+91 9815591973 support@examlife.info

Exam Life™
Be The Change

- ☀ ☾
- Home
- UPSC
    - Current Affairs IAS
    - करंट अफेयर्स फॉर आईएएस
    - Quiz IAS
    - आईएएस के लिए प्रश्नोत्तरी
    - UPSC News Editorial (हिंदी /Eng)
    - Answer Writing (हिंदी /Eng)
    - UPSC Essay (हिंदी /Eng)
    - UPSC GS (हिंदी /Eng)
        - UPSC GS 1 (हिंदी /Eng)
        - UPSC GS-2 (हिंदी /Eng)
        - UPSC GS-3 (हिंदी /Eng)
        - UPSC GS-4 (हिंदी /Eng)
    - Kurukshetra (हिंदी /Eng)
    - Yojana (हिंदी /Eng)
    - IAS Strategy for Prelims
        - General Studies
        - CSAT
    - IAS Strategy for Mains
        - IAS GS 1
        - IAS GS 2
        - IAS GS 3
        - IAS GS 4
    - IAS Test Series
- Himachal HPAS
    - Himachal Daily Current Affairs
    - हिमाचल नियमित समाचार
    - Daily Himachal GK Quiz

    - दैनिक क्विज़ हिमाचल HPAS
    - Himachal News Editorial (हिंदी /Eng)
    - Answer Writing (हिंदी /Eng)
    - Himachal Essay (हिंदी /Eng)
    - Giriraj
        - Magazine
        - Giriraj Quiz
    - गिरिराज
        - पत्रिका
        - गिरिराज प्रश्नोत्तरी
    - HP Government Schemes
    - हिमाचल प्रदेश सरकार की योजनाएं
    - Syllabus Prelims Himachal HPAS
        - GENERAL STUDIES
        - CSAT
            - English
            - Hindi
    - Syllabus Mains Himachal HPAS
        - English,Hindi,Essay & One Optional
        - HPAS GS 3
        - HPAS GS 2
        - HPAS GS 1
    - Himachal HPAS Test Series
    - All You need to Know about Himachal HPAS
- HARYANA HCS
    - Haryana Current Affairs
    - हरियाणा करेंट अफेयर्स
    - HCS Quiz
    - एचसीएस प्रश्नोत्तरी
    - Haryana News Editorial (हिंदी /Eng)
    - Answer Writing (हिंदी /Eng)
    - Haryana Essay (हिंदी /Eng)
    - HR Government Schemes
    - हरियाणा सरकार की योजनाएं
    - Syllabus Mains Haryana HCS
    - Syllabus Prelims Haryana HCS
    - HCS Prelims Test Series

- □□□□□□ □□□□□□□□□ □□□□□ □□□□□
- Punjab PCS
  - Punjab PCS Current Affairs
  - Daily Quiz Punjab PCS
  - Punjab News Editorial (Eng)
  - Answer Writing (Eng)
  - Punjab Essay (Eng)
  - All you need to know about Punjab PCS Exam 2021
  - Syllabus Prelims Punjab PCS
    - General Studies
    - Prelims GS 1
  - Syllabus Mains Punjab PCS
    - PCS GS 1
    - PCS GS 2
    - PCS GS 3
    - PCS GS 4
    - Online PUNJAB PCS TEST SERIES 2020
- CSAT
  - CSAT English
  - □□□□□ □□□□□
- Concept Mindmaps
  - Polity (□□□□□ / Eng)
  - Geography (□□□□□ / Eng)
  - Enviroment (□□□□□ / Eng)
  - History (□□□□□ / Eng)
  - Economics (□□□□□ / Eng)
  - Science and Technology (□□□□□ / Eng)
  - CSAT Concepts (□□□□□ / Eng)
  - Maps (□□□□□ / Eng)
  - Art and Culture (□□□□□ / Eng)
  - International Affairs (□□□□□ / Eng)
  - Punjab PCS Concepts
  - Himachal HPAS Concepts (□□□□□ / Eng)
  - Haryana HCS Concepts (□□□□□ / Eng)
  - Rajasthan RAS Concepts (□□□□□ / Eng)
- Concept Quiz
  - Polity Quiz (□□□□□/Eng)

