A and B D). none
2. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A).$E_s=NE_b$ B). $E_b=NE_s$ C).$E_s=E_b$ D). none
3. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
4. The bit error rate(BER) for all systems…onotonically with increase in E_b/N_0 [ ]
   A). increases B).decreases C). constant D). none
5. The code rate of an (n, k) block code is…….. [ ]
   A).k/n B). n/k C). 1-k/n D).none
6. The relation between syndrome vector and error pattern [ ]
   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
7. The minimum distance for hamming code is [ ]
   A).3 B).2 C). 1 D).none
8. Multiplier followed by integrator is called..... [ ]
   A).correlator B). matched filter C). both A & B D). none
9. Code trellis is the compact representation of ---------- [ ]
   A). code tree B). state diagram C). both A & B D).none
10. In (n, k) block code the number of redundant bits=…… [ ]
    A). n-k B).n+k C). n D). none

11. Bandwidth of QPSK=B_T =……..……

12. Error probability of BPSK=P_e =……..

13. In Viterbi algorithm discrepancy b/w received signal & decoded signal is called……
14. To detect ‘s’ errors per word $d_{min} \geq$……

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17. In systematic block code message bits appear at the beginning of the code word. T/F

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SET-4

Choose correct answer

1. Properties of cyclic codes [ ]
   A).linearity B). cyclic shift C).both A and B D). none
2. The relation between symbol energy and bit energy for M-ary PSK [ ]
   A).$E_s=NE_b$ B). $E_b=NE_s$ C).$E_s=E_b$ D). none
3. Geometric representation of signals is the representation of signals in terms of [ ]
   A). points B). lines C). both A and B D).none
4. The bit error rate(BER) for all systems…onotonically with increase in E_b/N_0 [ ]
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5. The code rate of an (n, k) block code is…….. [ ]
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   A). $S=EH^T$ B). S=EH C). $S=E^TH$ D). none
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9. Code trellis is the compact representation of ---------- [ ]
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11. Bandwidth of QPSK=B_T =……..……

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