Assignment 12

1. The probability of bit error (P_b) using coherent detection for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

2. The equation for the bit error probability (P_b) with non-coherent detection for each 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

3. The probability of bit error (P_b) using non-coherent detection for the 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

4. The probability of bit error (P_b) using non-coherent detection for the 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

5. The power of the signal is approximately 20 dB, and the power of the noise is approximately 10 dB, and the signal-to-noise ratio (SNR) is

\[ SNR = \frac{20}{10} = 2 \text{ dB} \]

6. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

7. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

8. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

9. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

10. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

11. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

12. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

13. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

14. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

15. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

16. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

17. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

18. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

19. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

20. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

21. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

22. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

23. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

24. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using non-coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]

25. The bit error probability (P_b) for 8-ary orthogonal signaling scheme using coherent detection is

\[ P_b = \frac{45}{63} \approx 0.72 \]