- Geography Quiz (□□□□□/Eng)
- Enviroment Quiz (□□□□□/Eng)
- History Quiz (□□□□□/Eng)
- Economics Quiz (□□□□□/Eng)
- Science and Technology Quiz (□□□□□/Eng)
- CSAT Concepts Quiz (□□□□□/Eng)
- Maps Quiz (□□□□□/Eng)
- Art and Culture Quiz (□□□□□/Eng)
- Punjab PCS Concepts Quiz
- Himachal HPAS Concepts Quiz (□□□□□/Eng)
- Haryana HCS Concepts Quiz (□□□□□/Eng)
- Rajasthan RAS Concepts Quiz (□□□□□/Eng)

- Mains
  - UPSC Answer Writing (□□□□□/Eng)
  - HPPSC Answer Writing (□□□□□/Eng)
  - Haryana HCS Answer Writing (□□□□□/Eng)
  - Punjab PCS Answer Writing
- Exam Blogs
  - UPSC Exam Blogs
  - Himachal Exam Blogs
  - Punjab exam Blogs
  - Haryana Exam Blogs
  - Rajasthan Exam Blogs
  - E-Magazine
    - E-Magazine for HPAS
    - □□□□□□□□ □□ □□□ □-□□□□□□□□
    - E-Magazine for Punjab PCS
- UPCOMING EXAMS
  - National Exams
  - Himachal Pradesh Exams
  - Punjab Exams
  - Test Series Planner
- About US
- Sign Up
- Login
- facebook 

- instagram 
- youtube 

MENU
Click on Drop Down for Current Affairs

Topics Covered

Summary:

- Green Hydrogen Pilot Project: India’s first multi-purpose green hydrogen pilot project has been launched at the Nathpa Jhakri Hydro Power Station in Himachal Pradesh, using renewable energy to produce green hydrogen for clean fuel production.
- National Impact: This project aligns with India’s National Green Hydrogen Mission and accelerates infrastructure development for green hydrogen as a viable energy option.
- Challenges and Opportunities: While scaling up green hydrogen faces challenges, it offers benefits like sector decarbonization and energy security enhancement.

What is the news?

- India’s clean energy sector has received a significant boost with the inauguration of the country’s first multi-purpose green hydrogen pilot project at the Nathpa Jhakri Hydro Power Station (NJHPS) in Himachal Pradesh. This development marks a crucial step towards harnessing the potential of green hydrogen as a clean and sustainable fuel source.

Green Hydrogen: Powering the Future

- Green hydrogen is a clean-burning fuel produced by splitting water using renewable energy sources like solar or hydro power. Unlike traditional hydrogen production methods that rely on fossil fuels, green hydrogen generation creates no harmful emissions, making it a promising alternative for various applications.

The Himachal Pradesh Project: A Multi-Pronged Approach

The pilot project at NJHPS is a testament to India's commitment to exploring the diverse applications of green hydrogen. The project boasts a multi-purpose design, aiming to:

- **Generate clean fuel:** The project will utilize renewable energy from SJVN's solar power plant to produce green hydrogen, which can then be used for various purposes, including powering turbines and other industrial processes.
- **Reduce reliance on fossil fuels:** By using green hydrogen, the project can help to reduce India's dependence on imported fossil fuels, promoting energy security and a cleaner environment.
- **Advance technological know-how:** This pilot project serves as a valuable platform for research and

development, paving the way for advancements in green hydrogen technology and infrastructure in India.

What is the Capacity?

- The project is the nation’s first multi-purpose (combined heat and power) green hydrogen generation plant with the capability to cater to the high-velocity oxygen fuel (HVOF) coating facility of NJHPS to meet its combustion fuel requirements, in addition to generating electricity through its 25 kW capacity fuel cell.
- It will produce hydrogen gas by splitting hydrogen and oxygen from water with the help of an alkaline electrolyzer of 20 Nm3/hr capacity by utilising renewable energy supplied from the 1.31 MW solar power plant of SJVN located in Wadhal, Himachal Pradesh.

The Road Ahead: Challenges and Opportunities

- While the inauguration of this pilot project is a positive step, challenges remain. Scaling up green hydrogen production requires significant investment in research, infrastructure development, and cost reduction. Additionally, creating a robust regulatory framework to promote green hydrogen adoption across various sectors is

crucial.

- Despite the challenges, the potential benefits of green hydrogen are undeniable. It has the potential to decarbonize various sectors, including transportation, power generation, and industrial processes. This technology can contribute significantly to India's ambitious clean energy goals and its fight against climate change.

