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**11. What is the primary component responsible for converting sunlight into electricity in a solar panel?**

- a) Silicon crystals (Correct)
- b) Aluminum frame
- c) Glass cover

**12. How does the tilt angle of solar panels affect their energy production?**

- a) Higher tilt angles increase energy production in winter months
- b) Lower tilt angles increase energy production in summer months (Correct)
- c) Tilt angle has no effect on energy production

**13. Which factor has the greatest influence on the efficiency of a solar panel?**

- a) Panel color
- b) Temperature (Correct)
- c) Panel size

**14. What is the typical efficiency range of commercially available solar panels?**

- a) 5-10%
- b) 15-20% (Correct)
- c) 25-30%

**15. What is the main advantage of using solar water heaters in residential settings?**

- a) Higher initial cost compared to conventional water heaters
- b) Lower energy efficiency
- c) Reduced electricity bills and environmental impact (Correct)

**16. Which type of solar technology uses mirrors or lenses to concentrate sunlight onto a small area?**

- a) Photovoltaic cells
- b) Concentrated solar power (Correct)
- c) Solar thermal collectors

**17. How does solar energy storage contribute to grid stability and reliability?**

- a) It increases reliance on fossil fuels
- b) It allows for energy to be stored and used during periods of low sunlight (Correct)
- c) It decreases energy efficiency

**18. What role do inverters play in a solar energy system??**

- a) They convert direct current (DC) electricity from solar panels into alternating current (AC) electricity (Correct)
- b) They regulate the temperature of solar panels
- c) They store excess electricity generated by solar panels

**19. What are some common financing options available for homeowners interested in installing solar panels?**

- a) Solar leases and power purchase agreements (Correct)
- b) Government grants for fossil fuel usage
- c) Traditional bank loans with high interest rates

**20. How do solar-powered light contribute to outdoor lighting and energy conservation?**

- a) They require regular battery replacements
- b) They utilize renewable energy sources and reduce electricity consumption (Correct)
- c) They emit harmful greenhouse gases during operation