

IASbaba's Daily Quiz

September 20, 2018

Q.1) Which of the following statements regarding NASA's Juno Spacecraft is/are correct?

- a) It is second spacecraft to orbit Uranus, after the Galileo probe.
- b) The previous mission had found evidence of subsurface saltwater on Uranus's moons Europa, Ganymede and Callisto.
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.1) Solution (d)

The objective of Juno mission is to measure Jupiter's composition, gravity field, magnetic field, and polar magnetosphere.

Europa, Ganymede and Callisto are an example of Galilean moon of Jupiter. NASA's Juno spacecraft is sent to orbit Jupiter not Uranus. So, both the statements are incorrect.

NASA's Juno spacecraft has beamed back an image of a long, brown oval known as a "brown barge".

Brown barge is an elusive atmospheric feature in Jupiter's South Equatorial Belt.

Source: <https://timesofindia.indiatimes.com/home/science/nasas-juno-probe-captures-elusive-brown-barge-on-jupiter/articleshow/65836759.cms>

Q.2) Consider the following statements about Transiting Exoplanet Survey Satellite (TESS)

- 1. It finds exoplanets that periodically block part of the light from their host stars
- 2. It looks for dips in the visible light of stars, to determine the size of the exoplanet
- 3. It is developed by European Space Agency (ESA)

Select the correct statements

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

Q.2) Solution (a)

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The Transiting Exoplanet Survey Satellite (TESS) is a space telescope for NASA's Explorers program, designed to search for exoplanets using the transit method in an area 400 times larger than that covered by the Kepler mission.

The mission will find exoplanets that periodically block part of the light from their host stars, events called transits. TESS will survey 200,000 of the brightest stars near the sun to search for transiting exoplanets.

TESS will survey the entire sky over the course of two years by breaking it up into 26 different sectors, each 24 degrees by 96 degrees across.

The transit method of detecting exoplanets looks for dips in the visible light of stars, and requires that planets cross in front of stars along our line of sight to them. Repetitive, periodic dips can reveal a planet or planets orbiting a star. Transit photometry, which looks at how much light an object puts out at any given time, can tell researchers a lot about a planet. Based on how much of a dip in light a planet causes in its star, we can determine that planet's size. Looking at how long it takes a planet to orbit its star, scientists are able to determine the shape of the planet's orbit and how long it takes the planet to circle its sun.

This animation shows how a dip in the observed brightness of a star may indicate the presence of a planet passing in front of it, an occurrence known as a transit -

<https://www.nasa.gov/sites/default/files/thumbnails/image/transiting-exoplanet-with-brightness-graph-anim.gif>

Source: <https://www.ndtv.com/science/nasas-newest-planet-hunter-telescope-tess-shares-first-science-image-1918249>

Q.3) 'Nahargarh Biological Park' is located in

- a) Madhya Pradesh
- b) Rajasthan
- c) Gujarat
- d) Maharashtra

Q.3) Solution (b)

State's first lion safari was recently inaugurated in this park.

Source: https://www.business-standard.com/article/pti-stories/rajasthan-s-forest-minister-inaugurates-state-s-first-lion-safari-118091300842_1.html

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Q.4) 'Kudumbashree' is the women empowerment and poverty eradication program conceived by which of the following states?

- a) Kerala
- b) Tamil Nadu
- c) Karnataka
- d) Telangana

Q.4) Solution (a)

Kudumbashree is the women empowerment and poverty eradication program, framed and enforced by the State Poverty Eradication Mission (SPEM) of the Government of Kerala. The Mission aims to eradicate absolute poverty within a definite time frame of 10 years under the leadership of Local Self Governments formed and empowered by the 73rd and 74th Amendments of the Constitution of India. The Mission launched by the State Government with the active support of Government of India and NABARD has adopted a different methodology in addressing poverty by organizing the poor in to community-based organizations. The Mission follows a process approach rather than a project approach.

Source: <https://www.thehindu.com/opinion/op-ed/the-power-of-kudumbashree/article24962081.ece>

Q.5) 'Mangkhut Typhoon' hit which of the following?

- a) Philippines
- b) Madagascar
- c) Florida, USA
- d) Malta

Q.5) Solution (a)

It struck the Philippines, Hong Kong and China.

Source: <https://www.thehindu.com/todays-paper/tp-in-school/typhoon-mangkhut-toll-in-philippines-increases-to-65/article24972040.ece>