

July 25, 2018

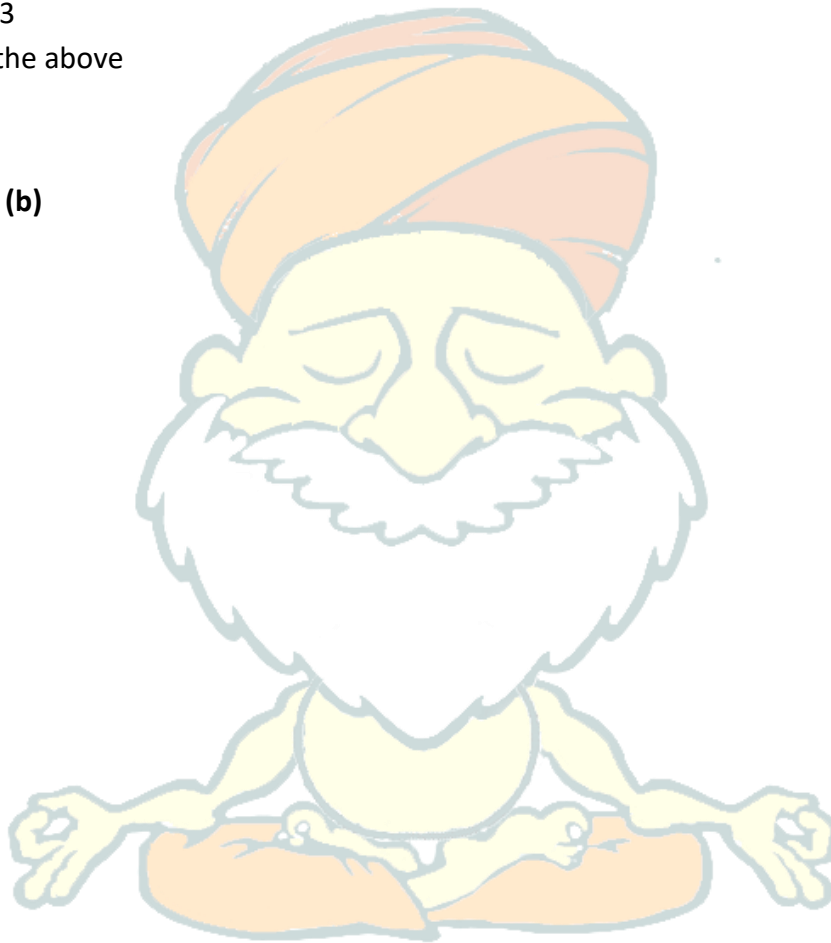
Q.1) Consider the following statements about 'Parker Solar Probe Mission'

1. It is a joint mission by NASA and Space X
2. It will trace the flow of energy that heats and accelerates the solar corona and solar wind
3. It is launched by Falcon Heavy

Select the correct statements

- a) 1 and 2
- b) 2 Only
- c) 1 and 3
- d) All of the above

Q.1) Solution (b)



PARKER SOLAR PROBE

A NASA Mission to Touch the Sun

Launch Window: July 31 – August 19, 2018

NASA's Parker Solar Probe mission, which is scheduled to launch in July 2018, will come within 3.9 million miles (6.2 million kilometers) of the sun – seven times closer than any other spacecraft ever has.

The specially shielded Parker Solar Probe will have to endure temperatures up to 2,500 degrees Fahrenheit (1,370 degrees Celsius) and solar radiation intensities 475 times higher than we're used to here on Earth.

SCIENCE OBJECTIVES

- Trace the flow of energy that heats and accelerates the solar corona and solar wind.
- Determine the structure and dynamics of the plasma and magnetic fields at the sources of the solar wind.
- Explore mechanisms that accelerate and transport energetic particles.

THE CORONA

The third layer of the sun's atmosphere is the corona. It can only be seen during a total solar eclipse. It appears as white streamers or plumes of ionized gas that flow outward into space. Temperatures in the sun's corona can get as high as 3.5 million degrees Fahrenheit (2 million degrees Celsius). As the gases cool, they become the solar wind.

TRAJECTORY DESIGN

• 24 Orbits
• 7 Venus gravity assist flybys

SPACECRAFT

Anti-Ram Facing View

Ram Facing View

Primary Science (11 days) ← → Cruise/Downlink (158-77 days)

PERIHELION
35Rs—9.5Rs

APHELION
1.02AU—0.73AU
(45° slew 1.02AU to 0.82AU)

SPACE .COM

Credit: NASA

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Source: <https://www.thehindu.com/sci-tech/science/nasa-to-launch-probe-into-suns-scorching-atmosphere/article24483909.ece>

Q.2) 'Project Loon' was recently in news. It is related to

- a) Waste management technology
- b) Solar power production technology
- c) Water conservation technology
- d) Wireless communication technology

Q.2) Solution (d)

Project Loon is a research and development project developed by X (formerly Google X) with the mission of providing Internet access to rural and remote areas. The project uses high-altitude balloons placed in the stratosphere at an altitude of about 18 km (11 mi) to create an aerial wireless network with up to 4G-LTE speeds.

Source: <https://www.reuters.com/article/us-kenya-alphabet/alphabet-to-deploy-balloon-internet-in-kenya-with-telkom-in-2019-idUSKBN1K90SV>

Q.3) Consider the following statements

1. India has a military base in Djibouti
2. Djibouti is a landlocked country enclosed by Eritrea, Ethiopia, and Somalia

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.3) Solution (d)

It is bordered by Eritrea in the north, Ethiopia in the west and south, and Somalia in the southeast. The remainder of the border is formed by the Red Sea and the Gulf of Aden at the east.

China has a military base in Djibouti, not India.

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Source: <https://www.thehindu.com/news/international/xi-visits-africa-as-china-seeks-to-deepen-economic-relations/article24484126.ece>

Q.4) Consider the following statements about 'Hamas'

1. It is a secular organisation which recognises Israel and wants to build a state on 1967 borders
2. It was formed in the wake of Arab Spring, 2010.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.4) Solution (d)

Hamas

- It was formed in 1987
- **Ideology:** Islamist
- **Strategy towards Israel:** Armed resistance
- **Objectives:** Does not recognise Israel, but accepts a Palestinian state on 1967 borders

Source: <https://www.thehindu.com/news/international/hamas-announce-ceasefire-in-gaza/article24483826.ece>

Q.5) Which of the following was known in ancient times as 'Constantinople'?

- a) Jordan
- b) Libya
- c) Istanbul
- d) Egypt

Q.5) Solution (c)

IASbaba's Daily Quiz

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It has been referred to by many names in its history, most notably Byzantium, Constantinople, and now Istanbul. After the creation of the Republic of Turkey in 1923, the various alternative names besides İstanbul became obsolete.

Source: <https://www.thehindu.com/todays-paper/tp-in-school/istanbul-one-city-many-cultures/article24274825.ece>

