FAQs

Why did we need industrial exposition in the 19th century?

During the 19th and 20th century international exhibitions, popularly called world's fairs, have become elaborate showcases for technological and cultural developments as well as manufactured products. These exhibitions became a place where manufacturers displayed their works and inventions during the industrial revolution. This also showcased the power of the country. One of the famous expositions are the Great Paris Exposition in 1855.

Explain the different expositions that happened in Chicago and Vienna tracing the history and impact of such expositions.

World's Columbian Exposition, Chicago

- The woman's building exhibited over 400 years of progress made by women. Displays included objects made by nineteenth century women from Europe and the united states as well as women's work by native Americans.
- Getting a building of their own symbolized the importance of women at the exposition.
- The statue of the republic symbolized the strength of the country, which had survived a civil war and was taking in immigrants from all over the world.

Vienna Exposition, Vienna

- This fair was the first exposition to use multiple buildings instead of one main structure.
- National exhibits remained in a single structure. Most prominent feature is the rotunda, the enclosed circular building.
- The rotunda was actually just one part of the palace of industry, which expanded on either side to form a horizontal strip about 2953 feet.

- The palace was designed to be a permanent structure and was used after the exposition to hold trade shows.
- There were machinery hall, art hall, in those 28 galleries. The machine hall was converted to a storage house for the Great Northern Railway.

Explain the Paris Exposition of 1889 with special reference to the Eiffel Tower.

The Eiffel tower was built for the international exhibition of Paris of 1889 commemorating the centenary of the French revolution. Designed by the French Engineer Gustave Eiffel for the entrance to the 1889 exposition Universelle in the Paris Champ de Mars. The Eiffel tower is the tallest structure in Paris, and reigned for 40 years until 1930 as the tallest in the world at 300 metres (320.75 including antenna), and 7000 tons.

The lifts at the Eiffel tower is the one of its special features.

Lifts

- The Roux, CombaluzieretLepape lifts during construction note the drive sprockets and chain in foreground.
- Equipping the tower with adequate and safe passenger lifts was a major concern of the government commission overseeing the Exposition.
- Although some visitors could be expected to climb to the first or even the second stage, the main means of ascent clearly had to be lifts.
- The lifts to the second platform presented a more complex problem, because a straight track was not possible. No French company willing to undertake the work.
- The European branch of Otis Brothers and company submitted a proposal but this was rejected : the fair's charter ruled out the use of any foreign material in the construction of the Tower.

- The deadline for bids was extended, but still no French companies put themselves forward, and eventually the contract was given to Otis in July 1887.
- The car was divided into two superimposed compartments, each holding 25 passengers, with the lift operator occupying an exterior platform on the lower level.
- Motive power was provided by an inclined hydraulic ram, 12.67m (36 ft.) long 96.5 cm (38 in.) diameter 10.83m (35 ft. 6 in.) stroke in the tower leg: this moved a carriage carrying six sheaves.
- Five fixed sheav3es were mounted higher up the leg, producing an arrangement similar to a block and tackle but acting in reverse, multiplying the stroke of the piston rather than the force generated.
- The hydraulic pressure in the driving cylinder, the water was pumped back up to the reservoir by two pumps in the machinery room at the base of the south leg.
- After being exhausted from the cylinder, the water was pumped back up to the reservoir by two pumps in the machinery room at the base of the south leg.
- This reservoir also provided power to the lifts to the first level.
- This original lifts from the second to the third floor were supplied by Leon Edoux. A pair of 81 m hydraulic rams were mounted on the second level, reaching nearly halfway up to the third level.
- One lift car was mounted on top of these rams, cables ran from the top of this car up to sheaves on the third level and then back down to a second car.

At first the legs were constructed as cantilevers but about halfway to the first level construction was paused in order to construct a substantial timber scaffold. This caused a renewal of the concerns about the structural soundness of the project, and sensational headlines such as "Eiffel Suicedel" and

"Gustave Eiffel has gone mad, he has been condined in an Aslyum" appeared in the popular press.

Explain the International Exposition in Barcelona.

The Barcelona International Exhibition (1929) – The Barcelona Pavilion.

- Designed by Ludwig Mies Van Der Rohe as the German National pavilion for the 1929 Barcelona international Exhibition.
- The Pavilion was conceived to accommodate the official reception presided over by King Alphonso XVIII of Spain along with the German authorities.
- The pavilion had a flat roof supported on chrome columns.
- The steel skeleton and the pavilion's walls, rectangular planes of marble, glass and onyx placed vertically or horizontally, could be freely positioned and made it possible that space seems to flow thorough them.
- This use of the open plan achieves extreme lightness and movement.
- The pavilion has become a key reference point in both the career of Mies Van Der Rohe and 20th century architecture as a whole.