National Impact:

The national impact of India's first multi-purpose green hydrogen pilot project can be summarized in these key points:

- **Aligns with National Green Hydrogen Mission:** The project directly supports the government's mission to develop green hydrogen as a clean energy source. This pilot provides valuable data and experience that can be used to inform the larger national initiative.
- **Accelerates Infrastructure Development:** This project demonstrates the feasibility of green hydrogen production using renewable energy sources. By showcasing a successful model, it can encourage further investment and development of green hydrogen infrastructure across the country.
- **Establishes Green Hydrogen as a Viable Option:** The success of this pilot can help to convince policymakers, industries, and the public of the potential of green hydrogen. This can lead to

wider adoption and mainstream use of green hydrogen in the future.

- **Potential for Power Sector Transformation:** If green hydrogen production can be scaled up effectively, it could revolutionize the power sector. It offers a clean and sustainable alternative to traditional fossil fuel-based generation methods.

In essence, this pilot project serves as a stepping stone for India's national ambitions in the green hydrogen sector. It paves the way for a cleaner energy future and contributes to the country's goals for energy security and environmental sustainability.

Conclusion:

- India's first green hydrogen pilot project signifies a promising leap forward in the nation's clean energy journey. By fostering innovation and collaboration, India can unlock the full potential of green hydrogen and establish itself as a leader in this transformative technology.

Examlife

On Whatsapp Now

Introducing Examlife Channel - Your Ultimate Destination for Daily Most Important Current Affairs and Quiz! Follow Examlife Channel today!

QuizTime:

0 votes, 0 avg

0

Are you Ready!

Thank you, Time Out !

Created by **Examlife**

General Studies

CURRENT AFFAIRS QUIZ

Read the Below Instructions Carefully:

- Click on - Start Quiz
- Attempt all questions (You can attempt or leave)

- After Attempting Last Question.
- Enter Name & Email
- Click on - Check Result
- Scroll down - Check out Solutions too.

Thank you.

Loading ...

1 / 5

Category: **General Studies**

The main challenge associated with large-scale production of green hydrogen in India is:

○ Limited availability of renewable energy sources.

○ Lack of skilled workforce in the hydrogen sector.

○ Absence of a supportive regulatory framework.

○ High cost of production compared to fossil fuels.

Prev Finish Next

2 / 5

Category: **General Studies**

Consider the following statements about India's first multi-purpose green hydrogen pilot project:

○ It is located at the Nathpa Jhakri Hydro Power Station (NJHPS) in Himachal Pradesh.

○ It aims to produce green hydrogen using renewable energy sources.

○ It is a significant step towards reducing India's dependence on imported coal.

○ All of the above.

Prev Finish Next

3 / 5

Category: **General Studies**

Green hydrogen has the potential to contribute to India's clean energy goals by:

○ Replacing traditional biomass as a cooking fuel in rural areas.

○ Providing a clean fuel source for power generation in remote locations.

○ Reducing greenhouse gas emissions from industrial processes.

○ All of the above.

Prev Finish Next

4 / 5

Category: **General Studies**

Which of the following strategies can be most effective in promoting wider adoption of green hydrogen in India?

○ Increasing public awareness about the environmental benefits of green hydrogen.

○ Providing subsidies for the purchase of green hydrogen-powered vehicles.

○ Encouraging research and development to improve green hydrogen production efficiency.

○ All of the above.

Prev Finish Next

5 / 5

Category: **General Studies**

The inauguration of India's first green hydrogen

pilot project signifies:

○ A potential breakthrough in achieving complete energy independence.

○ A step towards achieving India's ambitious clean energy targets.

○ A solution to the problem of limited grid connectivity in rural areas.

○ A replacement for traditional hydropower generation.

Prev Finish

Check Rank, Result Now and enter correct email as you will get Solutions in the email as well for future use!

Check the Result

Your score is

0%

Restart quiz

Please Rate!

Send feedback

Mains Questions:

Question 1:

India's first multi-purpose green hydrogen pilot project was recently inaugurated at the Nathpa Jhakri Hydro Power Station (NJHPS) in Himachal Pradesh. Discuss the significance of this project for India's energy sector and the challenges associated with large-scale green hydrogen production. (250 words)

Model Answer:

Significance of the Green Hydrogen Pilot Project:

- Aligns with National Green Hydrogen Mission: This project supports the government's goal of developing green hydrogen as a clean energy source.
- Promotes Clean Energy Transition: Green hydrogen offers a sustainable alternative to fossil fuels, contributing to India's clean energy goals and reducing greenhouse gas emissions.

- Technological Advancement: The project serves as a platform for research and development, paving the way for advancements in green hydrogen technology and infrastructure in India.
- Reduces Reliance on Fossil Fuels: Green hydrogen production can decrease dependence on imported fossil fuels, enhancing energy security.

