

**CLASS – 10**

**SOCIAL SCIENCE**

**Contemporary India-II**

**CH-3 : Water Resources**

**Part – 2**

**Multi-Purpose River Projects**

**Pankaj Vaishnav**

# OVERVIEW

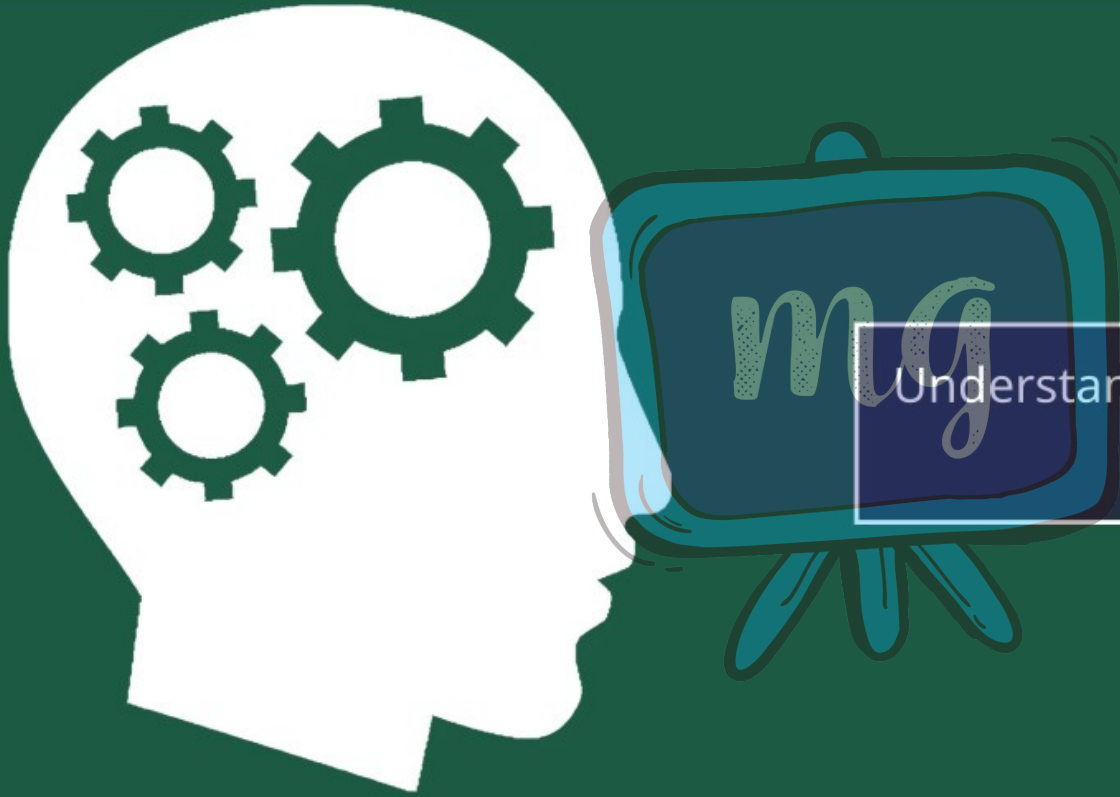
1. Water Resources

2. Multi-Purpose River Projects (DAMS)

3. Challenges of Large Dams

4. Rainwater Harvesting

# COMPETENCY BASED LEARNING



Understanding Dam as a Multi-Purpose  
Project

# MULTI-PURPOSE RIVER PROJECTS AND INTEGRATED WATER RESOURCES MANAGEMENT

▣ We have been constructing hydraulic structures from Ancient times.

- ✦ Dams (Built of Stone Rubble)
- ✦ Reservoirs
- ✦ Lakes
- ✦ Embankments
- ✦ Canals

# HYDRAULIC STRUCTURES IN ANCIENT INDIA

1<sup>st</sup> Century B.C.

■ Sringaverapura (Near Allahabad) had sophisticated water harvesting system channeling the flood water of the Ganga river.

## Chandragupta Maurya's Duration

- ▮ Dams, lakes and irrigation systems were extensively built.





## ▮ Evidences of Irrigation Works

- ✦ Kalinga (Odisha)
- ✦ Bennur (Karnataka)
- ✦ Kolhapur (Maharashtra)
- ✦ Nagarjunakonda (Andhra Pradesh)

## 11<sup>th</sup> Century

- ▣ Bhopal Lake was built.

(One of the largest artificial lakes of  
its time)



## 14th Century

- Tank in Hauz Khas (Delhi) was constructed by Iltutmish.

