MAY-2021 (ISSUE-04)

E-NEWS LETTER (MONTHLY)

# Civil Bulletin

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## Namaste Tower: The upcoming Project

The Namaste Tower planned for Mumbai, India was proposed to be the first one in India from the global hospitality chain! The mixed-use skyscraper with 62 floors, including the 380-room W Hotel, besides office and retail spaces; was slated to become a landmark in the 'Maximum City' - representing the spiralling status of the country.

The stunningly designed tower is composed of two symmetrical wings that are coupled together; the space between the masses forms the corridors. At the end of each corridor, opens an atrium offering dramatic and framed views of the city. Huge gardens inside the atriums will help to bring lush greenery in the interiors of the building. The structure is kept energy efficient by providing large scale canopies, which will include a range of solar thermal collectors; with enough potential to provide 12 per cent of the energy obligatory to heat the hot water for the hotel.

"Nothing is particularly hard if you break it down into small jobs."
-Henry Ford

"If you want to shine like a sun, First burn like a sun."
-Dr. APJ Abdul Kalam

"The weak can never forgive. Forgiveness is the attribute of the strong."
-M.K.Gandhi

### Circular for WFH

As the condition in state worsened, Edu. Dept. issued circular for work-from-home..

### GTU Sem-6 online exam

GTU conducted online theory exam at the end of the month.

### Tribute to Beloved Lecturer

Deptt always remembers Shri A. D. Dhangar and Shri G.S. Patel for their contribution.

# Construction of Bridges Since Ancient Times

The first bridges were believed to be made by nature — as simple as a log fallen across a stream. The first bridges made by humans were probably spans of wooden logs or planks and eventually stones, using a simple support and crossbeam arrangement. The Indian Epic literature Ramayana provides mythological accounts of bridges constructed from India to Sri Lanka by the army of Lord Sri Rama.

Mention of bridges being constructed by Mauryan dynasty in India, is given in Kautilya's "Arthasastra". During the wars Mughals have constructed many bridges across major rivers, in India. Before pre-historic people began to build the crudest shelter for themselves they bridged streams. Trees that have fallen across the stream from bank to bank acted as bridges. The wandering tribe that first deliberately made a tree fall across a stream were the first bridge builders.

Rope bridges, a simple type of suspension bridge, were used by the Inca civilization in the Andes Mountains of South America The first bridges were natural of huge rock arch that spans. The first man-made bridges were tree trunks laid across streams in girder fashion, flat stones, and festoons of vegetation, twisted or braided and hung in suspension. These three types - beam, arch, and suspension - have been known and built since ancient times and are the origins from which engineers and builders derived various combinations such as the truss, cantilever, cable-stayed, tied-arch, and moveable spans

With the Industrial Revolution, steel, which has a high tensile strength, replaced wrought iron for the construction of larger bridges to support large loads, and later welded structural bridges of various designs were constructed. Bridges are classified as Beam bridges, Cantilever bridges, Arch bridges, Suspension bridges, Cable stayed bridges and Truss bridges.

## REVERSE OSMOSIS

Reverse osmosis is a water purification process that uses a semi-permeable membrane (synthetic lining) to filter out unwanted molecules and large particles such as contaminants and sediments like chlorine, salt, and dirt and microorganism too from drinking water.

In reverse osmosis, an applied pressure is used to overcome the osmotic pressure and push the water from high concentration of contaminants to low concentration of contaminants. Reverse osmosis typically involves four stages of filtration: a sediment filter, pre-carbon block, reverse osmosis membrane, and post-carbon filter.