

# Columbus



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The Knowledge Explorer

## Jeffrey Preston Bezos



**Jeff Bezos** ( 12 Jan 1964 )

**Jeffrey Preston Bezos** is the founder, president, chief executive officer and chairman of the board of Amazon.com. Bezos, a Tau Beta Pi graduate of Princeton University, worked as a financial analyst for D. E. Shaw & Co. before founding Amazon in 1994.

Bezos founded Amazon.com in 1994 after making a cross country drive from New York to Seattle, writing up the Amazon business plan on the way and setting up the original company in his garage. His work with Amazon eventually led him to become one of the most prominent dot-com entrepreneurs. In 2004, he founded a human spaceflight startup company called Blue Origin.

Bezos is known for his attention to business process details. As described by Condé Nast's Portfolio.com, he "is at once a happy-go-lucky mogul and a notorious micromanager. ... an executive who wants to know about everything from contract minutiae to how he is quoted in all Amazon press releases."

In October 2002, the firm added clothing sales to its line-up, through partnerships with hundreds of retailers, including The Gap, Nordstrom, and Land's End. Amazon shares its expertise in customer service and online order fulfillment with other vendors through co-branded sites, such as those with Borders and Toys 'R Us, and through its Amazon Services subsidiary. In September 2003, Amazon announced the formation of A9, a new venture aimed at developing a commercial search engine that focuses on e-commerce web sites. At the same time, Amazon launched an online sporting goods store, offering 3,000 different brand names. Amazon.com ended 2006 with annual sales over \$10.7 billion.

Jeff Bezos and Mackenzie live north of Seattle, and are increasingly concerned with philanthropic activities. "Giving away money takes as much attention as building a successful company," he has said.

In 2007, Bezos announced that Amazon would be producing a new handheld electronic reading device called the Kindle. The device uses "E Ink" technology to render text in a print-like appearance, without the eye-strain associated with television and computer screens. Font size is adjust-

able for further ease in reading, and best of all, unlike previous electronic reading devices, the Kindle includes wireless Internet connectivity, enabling the reader to purchase, download and read complete books and other documents anywhere, anytime, without requiring the user to download from another computer or even find a WiFi hot spot. Hundreds of books may be stored on the device at a time, and new books may be downloaded for as little as ten dollars, classics for two. Having already revolutionized the way the world buys books, Jeff Bezos is now transforming the way we read them as well.

### Jeff Bezos Quotes

- A brand for a company is like a reputation for a person. You earn reputation by trying to do hard things well.
- Amazon.com strives to be the e-commerce destination where consumers can find and discover anything they want to buy online.
- If you do build a great experience, customers tell each other about that. Word of mouth is very powerful.
- There are two kinds of companies, those that work to try to charge more and those that work to charge less. We will be the second.
- There are two ways to extend a business. Take inventory of what you're good at and extend out from your skills. Or determine what your customers need and work backward, even if it requires learning new skills. Kindle is an example of working backward.
- We expect all our businesses to have a positive impact on our top and bottom lines. Profitability is very important to us or we wouldn't be in this business.
- We see our customers as invited guests to a party, and we are the hosts. It's our job every day to make every important aspect of the customer experience a little bit better.
- What we want to be is something completely new. There is no physical analog for what Amazon.com is becoming.
- What's dangerous is not to evolve.





# Polar Satellite Launch Vehicle

The **Polar Satellite Launch Vehicle** commonly known by its abbreviation PSLV, is an expendable launch system developed and operated by the **Indian Space Research Organization (ISRO)**. It was developed to allow India to launch its Indian Remote Sensing (IRS) satellites into sun synchronous orbits, a service that was, until the advent of the PSLV, commercially viable only from Russia. PSLV can also launch small size satellites into geostationary transfer orbit (GTO). The PSLV has launched 41 satellites (19 Indian and 22 from other countries) into a variety of orbits till date. In April 2008, it successfully launched 10 satellites in one go, breaking a world record previously held by Russia.

