

WATER SUPPLY ENGINEERING

Lesson : 2

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SYLLABUS

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AIMS :

- To provide understanding on the influence of the climatic condition of Bangladesh on its ground water and surface water flow
- To provide understanding of recharging of underground water and ascertain its necessity in Bangladesh.
- To enable to select a suitable source of water and method of irrigation for particular situation.
- To enable to select a suitable method of drainage for particular situation.
- To enable to select a suitable method for control of rivers and flood in Bangladesh.
- To understand rain water harvesting.

SHORT DESCRIPTION

Sources of water; Rainfall and run-off; Lifting of underground water; Storing and Recharging of ground/rain water; Irrigation and its effect; Well irrigation; Water requirements for crops; and quality of irrigation water; Storage reservoir; Dam and dyke; Irrigation canals; Silt deposit; Scouring; Canal works; Drainage; River training works; Flood and flood management and flood control; Irrigation projects in Bangladesh.

DETAIL DESCRIPTION

2. Understand the features of a well and recharging of ground water.

- 2.1 State the following terms with neat sketches: Cone of depression, Circle of influence, Draw down curve.
- 2.2 Express how to determine the yield of a well.
- 2.3 Solve the problems regarding lifting water from well.
- 2.4 Define storing and recharging of ground water/rain water.
- 2.5 Mention the condition of recharging of ground water is required.
- 2.6 List the methods of recharging of ground water.
- 2.7 Mention the advantages and disadvantages of recharging of ground water.
- 2.8 Predict the need for recharging of ground water in Bangladesh.

3. Understand the significance of irrigation.

- 3.1 Explain the necessity of irrigation in Bangladesh.
- 3.2 Mention the benefits of irrigation.
- 3.3 Describe about the present development of irrigation in Bangladesh.
- 3.4 Name different types of irrigation including sub-divisions.
- 3.5 Describe flow irrigation through flexible pipe.
- 3.6 Differentiate canal or direct irrigation with reservoir (tank) or indirect irrigation.
- 3.7 Describe different methods for lifting water for irrigation manually and by power.
- 3.8 Mention the advantages and disadvantages of well irrigation.
- 3.9 Explain the necessity of tube-well irrigation in Bangladesh.
- 3.10 Mention the advantages and disadvantages of tube-well irrigation.

4. Understand the concept of storage reservoirs.

- 4.1 State the meaning of storage reservoir.