# **PRAJWALAN**

ABIT Group of Institutions
A Centre for Technical Excellence

# Chandrayaan-2: India's Mission to Space

Chandrayan-2 was the most complex mission ever attempted by India's space agency, ISRO. On 7th September, 2019 millions of Indians watched Vikram Moon Lander's final heart-stopping descent in the early hours - its progress beamed across television screens and social media accounts. But during the final stage - known as the "hovering" stage - a problem occurred. The Lander was about 2.1km (1.3 miles) from the lunar surface when it lost contact with scientists, dashing hopes that India would become only the fourth country to achieve a soft landing on the Moon. Since then, the US space agency NASA has said the Lander made a "hard landing". New pictures from a NASA spacecraft show the targeted landing site - but they were taken at dusk, and unable to locate the Lander.

Chandrayaan-2 was the most complex mission ever attempted by India's space agency, ISRO. Its chairman K Sivan - who had earlier described the final descent as "15 minutes of terror" - has since said the mission was "98% successful". One ISRO scientist said that the success of a space mission is measured in terms of 'the return you set'.

As described by the Scientists, it was a precise launch, the orbiter was maneuvered as anticipated which is a major part of the success and even the lander passed through all the three phases except that in the last phase it did not function as per the expectations. Now the scientists can rely on data they received from the orbiter. "The life of the orbiter got enhanced from one year to seven years because a lot of fuel was not consumed. It is important that the scientists can receive data for seven years from orbiter, which means many technologies have worked". Dr Madhavan Nair, former chairman of ISRO, said "only a small portion of the mission" had failed, and although the Lander had not made a soft landing, it had lost contact "very close to the surface of the moon". He added that "weightage" must be given to every stage of the mission, and that all the other stages - the launch, the orbiter's precise placement in the Moon's orbit, and the separation of the Lander from the orbiter - had been successful.

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#### About Us

Ajay Binay Group of Institution was established in the year 1985 in the memory of Ajay Bhuyan and Binay Mishra, Ex- Presidents the Odisha Small Scale Industries Association. to promote professional education in the state. It is situated in the heart of thousand years old silver city of Cuttuck. It's campus is situated in Sector-1 Of CDA. Bidanasi. on the Kathajodi river. ABIT has its own playground, open area stadium, excellent infrastructure. facilities and amenities. The group operates institutions imparting education in the areas of B.Arch, B. Tech, MBA, MCA, M. Tech and M. Arch.

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## From the desk of Head Governing Board

There has never been a more exciting time for technologists in the history of mankind. In the last few years, the world has witnessed rapid progress and proliferation of technologies across areas of mobility, communication, data storage, genetics, 3D printing, artificial intelligence, robotics and above all space technology. As engineers and professionals the scope and choices in front of you is unbounded. I urge all students and faculties to continuously invest time in understanding and utilizing contemporary technology for their own growth as well as the growth of the community they live in. Prajwalan 2020 is a first step towards that. May the new year shower knowledge, wisdom and prosperity on all ABIT Community.



Er. Satyadarshi Mishra

#### From the desk of Director- Placement and New Initiatives

Happy New Year to all!

As we start our journey into a new decade, I am very excited for all the opportunities that lies ahead of us. Indian scientists and technocrats have initiated their quest to explore space with their mission Chandrayan-2. We as engineers, have a lot to look up to in the coming years. Traditional engineering practices are paving way for new innovative and disruptive technologies. It is imperative to us hone our basics and move ahead to meet these challenges. This transition will be smooth if we keep abreast with the changing technical scenario and one critical and simple state ahead in this regard to keep oneself updated through self study and learning. It is thus important as an educational institute to come up with newsletter and study material that will address the reading requirements of the younger generation. I am sure this issue of Prajwalan will enlighten our students on the various aspects of lunar exploration. I would like to thank the editorial team with this issue.



Er. Payal Mohapatro

## From the desk of Principal

Wishing everyone a very happy and prosperous new year. The college Newsletter will definitely help to showcase the achievements and new initiatives. Let's start with renewed zeal to acquire more achievements. This issue of 'Prajwalan' highlights the launch of "Chandrayan-2", following its journey into the space. I congratulate the editorial team for their efforts in bringing up this issue of Prajwalan, 2020



Prof. (Dr.) Leena Samantaray

## Editor's Message

Here's wishing you a very happy and prosperous new year. The editorial team considers it a privilege to present Prajwalan, 2020. Last year we achieved quite a few milestones. Let us hope that this year, we add more jewels to our crown.

Very few have fully realized the wealth of sympathy, kindness, and generosity hidden in the soul of every student. Extracting talents, ideas, skills from different fields was a difficult task but when liberty and equality capture the minds of the students, it crosses the boundaries to strengthen the development of the countries.

Science has only promoted material well being, but moral and spiritual progress has declined for which the final goal of progress is very distant. Still human is destined to progress, struggling hard to achieve the goal.