

SECTION-B

- Q2. What is profile levelling? Discuss its procedure in detail.
- Q3. What is Sprinkler irrigation system? What are the main components of sprinkler irrigation system? Write its advantages and disadvantages. Draw a labelled layout diagram of sprinkler irrigation system.
- Q4. What are the different components of underground pipe line system? Write the function of each component. Draw the neat labelled diagram of layout of underground pipeline system.
- Q5. What are the precautions to be taken while installing wire for measurement of irrigation water?
- Q6. What are the factors affecting soil erosion? Discuss the mechanics of water erosion.

SECTION-C

- Q7. A pump lifts 1600 litres of water per minute against a total head of 21 metres. Compute the water horse power. If the pump has an efficiency of 75%. What size of motor is required to operate the pump? If a direct drive electric motor having an efficiency of 85% is used to operate the pump, compute the cost of electrical energy in a month of 30 days. The pump is operated for 8 hours daily for 30 days. The cost of electrical energy is Rs. 3.5 per unit.
- Q8. What are the different agronomic and engineering soil and water conservation measures? Discuss various agronomic and engineering measures in detail.
- Q9. Assume an earth channel on a grade of 0.15% with the depth of water as 0.9 m, bottom width as 60 cm and side slopes 1.5:1. Calculate the velocity of flow and carrying capacity of the channel. The Manning's roughness coefficient is 0.035.

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