

Honors Science (Physics)

Unit 5 Electricity & Magnetism

Practice Test Answers - Chapter 32

1. F
2. T
3. F
4. F
5. F

6. B
7. C
8. C
9. C
10. B
11. A
12. B
13. D
14. C
15. B

16. A good electrical conductor is any material with loosely held valence electrons. Copper and gold are examples. An insulator is a material that holds electrons tightly so they are not free to move.

Honors Science (Physics)

Unit 5 Electricity & Magnetism

Practice Test Answers - Chapter 33

1. T
2. F
3. T
4. T
5. F

6. B
7. C
8. B
9. D
10. C
11. A
12. A
13. B

14. $+1.6 \times 10^{-15} \text{ C}$

15. $3.2 \times 10^{-17} \text{ N}$

16. Elec. Fields and gravit. Fields are similar in that they both effect other materials in their field. Elec. Fields apply forces on charged particles and gravit. Fields apply forces on particles with mass. The strength of the force field depends on the distance from the source. Both fields apply forces inversely proportional to the square of the distance away. Gravit. Fields can only ATTRACT but Elec. Fields can ATTRACT or REPEL.

Honors Science (Physics)

Unit 5 Electricity & Magnetism

Practice Test Answers - Chapter 34

1. T
2. T
3. F
4. F
5. F

6. D
7. D
8. B
9. D
10. D
11. C
12. C
13. A

14. 100V
15. 720W

16. In a DC circuit the polarity of the source never changes and charge “flows” in one direction. In an AC circuit the polarity of the source changes 60 times each second and charges (or elec. Fields) bounce back and forth at that rate. When a bulb is lit, the electrons are already in it. The power company supplies the ENERGY and the bulb supplies the electrons!

Honors Science (Physics)

Unit 5 Electricity & Magnetism

Practice Test Answers - Chapter 35

1. T
2. T
3. F
4. T
5. F

6. A
7. C
8. B
9. C
10. A
11. A
12. C
13. B

14. 7.5 ohms
15. 1.1 ohm

16. In a parallel circuit, the voltage in each branch is the same and the current is different. The current is inversely proportional to the resistance. As more branches (with loads) are added, the resistance goes DOWN and the current goes up. Houses are wired in parallel so that when one bulb burns out, the whole house doesn't go dark. However, fuses or circuit breakers are wired into each circuit in series so that when they blow, the circuit is shut down.