47202 Introduction to future energy 2023 (Trial version)

Der anvendes en scoringsalgoritme, som er baseret på "One best answer"

Dette betyder følgende:
Der er altid netop ét svar som er mere rigtigt end de andre
Studerende kan kun vælge ét svar per spørgsmål
Hvert rigtigt svar giver 1 point
Hvert forkert svar giver 0 point (der benyttes IKKE negative point)

The following approach to scoring responses is implemented and is based on "One best answer"
There is always only one correct answer – a response that is more correct than the rest
Students are only able to select one answer per question
Every correct answer corresponds to 1 point
Every incorrect answer corresponds to 0 points (incorrect answers do not result in subtraction of points)

What is the maximum efficiency for generating work that can be extracted from a heat driven engine powered by fuel entering the engine at ambient temperature, 25 °C, and after full combusted reaching the temperature 800 ° C?

Choose one answer

- 72%
- 97%
- 56%
- 49%
- 36%

Why will we need TW-scale electrolysis if we wish to have a renewable energy system?

Choose one answer

- Because we need to make chemical feedstocks and store energy
- Because we cannot build enough wind turbines and solar power
- Because nuclear energy is too expensive
- Because there isn't sufficient platinum for low temperature fuel cells
- Because nuclear energy is too expensive

Tides occur as the level of water in oceans rises and falls. These changes in water level are due to:

Choose one answer

- The gravitational pull of the sun and moon, and atmospheric pressure
- The rotational speed of the Earth
- Temperature gradients across the ocean surface
- The gravitational pull of the moon
- Large storms occurring at different times on different regions of the ocean

The total solar power hitting the earth (120.000 TW) gives as much energy in yy minutes, as the global economy uses in a full year

Choose one answer

- yy = 3 min.
- yy = 10 min.
- yy = 30 min.
- yy = 80 min.
- yy = 240 min.

A country without nuclear power plants

Choose one answer

- Finland
- Sweden
- Poland
- Ukraine
- Slovenia

In which part of the battery does reduction take place during discharge?

Choose one answer

- The negative electrode
- The electrolyte
- The separator
- The current collector
- The positive electrode

What is the working temperature of a solid oxide fuel cell

Choose one answer

- 60-80 ° C
- 80-120 ° C
- 200-600 ° C
- 700-1000 ° C
- 1000-1500 ° C

What do the Sabatier process and the Fischer-Tropsch process have in common?

Choose one answer

- They are taking place in the electrolyzer
- They are both ways to synthesize carbonaceous fuels from hydrogen
- They are both combustion processes
- They are both ways to produce hydrogen
- They are both electrochemical processes