## The Mechanical Universe ALTERNATING CURRENT 10min



Most of the important information is in the text spoken during the presentation. So don't become entranced by the visual imagery; concentrate and stay focused on the words!

WARNING: EXTREME PUN DENSITY! (The current ones have the potential to be powerful, but try to resist getting too big a charge out of them.)

- 1. Who foresaw the potential of Niagara Falls?
- 2. Who offered resistance to the idea of alternating current as a means for electric power distribution?
- 3. Who worked for whom?

A. Tesla worked for Edison

C. Edison worked for Bell

E. Westinghouse worked for Edison

B. Edison worked for Tesla

D. Bell worked for Westinghouse

F. Tesla worked for Bell

4. Which of the following did Edison actually INVENT? (Select all that apply.)

A. phonograph

B. motion picture camera

C. telephone

D. telegraph

E. ticker tape machine

F. typewriter

5. The key to transferring power as efficiently as possible is to transfer it at the highest ...

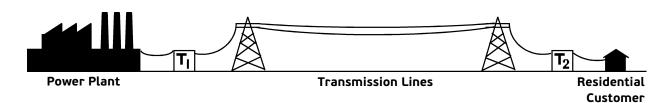
possible

A. power B. current

C. voltage

D. resistance

6. If alternating current passes through a loop or coil, it produces a constantly changing



7. Consider the power distribution system depicted in the diagram above. What happens to the electricity at T1? (The image above is not shown in the video.)

A. Current is stepped up

B. Current is stepped down

C. Voltage is stepped up

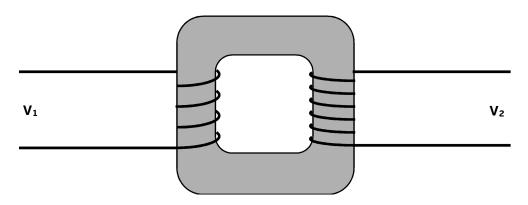
D. Voltage is stepped down

E. Resistance is stepped up

F. Resistance is stepped down

G. Power is stepped up

H. Power is stepped down



8. Consider the loops of wire wrapped around an iron core shown above.

A.  $V_1 > V_2$ 

B.  $V_2 > V_1$ 

C.  $V_1 = V_2$ 

- 9. Direct current could be easily and effectively used to distribute power
- A. on a small local scale only
- B. throughout a statewide region
- C. across the nation
- D. globally
- 10. Nikola Tesla's work was eventually honored with a(n)

A. Nobel Prize

- B. Presidential Medal of Honor
- C. Silver Star

- D. Purple Heart
- E. Edison Medal

F. Academy Award

G. A rock and roll band named after him

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1. Alternating current is a(n)	current.
1. Allei iidliiid Cui i eiil is d(ii)	Current

- 2. What kind of electric current did Thomas Edison advocate?
- 3. Where was Edison's lab during his time of invention?

A. Menlo Park, California B. Dearborn, Michigan C. Dearborn, Massachusetts D. Menlo Park, New Jersey

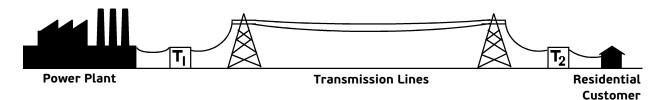
4. Which of the following did Edison IMPROVE (but not invent)? (Select all that apply.)

A. phonograph B. motion picture camera C. telephone D. telegraph E. ticker tape machine F. typewriter

5. The key to transferring power as efficiently as possible is to transfer it at the highest possible

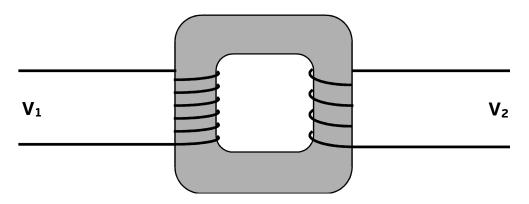
A. power B. current C. voltage D. resistance

6. If alternating current passes through a loop or coil, it produces a constantly changing



7. Consider the power distribution system depicted in the diagram above. What happens to the electricity at  $T_2$ ? (The image above is not shown in the video.)

A. Current is stepped up
C. Voltage is stepped up
D. Voltage is stepped down
E. Resistance is stepped up
G. Power is stepped up
H. Power is stepped down



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