Geography · GS - I

Discuss the scientific significance of Earth's oldest evidence of life and examine the need to conserve ancient geological formations.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 17/10/2026	GS - I	Geography

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Origin of life, stromatolites, geological heritage, microbial fossils, climate change, mining, erosion, conservation.

Model Answer

Introduction:

Earth's oldest evidence of life, preserved in ancient rocks and fossil-like structures, provides valuable insights into the emergence and evolution of early organisms billions of years ago.

Scientific Significance:

Ancient geological formations, including those in Western Australia's Pilbara region, help scientists investigate early microbial life, the evolution of Earth's atmosphere and the environmental conditions that supported life. They also improve our understanding of Earth's geological history and the possibility of life on other planets.

Threats and Conservation:

Erosion, mining, infrastructure development and climate-related processes can damage these irreplaceable records. Their destruction may permanently eliminate evidence that cannot be recreated. Conservation requires geological heritage mapping, protected zones, environmental impact assessments before mining, scientific

documentation and cooperation among governments, researchers and local communities.

Conclusion:

Protecting ancient geological records is essential for scientific research and preserving humanity's natural heritage. Development decisions should balance economic needs with the long-term value of these unique formations.

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