

August 26, 2019

Q.1) Consider the following statements with respect to 'Gravitational lens'

1. It has a single focal point
2. It is capable of bending the light from the source as the light travels towards the observer.

Select the correct statements

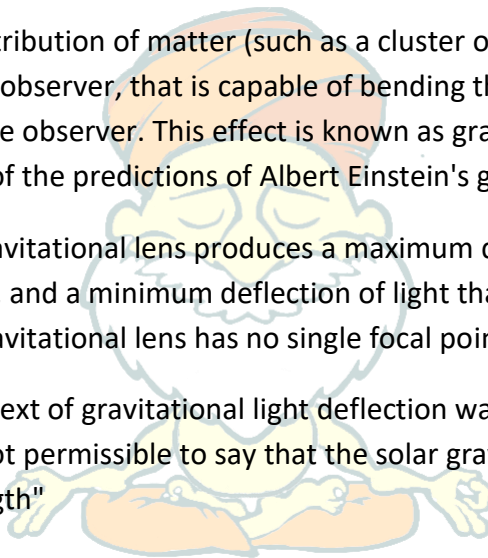
- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.1) Solution (b)

A gravitational lens is a distribution of matter (such as a cluster of galaxies) between a distant light source and an observer, that is capable of bending the light from the source as the light travels towards the observer. This effect is known as gravitational lensing, and the amount of bending is one of the predictions of Albert Einstein's general theory of relativity.

Unlike an optical lens, a gravitational lens produces a maximum deflection of light that passes closest to its center, and a minimum deflection of light that travels furthest from its center. Consequently, a gravitational lens has no single focal point, but a focal line.

The term "lens" in the context of gravitational light deflection was first used by O.J. Lodge, who remarked that it is "not permissible to say that the solar gravitational field acts like a lens, for it has no focal length"



Q.2) 'TEMPLATES' programme is associated with

- a) NASA
- b) ISRO
- c) DRDO
- d) JAXA

Q.2) Solution (a)

Targeting Extremely Magnified Panchromatic Lensed Arcs and Their Extended Star Formation (TEMPLATES)

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Source: <https://www.nasa.gov/feature/goddard/2019/where-are-new-stars-born-nasa-s-webb-telescope-will-investigate>

Q.3) 'Special Data Dissemination Standard (SDDS)' was in news recently. It is associated with

- a) International Monetary Fund
- b) International Solar Alliance
- c) World Economic Forum
- d) Financial Action Task Force

Q.3) Solution (a)

Special Data Dissemination Standard (SDDS) is an International Monetary Fund standard to guide member countries in the dissemination of national statistics to the public.

Q.4) Consider the following statements with respect to 'Girmityas'

1. They are indentured Indian labourers who left the country in the middle and late 19th century to serve as labours in the then British colonies.
2. They were primarily brought to work in Diamond Mines in Africa

Select the correct statements

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

Q.4) Solution (a)

Girmitya or Jahajis are indentured Indian labourers that were brought to Fiji, Mauritius, South Africa, East Africa, and the Caribbean to work on sugarcane plantations for the prosperity of the European settlers and save the Fijians from having to work on these plantations and thus to preserve their culture.

Q.5) 'U.K. Sinha Committee' was constituted to deal with

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- a) MSMEs
- b) E-Vehicles
- c) Corporate Social Responsibility
- d) Eco Sensitive Zones

Q.5) Solution (a)

RBI-appointed U.K. Sinha-led committee to study the problems faced by MSMEs.

