Answer Sheet With Explanation

Date: 03/02/2020 Duration: 2 hr

CIVIL SERVICES PRELIMINARY EXAM

VAJIRAO & REDDY INSTITUTE

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Test Booklet Code: 190 Test Booklet No: 580081 Total Ques: 100

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Ex. Burning biomass emits large amounts of pollutants like burning other solid fuels such as coal. Burning organic material emits Particulate Matter (PM), Nitrogen Oxide (NO_x), Carbon Monoxide (CO), Sulphur Dioxide (SO₂), Lead (Pb) Mercury and hazardous air pollutants.

Ex. Carbofuran, methyl parathion, phorate and triazophos chemicals are used as pesticides in India to control insects in a wide variety of field crops. Carbofuran is one of the most toxic carbamate (drived from carbamic acid) pesticides. Parathion or methyl parathion has been banned in various countries due to its high toxicity to humans. Triazophos is a chemically toxic insecticide which could lead to headaches, blurred vision, dizziness etc., in humans. Phorate is also a highly toxic chemical compound, used as an insecticide.

Ex. Augmented Reality is a technology where the objects that reside in the real world are enhanced by computergenerated perceptual information. It allows individuals to be present in the world and improves the experience using the camera of smartphone or PC. Virtual reality is the use of computer technology to craete a simulated environment. It immeres the user by making them feel like they are experiencing simulated reality. It replaces the user's real world environment with a simulated one. Its applications include entertainment and educational purposes.

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Ex. Cas9 protein has been in news for its property of being molecular scissors used in targeted gene editing. It is also known as CRISPR associated protein 9. It is heavily utilised in genetic engineering application's. It's main function is to cut DNA. So it can alter cells genome. It plays an important role in the immunological defense of certain bacteria against DNA viruses.

Ex. India successfully conducted its first anti-satellite (ASAT) missile test on 27 March, 2019 destroying low earth orbit satellite in space by using a missile that covered a distance of 300 km to engage the target. Let us tell you that India became the fourth country to acquire such type of modern capability. The codename of ASAT is Mission Shakti.

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Ex. The Kerala State Aids Control Society (KSACS) announced to reserve a government job for HIV positive candidates. A vacancy has been reserved in the office of KSACS for HIV positive candidates for the post of coordinator. The reason behind is that the presence of such a person will improve coordination and communication with groups at risk and ensure effective prevention.

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In a recent development, scientists have found particles of a rare 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.

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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.

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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.

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Bipolar Disorder is a mental health condition in which Ex. 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.

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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.

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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.