Answer Keys to End of Chapter 2 Questions
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Chapter 2

Multiple Choice, True/False, and Fill-in-Blanks Questions

Q1. A
Q2. D
Q3. A
Q4. B
Q5. A
Q6. A
Q7. B
Q8. B
Q9. B
Q10. A
Q11. B
Q12. B
Q13. B
Q14. B

Review Exercises

Q1.

A. 2.4 GHz: 0.125 meters (12.5 cm)
B. 5.2 GHz: 0.0577 meters (5.77 cm)
C. 1.5 GHz: 0.2 meters (20 cm)
D. 1.8 GHz: 0.1667 meters (16.67 cm)
E. 300 GHz: 0.001 meters (1 mm)

Q2.

A. 1 meter: 300 MHz
B. 50 cm: 600 MHz

Q3.

A. 100 kW: 80 dBm
B. 500 mW: 27 dBm
C. 2.5 mW: 4 dBm
D. 1 mW: 0 dBm
E. 100 pW: -70 dBm

Q4.

A. 1 kW: 30 dBW
B. 100 mW: -10 dBW
C. 1 μW: -60 dBW
D. 1 nW: -90 dBW
E. 1 pW: -120 dBW

Q5.

A. 30 dBm: 1 Watt
B. 10 dBm: 0.01 Watts (10 mW)
C. 30 dBW: 1000 Watts (1 kW)

Q6. 0 dBm

Q7. 10 dB

Q8. 60 Mbps

Q9. 2.4GHz, 5GHz, 900MHz, 60GHz, 5.8GHz

Q10. a=20.

Explanation:

$V = (PxR)^{1/2}$
$(V_{in}/V_{out}) = (P_{in}/P_{out})^{1/2}$
$\log_{10}(P_{in}/P_{out})^{1/2} = 1/2 \log_{10}(P_{in}/P_{out})$

$dB = 20\log_{10}(V_{in}/V_{out}) = 10 \log_{10}(P_{in}/P_{out})$

End of Chapter 2 Answer Keys