(For supplying water to Siri Fort area)



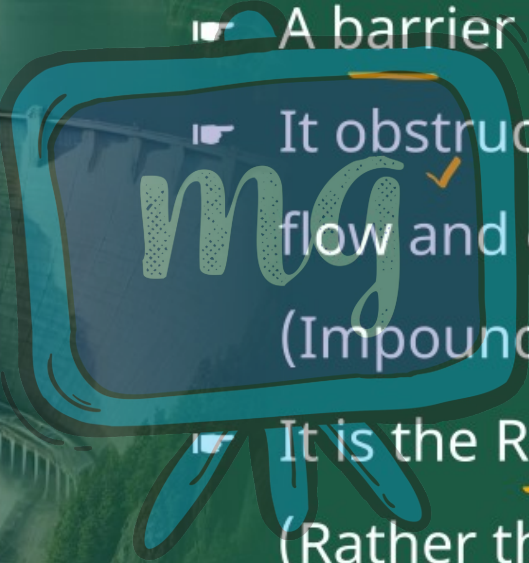
▮ We have continued this tradition in  
Modern India.



By building dams in many river basins.

# DAM

- ▣ A barrier across flowing water.
- ▣ It obstructs, directs or retards the flow and creates a reservoir lake.  
(Impoundment)
- ▣ It is the Reservoir.  
(Rather than the structure)



# CLASSIFICATION OF DAMS

1. Based on Structure

2. Based on Height

3. Based on Purpose

1.

## BASED ON STRUCTURE & MATERIALS



✓ Timber Dams



✓ Masonry Dams



✓ Embankment Dams

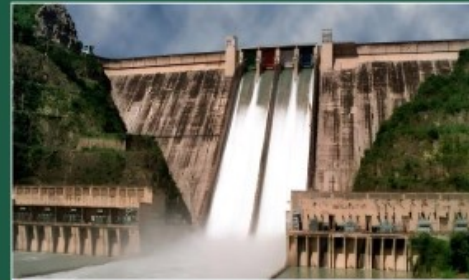
## 2. BASED ON HEIGHT



✓ Low Dams



✓ Medium Height Dams



✓ High Dams

☛ Traditionally, Dams were built to: -

✦ Enclose rivers

✦ Collect rainwater

☛ Collected water could be used to irrigate agricultural fields.