## Vehicle description

The PSLV has four stages using solid and liquid propulsion systems alternately. The first stage is one of the largest solid-fuel rocket boosters in the world and carries 138 tones of Hydroxyl-terminated polybutadiene (HTPB) bound propellant with a diameter of 2.8 m. The motor case is made of manag- ing steel. The booster develops a maximum thrust of about 4,430. Six strap-on motors, four of which are ignited on the ground, augment the first stage thrust. Each of these solid propellant strap-on motors carries nine tones of HTPB propellant and produces 677 thrust. Pitch and yaw control of the PSLV

during the thrust phase of the solid motor is achieved by injection of an aqueous solution of strontium perchlorate in the nozzle to constitute Secondary Injection Thrust Vector Control System (SITVC). There are two additional small liquid engine control power plants in the first stage, the Roll Control Thrusters (RCT), fixed racially opposite one on each side, between the triplet set of strap-on boosters. RCT is used for roll control during the first stage and the SITVC in two strap-on motors is for roll control augmentation.

The second stage employs the Vikas engine and carries 41.5 tones (40 tones till C-5 mission) of liquid propellant – Unsymmetrical Di-Methyl Hydrazine (UDMH) as fuel and Nitrogen tetroxide (N<sub>2</sub>O<sub>4</sub>) as oxidizer. It generates a maximum thrust of 800 (724 till C-5 mission). Pitch & yaw control is obtained by hydraulically gimballed engine ( $\pm 4^\circ$ ) and two hot gas reaction control for roll.

The third stage uses 7 tones of HTPB-based solid propellant and produces a maximum thrust of 324. It has a Kevlar-polyamide fiber case and a submerged nozzle equipped with a flex-bearing-seal gimballed nozzle ( $\pm 2^\circ$ ) thrust-vector engine for pitches & yaw control. For roll control it uses the RCS (Reaction Control System) of fourth stage.

The fourth and the terminal stage of PSLV has a twin engine configuration using liquid propellant. With a propellant loading of 2 tones (Mono-Methyl Hydrazine as fuel + Mixed Oxides of Nitrogen as oxidizer), each of these engines generates a maximum thrust of 7.4. Engine is gimballed ( $\pm 3^\circ$ ) for pitch, yaw & roll control and for control during the coast phase uses on-off RCS. PSLV-C4 used a new lightweight carbon composite payload adapter to enable a greater GTO payload capability



<b>Manufacturer</b>	Indian Space Research Organization (ISRO)
<b>Country of origin</b>	India
<b>Size Height</b>	44 meters (144 ft)
<b>Diameter</b>	2.8 meters (9 ft 2 in)
<b>Mass</b>	294,000 kilograms (650,000 lb)
<b>Stages</b>	4

## Horizon MiniPak – Portable Fuel Cell Charger



Offering a portable, affordable and green alternative to disposable and rechargeable batteries, Horizon Fuel Cell Technologies presents the first pocket-sized fuel cell for personal usage. Dubbed the “MiniPak”, the fuel cell is designed to power portable consumer electronics like cellphone, smartphone or personal media device. It is made using recycled plastics and green materials.

The Horizon MiniPak delivers 1.5 to 2W of continuous power through an integrated micro-USB port and a multi-choice cable to connected devices to charge them. It gets its power from refillable fuel cartridges, with that give it up to 12Wh of energy. It uses a combination of Horizon’s mass-produced PEM fuel cells and a new low-cost metal hydride storage solution, which can store hydrogen safely as a dry, non-toxic and non-pressurized material.

This hydrogen is absorbed and converted into a solid hydride by a metallic sponge contained in the fuel cartridge. Whenever required, it is released back to the fuel cell. This efficient, portable and sustainable power source will go on sale for just \$100.



## Saina Nehwal

Won a second Super Series title

## Singapore Open



Indian badminton ace Saina Nehwal put behind a nervy start to clinch the second Super Series title of her career by winning Singapore Open with a straight-game triumph over qualifier Tzu Ying Tai in the finals on Sunday.

