

SECTION-B

- Q2 What is contour? What are the characteristics of contour line?
- Q3 What is Drip irrigation system? What are the main components of drip irrigation system? Write its advantages and disadvantages. Draw a labeled layout diagram of drip irrigation system.
- Q4 What is pump characteristics curve? Draw a neat diagram and discuss how it is important for selection of any suitable pump.
- Q5 What are the precautions to be taken while installing weir for measurement of irrigation water?
- Q6 What are the factors responsible for soil erosion? Discuss in detail.

SECTION-C

- Q7 A Single acting reciprocating pump has piston of diameter 120 mm and stroke length 300 mm, the piston makes 60 double strokes per minute. The suction and delivery heads are 5m and 20 m respectively.

Find :

- Discharge capacity of the pump in litres per minute.
 - Force required to work the piston during the suction and delivery strokes if the efficiency of suction and delivery strokes are 65% and 75% respectively.
 - Power required to operate the pump.
- Q8 What are the different agronomic and engineering soil and water conservation measures? Discuss various agronomic and engineering measures in details.
- Q9 Calculate the capacity and velocity of flow of an unlined trapezoidal channel with bottom width 40 cm and depth of water of 40 cm and channel gradient is 0.1%. Side slope of channel is 1:1 and Manning's Roughness coefficient is 0.035.