

18/3/25

Water Resources

Question / Answers

1a) "Without irrigation, development of agriculture is difficult in India." Clarify the statement by giving two reasons. [2016]

ans. Two reasons for need of irrigation for development of agriculture in India are:

- Variability in rainfall: Rainfall in India is very uncertain, which increases the element of risk and makes crop production rather difficult.
- To maximize production: Irrigation is needed for high yields and maximum production from land.

b) Give one reason for each of the following. [2016]

i) The Northern Plains of India is found suitable for canal irrigation

ans. The Northern Plains of India is found suited for canal irrigation because of:

- Low relief area
- Deep fertile soil helps in recovering the

Cost of construction of canals

ii) Tank irrigation is an important method of irrigation in Karnataka.

ans. Tank irrigation is an important method of irrigation in Karnataka because:

- They are easy and economical to construct
- They help to raise the underground water level

iii) Although expensive, yet, sprinkler irrigation is gaining popularity in recent times.

ans. Although expensive, yet, sprinkler irrigation is gaining popularity in recent times because:

- there is no soil erosion
- field levelling is not required
- best suited for arid and semi-arid regions

c. d) Mention two factors which are essential for the development of tube well irrigation.

[2016]

ans. Factors which are essential for the development of tube well irrigation are

- There should be sufficient quantity of ground water.

- The soil in the immediate neighbourhood of the tube well should be fertile so that there is demand for irrigation.

1) q3; i) What is rainwater harvesting?

[2016,
2018]

an. Rain water harvesting is a technique of increasing the recharge of ground water by capturing and storing rainfall by constructing structures such as percolating pits, checkdams.

ii) ~~Mention~~ two objectives of rainwater harvesting.

~~ans~~ Two objectives of rooftop rainwater harvesting are:

- To make water available for future use.
- To reduce dependence on groundwater.

2 a) Give a reason for the significance of irrigation in: [2017]

i) Punjab

ans. The reason for the significance of irrigation in Punjab are:

- The rainfall is very uncertain
- A large amount of water is ~~or~~ is required for ~~the~~ the production of rabi crops
- Punjab region is rich in agriculture

ii) Rajasthan.

ans. The reason for the significance of irrigation in Rajasthan is that the rainfall is very low that is less than 25%.

b) Name a state where:

i) Tubewells are common - Punjab

ii) Tank irrigation is popular - Tamil Nadu.

c) Give one geographical reason for each of the following: [20 17]

i) Sprinkler irrigation is practiced in arid and semi arid regions.

ans. Sprinkler irrigation is practiced in arid and semi arid regions as there is no loss of water.

ii) A tube well should be installed in a fertile and productive region.

ans. A tube well should be installed in a fertile and productive region so that the cost of involvement in the construction of and operation of the tube well can be recovered by the increased farm production.

iii) Canal irrigation is more suitable in the Northern plains.

ans. Canal irrigation is more suitable in Northern plain because of the low relief area and deep fertile soil.

d) Study the diagram given aside and answer the questions that follow:

i) Name the activity shown in the diagram

ans. Rainwater Harvesting

ii) Give two objectives of the activity named in (d)(i)

ans. The main objectives of rooftop rainwater harvesting are:

- to make rainwater available for future use
- to make use of rainwater in dryland, hilly, urban and coastal areas.

3a) There ~~are~~ is plenty of rain in India during the rainy season, yet we need irrigation. Give two reasons to support this statement. [2018]

ans. Variability in Rainfall: Rainfall in India is very uncertain which increases the element of risk and make crop production rather difficult.

Unequal distribution: In parts of the country, 80% of the annual rainfall is received from June to September from the south-west monsoon.

Saurashtra - Kutch region of Gujarat, west western half of Rajasthan and parts of Punjab and Haryana are in the arid zone where there is a constant deficiency of water.

b) Name three traditional means of irrigation. [2018]

ans. • wells and tube wells
• canals
• Tanks.