Challenges of Large-Scale Green Hydrogen Production:

- High Cost: Currently, green hydrogen production is expensive due to the high cost of renewable energy sources and electrolyzer technology.
- Infrastructure Development: Scaling up production requires significant investment in building a robust infrastructure for hydrogen transportation and storage.
- Policy Framework: A clear and supportive regulatory framework is needed to incentivize green hydrogen adoption across various sectors.
- Research & Development: Further research is needed to improve the efficiency and affordability of green hydrogen production technologies.

Question 2:

Green hydrogen has the potential to be a game-changer in various sectors. Critically analyze the potential applications of green hydrogen and suggest strategies for promoting its wider adoption in India. (250 words)

Model Answer:

Potential Applications of Green Hydrogen:

- Power Generation: Green hydrogen can be used in fuel cells to generate clean electricity, especially for applications where grid connectivity is limited.
- Transportation: Green hydrogen can power electric vehicles (fuel cell vehicles) with zero tailpipe emissions, contributing to cleaner transportation.
- Industrial Processes: Green hydrogen can be used in various industrial processes, such as steel production and fertilizer manufacturing, decarbonizing these sectors.
- Energy Storage: Green hydrogen offers a long-term energy storage solution, balancing the variability of renewable energy sources like solar and wind.

Strategies for Promoting Green Hydrogen Adoption:

- Government Incentives: Providing subsidies and tax breaks for green hydrogen production and infrastructure development can encourage investment.
- Research & Development Funding: Increased government and private sector funding for research will enhance technology development and cost reduction.
- Carbon Pricing: Implementing carbon pricing mechanisms on fossil fuels can make green hydrogen a more attractive alternative.
- Public Awareness Campaigns: Raising public awareness about the benefits of green hydrogen will generate support for its adoption.

By effectively addressing the challenges and implementing

promotional strategies, India can harness the full potential of green hydrogen as a clean and sustainable energy source for the future.

Remember: These are just sample answers. It's important to further research and refine your responses based on your own understanding and perspective. Read entire UPSC Current Affairs.

Relevance to the UPSC Prelims and Mains syllabus under the following topics:

Prelims:

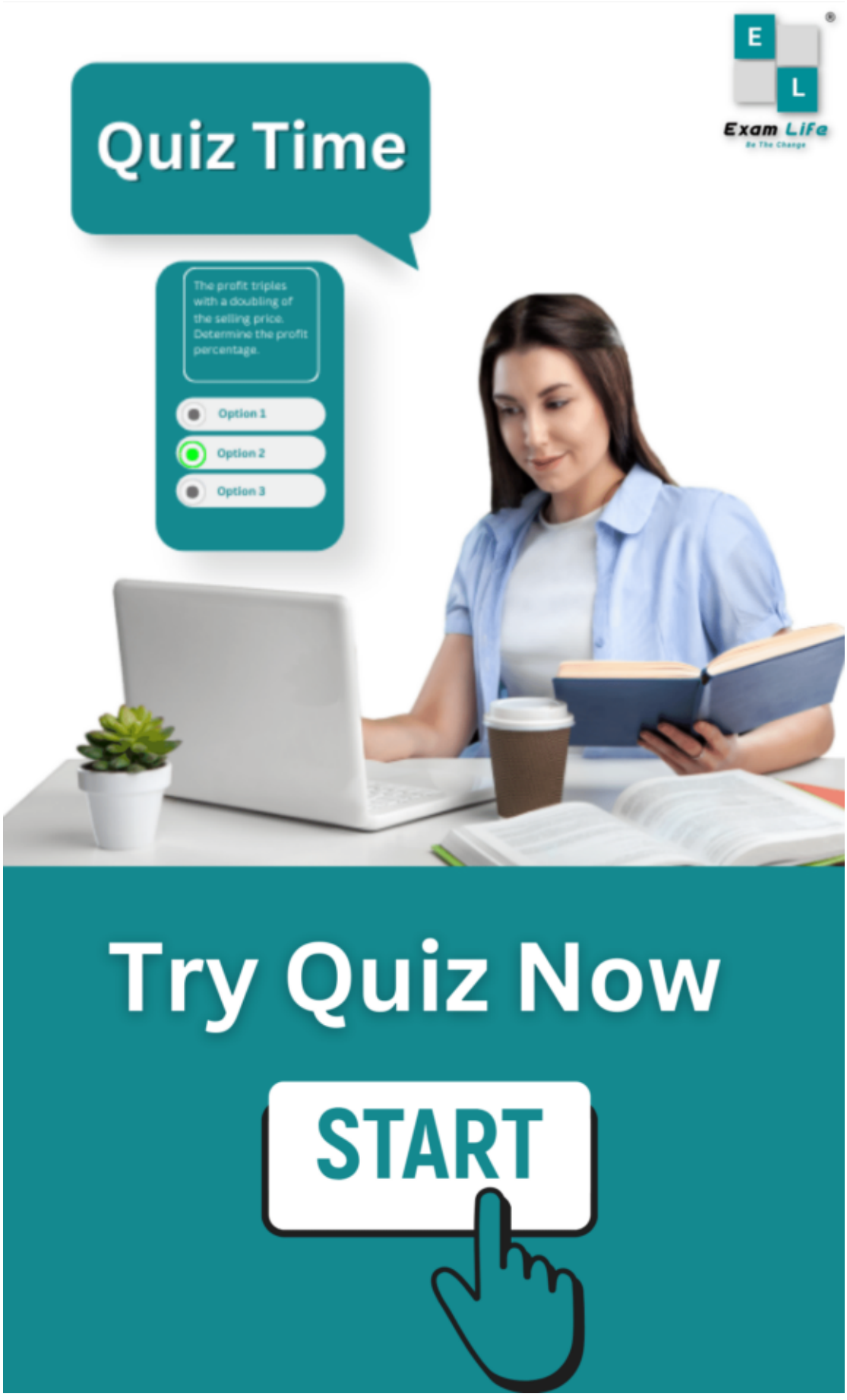
- **GS Paper I:**Science and Technology: Recent developments in science and technology. (Directly relevant)