### ऊँचाई

ऊँचे पहाड़ पर,  
पेड़ नहीं लगते,  
पीधे नहीं उगते,  
न घास ही जमती है।

जमती है सिर्फ बर्फ,  
जो, कफन की तरह सफ़ेद और,  
मीत की तरह ठंडी होती है।  
खेलती, खिल-खिलती नदी,  
जिसका रूप धारण कर,  
अपने भाग्य पर बूँद-बूँद रोती है।

ऐसी ऊँचाई,  
जिसका परस  
पानी को पत्थर कर दे,  
ऐसी ऊँचाई  
जिसका दरस हीन भाव भर दे,  
अभिनन्दन की अधिकांशी है,  
आरोहियों के लिए आमंत्रण है,  
उस पर झड़े गाड़े जा सकते हैं,  
किन्तु कोई गौरिया,  
वहाँ नीड़ नहीं बना सकती,  
ना कोई थका-मांदा बटोही,  
उसको छांव में पलभर पलक ही झपका सकता है।

सच्चाई यह है कि  
केवल ऊँचाई ही काफ़ि नहीं होती,  
सबसे अलग-थलग,  
परिवेश से पृथक,  
अपनों से कटा-बंटा,  
शून्य में अकेला खड़ा होना,  
पहाड़ की महानता नहीं,  
मजबूरी है।  
ऊँचाई और गहराई में  
आकाश-पाताल की दूरी है।

जो जितना ऊँचा,  
उतना एकाकी होता है,  
हर भार को स्वयं ढोता है,  
चेहरे पर मुस्कानें चिपका,  
मन ही मन रोता है।

जसुरी यह है कि  
ऊँचाई के साथ विस्तार भी हो,  
जिससे मनुष्य,  
दूँट सा खड़ा ना रहे,  
औरों से घुले-मिले,  
किसी को साथ ले,  
किसी के संग चले।

भीड़ में खो जाना,  
यादों में डूब जाना,  
स्वयं को भूल जाना,  
अस्तित्व को अर्थ,  
जीवन को सुगंध देता है।

धरती को बौनों की नहीं,  
ऊँचे कद के इन्सानों की जरूरत है।  
इतने ऊँचे कि आसमान को छू लें,  
नये नक्षत्रों में प्रतिभा के बीज बो लें,  
किन्तु इतने ऊँचे भी नहीं,  
कि पाँव तले दूब ही न जमे,  
कोई कांटा न चुभे,  
कोई कलिन न खिले।

न वसंत हो, न पतझड़,  
हों सिर्फ ऊँचाई का अंधड़,  
मात्र अकेलेपन का सन्नाटा।

मेरे प्रभु!  
मुझे इतनी ऊँचाई कभी मत देना,  
गैरों को गले न लगा सकूँ,  
इतनी रुखाई कभी मत देना।

— अटल बिहारी वाजपेयी

## QUIZ #45

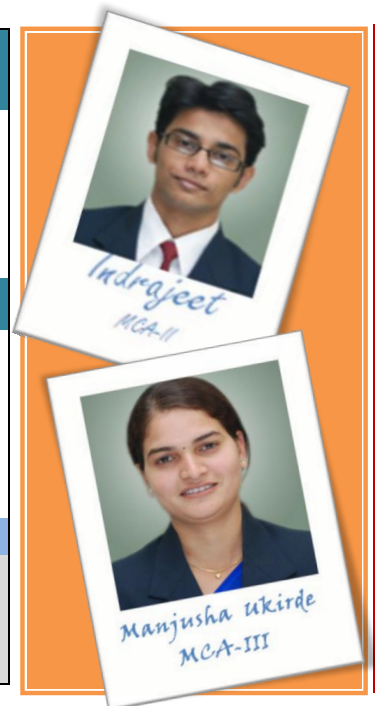
- 1 The longest highway in the world?
- 2 The coldest place on the world?
- 3 Mount Everest was named after?

## ANSWER #44

- 1 Who is the CEO of search company Google? **Ans: Eric E. Schmidt**
- 2 Which two countries have signed the Nuclear Swap deal with Iran? **Ans: Turkey and Brazil**
- 3 Which Indian IT company is associated with FIFA World Cup 2010 as one of the sponsors? **Ans: Mahindra Satyam**

Mail your comments/answers: [mailtocolumbus@gmail.com](mailto:mailtocolumbus@gmail.com)

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QUIZ WINNERS

