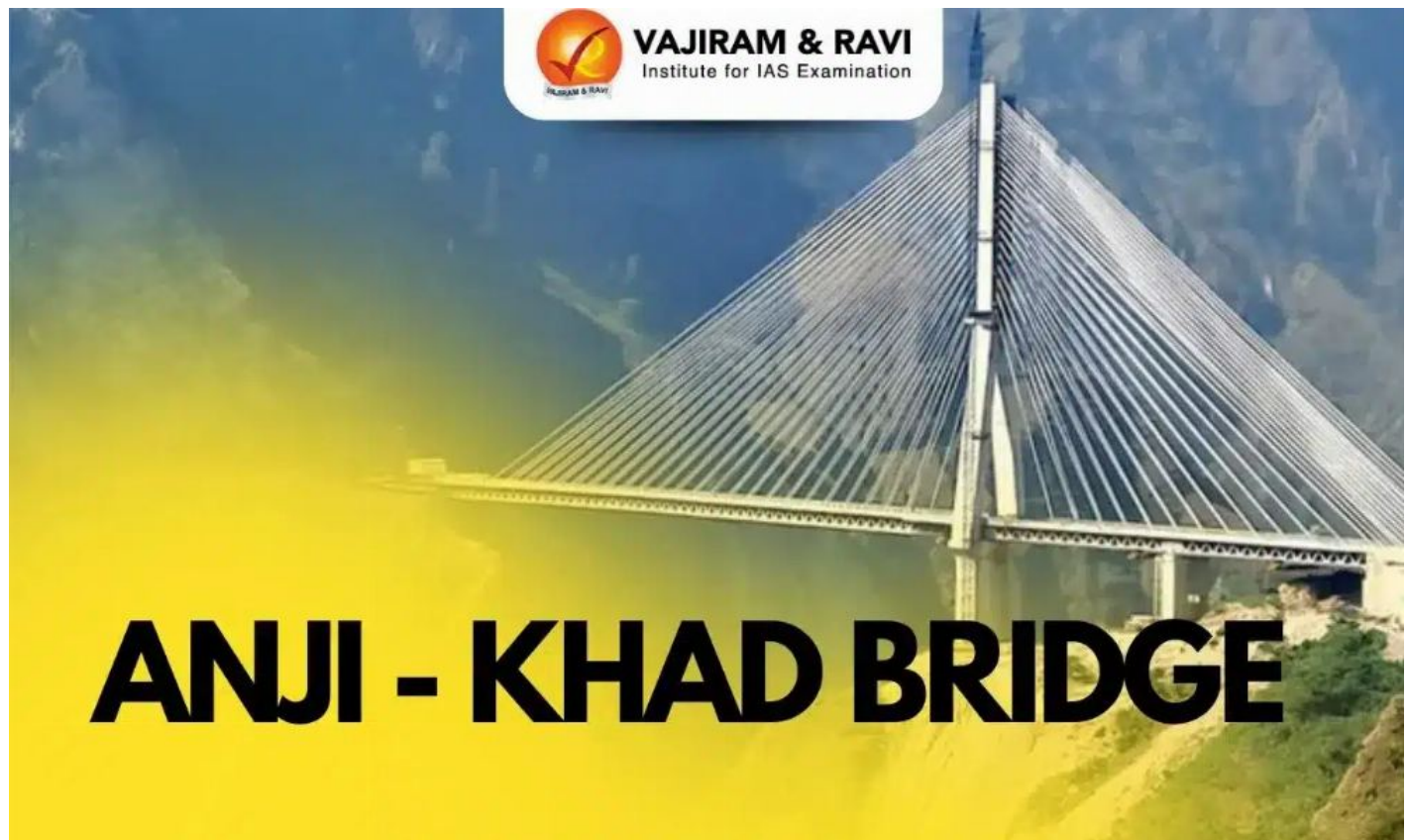


Anji Khad Bridge

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About Anji Khad Bridge:

- It is **India's first cable-stayed rail bridge**, located in the **Reasi district** of **Jammu and Kashmir**.
- A critical **component of** the ambitious **Udhampur-Srinagar-Baramulla Rail Link (USBRL)** Project, this engineering marvel **connects Katra and Reasi**.
- The project's prime focus is on **enhancing connectivity between the Kashmir Valley and the rest of India**.
- It is constructed **over the Anji River**, a **tributary of the Chenab River**.
- Constructed in the challenging Himalayan terrain, the bridge overcame complex geological conditions, including seismic activity and fragile rock formations.
- The **Indian Railways collaborated with IIT Roorkee and IIT Delhi for site-specific investigations** to ensure the bridge's stability.
- **Anji Khad Bridge Features:**
 - It is an **asymmetrical cable-stayed bridge balanced** on the **axis of a central pylon**.
 - Spanning 725.5 metres, the bridge features a 193-metre-tall main pylon, soaring 331 metres above the riverbed.

- Its design allows it to withstand wind speeds of up to 213 km/h and safely support train operations at speeds of 100 km/h.
 - The bridge comprises four key sections: a 120-metre approach viaduct on the Reasi side, a 38-metre approach bridge on the Katra side, a 473.25-metre cable-stayed segment spanning the valley, and a 94.25-metre central embankment connecting the main structure to the viaduct.
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Q1: What are cable-stayed bridges?

Cable-stayed bridges have a unique design that consists of a tall tower and a deck supported by cables attached directly to the tower. The bridge deck is supported by several cables, each connected at one end to the tower and the other end to the deck.

Source: FE

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