DISCUSSION TEXT

A. Read the text below than answers some questions the following given.

Nuclear Energy: A Debate That Ignites Passions

While the sun effortlessly radiates boundless energy, we on Earth grapple with harnessing power from less celestial sources. Nuclear energy, in particular, has sparked a fiery debate, igniting both hopes and fears. Although it promises a vast supply of electricity through atomic fission, its potential risks cast a long shadow. Is nuclear energy a savior or a siren, beckoning us towards a perilous path?

First and foremost, nuclear reactors generate electricity without emitting greenhouse gases, making them a formidable weapon against climate change. Contrastingly, fossil fuels continue to burden the atmosphere with carbon, exacerbating global warming.

Furthermore, nuclear energy liberates nations from reliance on foreign oil and gas, bolstering energy security. In contrast, dependence on fossil fuel imports often entangles countries in geopolitical conflicts and economic uncertainties.

Moreover, nuclear reactors deliver unparalleled energy density. A single reactor can power millions of homes for years, a feat unmatched by most renewable sources. By comparison, solar and wind farms often require vast tracts of land to produce similar output.

Despite its benefits, nuclear energy faces a persistent challenge: the safe management of radioactive waste. Additionally, the specter of accidents, such as Chernobyl and Fukushima, lingers in the collective memory, fueling fears of potential catastrophes.

Equally concerning, the technology that illuminates homes can also be exploited to forge weapons of mass destruction. This duality casts a dark cloud over nuclear energy's future, as it walks a tightrope between progress and potential devastation.

Compounding these concerns, the construction and maintenance of nuclear reactors demand substantial financial investments and stringent safety protocols, raising concerns about their long-term economic viability.

In conclusion, the fiery debate surrounding nuclear energy reveals a potent force poised between promise and peril. While its ability to combat climate change, bolster energy security, and deliver unmatched energy density offers undeniable hope, the specters of radioactive waste, catastrophic accidents, weapons proliferation, and high costs cast a long and chilling shadow. The path forward demands thoughtful navigation, rigorous safety measures, and a commitment to responsible stewardship of this potent technology. Ultimately, the decision to embrace nuclear energy hinges on our ability to balance its potent benefits with its grave risks, forging a future powered by a nuanced understanding of both the light and the shadow it casts.

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Choose a, b, c, d, or e for the correct answer.

1. What is the main topic of the passage?

a) The benefits of solar energy

b) The disadvantages of fossil fuels

c) The future of renewable energy

d) The debate surrounding nuclear energy

e) The history of electricity production

2. What is the argument in favor of nuclear energy mentioned first in the passage?

a) It can be used to create weapons of mass destruction.

b) It generates electricity without emitting greenhouse gases.

c) It is more affordable than wind and solar power.

d) It can be easily transported and stored.

e) It has a high energy density.

3. What is the main concern about nuclear energy highlighted in the passage?

a) It requires vast amounts of land to generate electricity.

b) It is unreliable and inconsistent.

c) It produces radioactive waste that is difficult to manage.

d) It is susceptible to terrorist attacks.

e) It is only accessible to developed countries.

4. Which statement best summarizes the author's stance on nuclear energy?

a) Nuclear energy is the clear solution to our energy problems.

b) Nuclear energy is too dangerous and should be abandoned.

c) Nuclear energy has potential benefits but also serious risks that need careful consideration.

d) Nuclear energy is outdated and should be replaced by renewable sources.

e) We should rely on fossil fuels until a better alternative is found.

5. What word in the passage is closest in meaning to "peril"?

a) Hope

b) Security

c) Promise

d) Uncertainty

e) Danger

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6. The phrase "cast a long shadow" is used to describe:

a) The environmental impact of nuclear waste.

b) The economic burden of nuclear reactors.

c) The potential for accidents with nuclear energy.

d) The public fear of nuclear weapons.

e) The technological challenges of clean energy.

7. Which of the following is NOT mentioned as a benefit of nuclear energy in the passage?

a) Reduced reliance on foreign oil and gas.

b) Lower greenhouse gas emissions.

c) Increased energy independence.

d) Reduced land use compared to renewables.

e) Unmatched energy density compared to other sources.

