
CHAPTER 5

Error Detection

Multiple-Choice Questions

1. c
3. c
5. b
7. a
9. d
11. a
13. c
15. d
17. b
19. a
21. d
23. c
25. c
27. b
29. d
31. a

Exercises

33.
 - a. $1,500 \times 2 \times 0.001 = 3$ bits /data unit
 - b. $12,000 \times 2 \times 0.001 = 24$ bits/data unit
 - c. $96,000 \times 2 \times 0.001 = 192$ bits/data unit
35. Yes, because the number of 1s is odd.
37. 001
39. 00111010 11001111 11111111 00000000 00001010

- 41. Bits 1, 5, 7, and 8 (from the right) are in error.
- 43. 5 bits long
- 45. $x^{12} + x^6 + x^5 + x^4 + 1$