

78 C

Ex. Elements vary in abundance. Among metals, aluminium is the most abundant. It is the third most abundant element in earth's crust (8.3% approx. by weight). It is a major component of many igneous minerals including mica and clays. Many gemstones are impure forms of Al_2O_3 and the impurities range from Cr (in 'ruby') to Co (in 'sapphire'). Hence statement 1 is correct.

For the purpose of extraction, bauxite is chosen for aluminium. Hence statement 2 is correct.

79 D

Ex. In tissue culture, new plants are grown by removing tissue or separating cells from the growing tip of a plant. The cells are then placed in an artificial medium where they divide rapidly to form a small group of cells or callus. The callus is transferred to another medium containing hormones for growth and differentiation. The plantlets are then placed in the soil so that they can grow into mature plants. Using tissue culture, many plants can be grown from one parent in disease-free conditions. This technique is commonly used for ornamental plants.

Hence, all the statements are correct.

80 D

Ex.

81 D

Ex. China is world's largest manufacturer of silicon wafers used in photovoltaic units. As entrusted by the Electricity Act, 2003, Central Electricity Regulatory Commission (CERC), is designated as a key regulator of power sector in India which determines the solar power tariffs.

82 A

Ex.

83 C

Ex. Terminal High Altitude Area Defense (THAAD), formerly Theater High Altitude Area Defense, is an American anti-ballistic missile defense system designed to shoot down short, medium, and intermediate-range ballistic missiles in their terminal phase (descent or re-entry) by intercepting with a hit-to-kill approach.

84 D

Ex. The 'Additional Protocol' is not a stand-alone agreement, but rather a protocol to a safeguards agreement that provides additional tools for verification. In particular, it significantly increases the IAEA's ability to verify the peaceful use of all nuclear materials in states with comprehensive safeguards agreement. With the signing of additional protocol with IAEA, the civilian nuclear reactor comes under IAEA safeguards.

85 A

Ex. The satellites of NASA had discovered 'First Nearby Super-Earth'. It is a planet that could possibly support life. The team of International Astronomers announced their findings in the publication Astronomy and Astrophysics. The new discovery is known as an exoplanet. It is basically a planet that orbits a star outside of our solar system.

86 D

Ex. On 14 September 2019, Russia's world first floating nuclear power plant has been completed. It is about 5,000 kilometre (3,100 miles) Arctic transfer to the country's far east. The floating nuclear power plant named 'The Akademik Lomonosov'. It will start operating by the end of the year from Pevek, the autonomous district of Chukotka. It will provide energy for around 1, 00,000 people and also power oil platforms.

87 D

Ex. Zika virus was first detected in Uganda in 1947 by the scientists when they were researching on yellow fever. Zika Virus was named after the Zika Forest of Uganda. In the local language word, Zika means overgrown. In the research, scientists came across a different and apparently harmless virus transmitted by mosquitoes to monkeys and they named it as Zika.

88 A

Ex. satellite was launched by Nepal successfully from Virginia in the United States on 18 April, 2019. Its aim is to gather detailed geographical information of the Himalayan nation.

89 D

Ex. Bipolar Disorder is a mental health condition in which patients undergo intense mood shifts that oscillate between depression and elevated moods. After researching, scientists found that such patients carry some residual impairment in terms of processing of information even in their 'normal' phases. The study has been done by jointly researchers from the National Institute of Mental Health and Neuroscience (Nimhans), Bengaluru and All India Institute of Medical Sciences, New Delhi.

90 A

Ex. The recipients of the Nobel Prize in Chemistry 2019 are John B. Goodenough, M. Stanley Whittingham and Akira Yoshino for the development of lithium-ion batteries. Do you know that this lightweight, rechargeable and powerful battery can be used in mobile phones to laptops, electric vehicles? Not only this, it can even store significant amounts of energy from solar and wind power, making possible a fossil fuel-free society.

91 A

Ex. is the second mission to the moon which was launched on 22 July, 2019 by India's Geosynchronous Satellite Launch Vehicle (GSLV Mk III). It reached lunar orbit on 19 August, 2019. Despite the crash-landing of the Lander, ISRO confirmed that all the instruments are onboard the orbiter and are working well.

92 B

Ex. In a recent development, scientists have found particles of a rare isotope of iron (Fe-60) in Antarctica snow. It is believed that they have been originated from nearby supernovae. It will help in understanding the structure and origin of interstellar dust clouds, according to scientists.