Marks: 50

Time: 2 hours

I   **Fill up the blanks**   (10x1=10)

1   Susceptibility of the soil to get eroded is called ---------
2   Water use efficiency is maximum for --------- irrigation system
3   The process of filling water into the suction pipe and pump up to the delivery valve is called ---------
4   The amount of water retained in the soil after excess water is drained away by gravity drainage is called ---------

State True/False

5   Percolation tanks are used for ground water recharging.
6   Gully erosion is the advanced stage of rill erosion.

Match the following

7   Multi slot divisor   a   Peak runoff rate
8   Saltation   b   Fertigation
9   Rational formulae   c   Wind erosion
10   Venturi injector   d   Soil loss

II   **Write short notes on any FIVE**   (5x2=10)

1   Sheet erosion
2   Bench Terracing
3   Axial flow pumps
4   Fertigation
5   Strip cropping
6   Agents of soil erosion
7   Types of contour bunds

III   **Answer any FIVE**   (5x4=20)

1   Explain the working of a centrifugal pump.
2   Factors affecting soil erosion.
3   What is runoff coefficient? Calculate the peak runoff rate from a watershed of 18 ha area having a rainfall intensity of 10 cm/hr and runoff coefficient of 0.3.
4   Explain USLE equation.
5   Explain the different stages of gully erosion.
6   What are the advantages and disadvantages of sprinkler irrigation?
7   Explain the components of a roof water harvesting system.

IV   **Write essay on any ONE**   (1x10=10)

1   Explain the different engineering measures used for controlling soil erosion by water.
2   What are the different methods of irrigation? Explain the major components of a drip irrigation system.

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