Today, Dams are built for: -

✦ Irrigation Purpose

✦ Electricity Generation

✦ Water Supply for Domestic Use

✦ Water Supply for Industrial Use

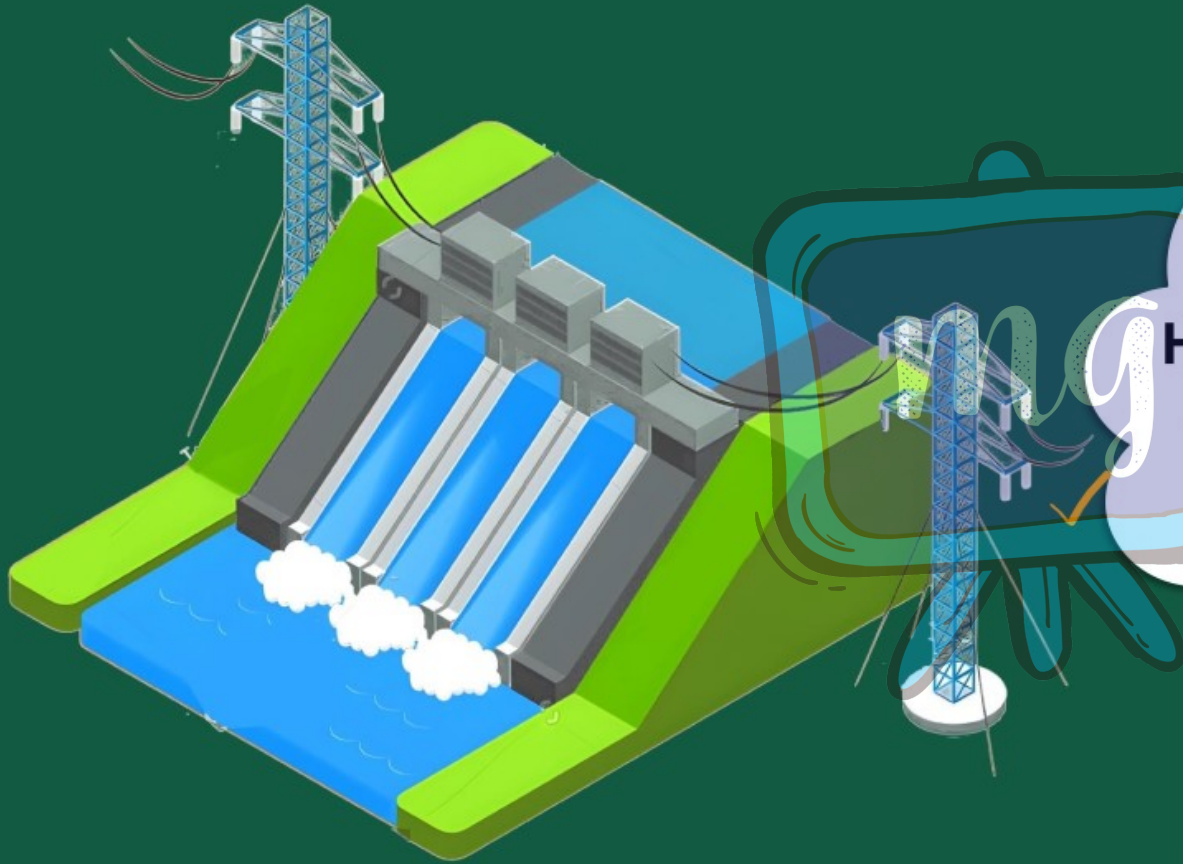
✦ Flood Control

✦ Recreation

✦ Inland Navigation

✦ Fish Breeding





Hence, Dams are known as  
“Multi-Purpose Projects”

# 1. BHAKRA - NANGAL PROJECT

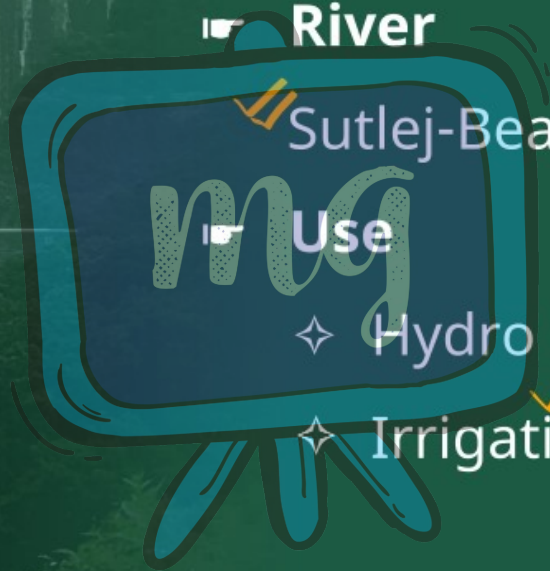
▣ River

Sutlej-Beas (H.P.)

▣ Use

✦ Hydro Power Production

✦ Irrigation



## 2. HIRAKUD PROJECT

▣ River

Mahanadi

(Odisha)

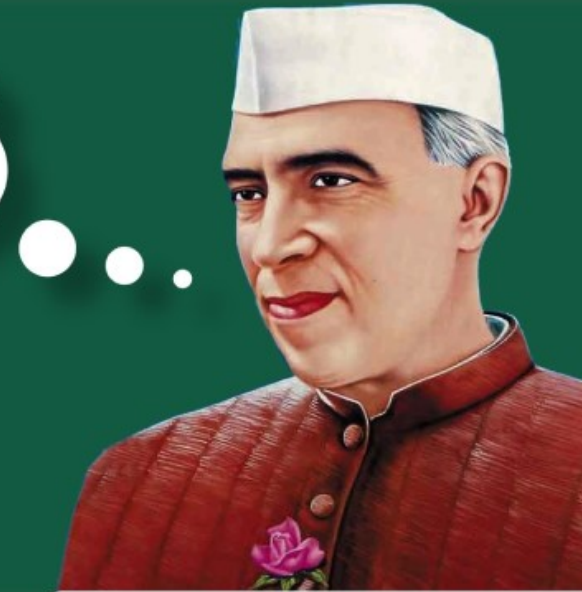
▣ Use

✦ Conservation of Water ✓

✦ Flood Control ✓

# DAMS

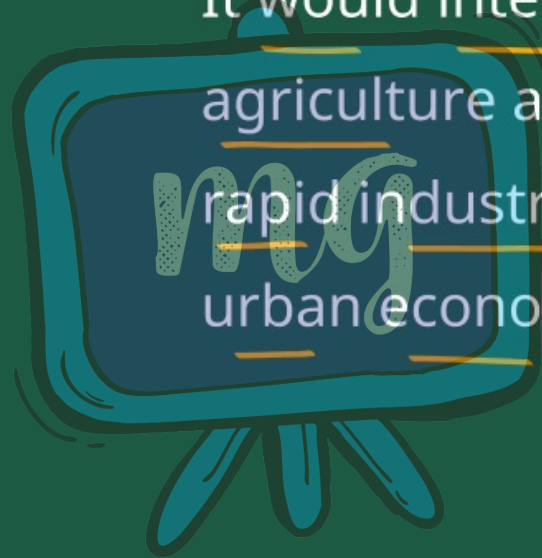
## 'The Temples of Modern India'