Mains:

- **GS Paper III – Science and Technology:**

Indian Space Programme and its achievements. (Connect to advancements in clean energy technologies)
Achievements in fields of engineering and technology; their applications and impact on society. (Discuss applications of green hydrogen)

- **GS Paper III – Indian Economy:**
  Infrastructure: Energy. (Discuss the need for green hydrogen infrastructure)
  Government policies and interventions for development. (Discuss government initiatives like the National Green Hydrogen Mission)
- **GS Paper IV – Ethics, Integrity and Aptitude:**
  Conservation, environmental pollution and degradation, environmental impact assessment. (Discuss green hydrogen as a sustainable alternative)


Quiz Time
The profit triples with a doubling of the selling price. Determine the profit percentage.
Option 1
Option 2
Option 3
Exam Life
Be The Change
Try Quiz Now
START

UPSC

- National Current Affairs
- UPSC Quiz
- Editorials
- Mindmaps
- E-Magazine
- Free Mock Test
- Prelims Test Series

यूपीएससी

- राष्ट्रीय करेंट अफेयर्स
- यूपीएससी प्रश्नोत्तरी
- संपादकीय
- माइंडस्मैप्स
- ई-पत्रिका
- फ्री मॉक टेस्ट
- प्रीलिम्स टेस्ट सीरीज

Examlife Online Prelims Test Series

Enroll Now

Himachal HPAS

- HP Current Affairs
- HPAS Quiz
- HP Editorials
- HP Mindmaps
- HPAS E Magazine
- HPAS Free Mock Test
- HPAS Prelims Test Series

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

Punjab PCS

- Punjab Current Affairs
- PPSC Quiz
- Punjab Mindmaps
- Punjab Editorial
- Punjab E-Magazine
- PPSC Free Mock Test
- PPSC Prelims Test Series

Haryana HCS

- Haryana Current Affairs
- HCS Quiz
- HCS Editorials
- HCS Mindmaps
- HCS E-Magazine
- HCS Free Mock Test
- HCS Prelims Test Series

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]

- एचसीएस ई -पत्रिका
- एचसीएस फ्री मॉक टेस्ट
- एचसीएस प्रीलिम्स टेस्ट सीरीज

Useful Links

- UPSC
- यूपीएससी
- Himachal HPAS
- हिमाचल एच पी ए एस
- Punjab PCS
- Contact us
- About us
- Privacy Policy
- Haryana HCS
- हरियाणा एचसीएस
- CSAT
- सीसैट

Social Media

Examlife Online Prelims Test Series

Enroll Now

- Punjab PCS Exam (Click Here)
- Himachal HPAS Exam (Click Here)
- □□□□□□ □□□□□□□ (Click Here)
- UPSC Preparation (Click Here)
- □□□□□□□□ □□ □□□□□□ (Click Here)