8. What evidence is used to support the claim that nuclear reactors pose a risk of accidents?

a) The cost of building and maintaining reactors.

b) The amount of radioactive waste produced.

c) The potential for weaponization.

d) The reliance on foreign oil and gas.

e) The example of accidents like Chernobyl and Fukushima.

9. The word "contrastingly" in the passage is used to show:

a) A similarity between two ideas.

b) A chronological order of events.

c) A definition of a term.

d) A difference between two ideas.

e) An example of a scientific principle.

10. What is the main message of the conclusion?

a) Nuclear energy is the only solution to climate change.

b) We should prioritize renewable energy over nuclear energy.

c) The decision about nuclear energy requires careful consideration of both benefits and risks.

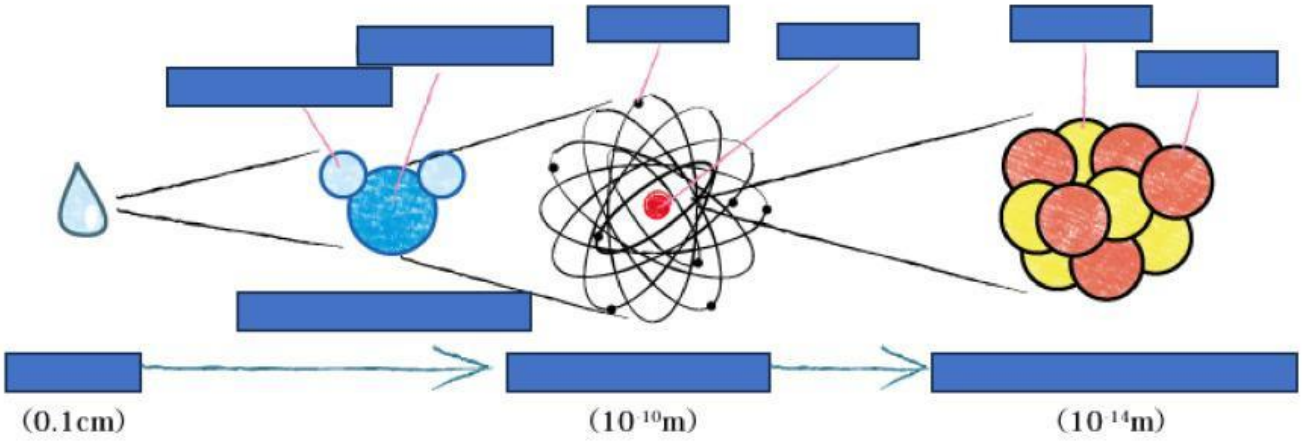
d) Nuclear energy is too dangerous to be considered a viable energy source.

e) Nuclear energy is the most efficient and cost-effective way to generate electricity.

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B. *Observe the structure of nuclear physic below then match the following part of nuclear structure below with the picture.*

✓ Water	✓ Water molecule	✓ Oxygen atom	✓ Nucleus of oxygen	✓ hydrogen atom
✓ Proton	✓ Neutron	✓ electron	✓ nucleus	✓ Oxygen atom



C. *Choose T if the statement is true of F if the statement is false.*

Statements	T / F
1. Nuclear energy offers a potent solution to climate change by generating electricity without greenhouse gas emissions.	T / F
2. The technology behind nuclear energy can only be used for peaceful purposes and cannot be misused for weapons.	T / F
3. Compared to most renewable energy sources, nuclear reactors require significantly less land to produce a similar amount of electricity.	T / F
4. The biggest concern surrounding nuclear energy is its high price tag and economic burden on nations.	T / F
5. The author ultimately advocates for the complete abandonment of nuclear energy due to its inherent risks.	T / F

D. *Match the words below with the correct definition.*

1. Radiate *(verb)* ____ ____ lasting for a long time or difficult to get rid of
2. Ignite *(verb)* ____ ____ the act of destroying something, or the fact of being destroyed
3. Persistent *(adjective)* ____ ____ careful to look at or consider every part of something to make certain it is correct or safe
4. Destruction *(noun)* ____ ____ to produce heat and/or light
5. Rigorous *(adjective)* ____ ____ to (cause to) start burning or explode

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