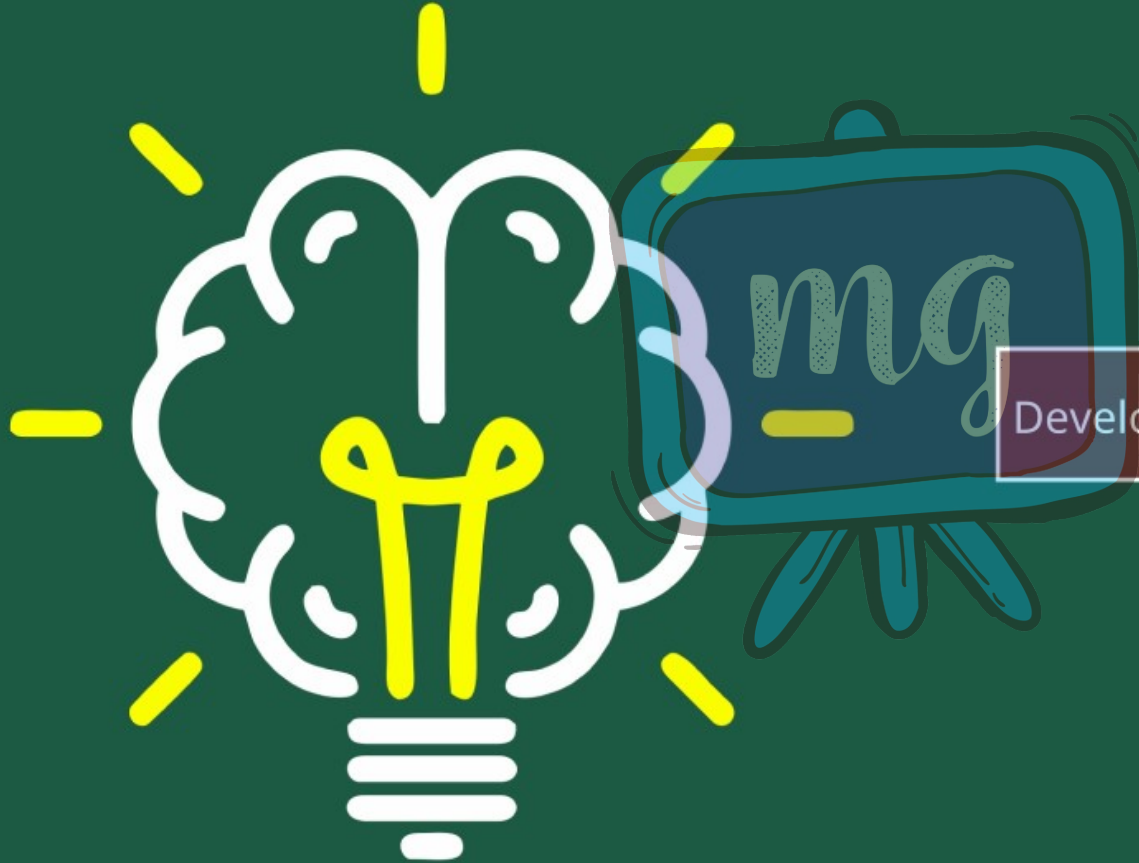
Jawaharlal Nehru

## Reason

It would integrate development of  
agriculture and village-economy with  
rapid industrialisation & growth of the  
urban economy.



# LEARNING OUTCOME



Development and Purpose of Dams

# ASSESSMENT



1 | From ancient times, evidence of sophisticated irrigation works has also been found in Nagarjunakonda. It is located in .....

- A Andhra Pradesh
- B Odisha
- C Karnataka
- D Tamil Nadu

# ASSESSMENT



2

Jawaharlal Nehru, proudly proclaimed the dams as the 'Temples of Modern India', because

A

They symbolize religious beliefs

B

They integrate the development of agriculture and village economy with rapid industrialisation and growth of the urban economy

C

They are tourist attractions

D

They preserve ancient traditions

# ASSESSMENT

3

Hirakud dam is built on which river?

- A Ganga
- B Satluj
- C Narmada
- D Mahanadi