

**CERTIFICATE IN WATER HARVESTING
AND MANAGEMENT**

Term-End Examination

June, 2010

00968

**ONR-003 : WATER HARVESTING,
CONSERVATION AND UTILIZATION**

Time : 3 hours

Maximum Marks : 75

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Define *any five* of the following : 1x5=5
- (i) Contour
 - (ii) Water Harvesting Potential
 - (iii) Cropping intensity
 - (iv) Delta
 - (v) Aquifer
 - (vi) Soil moisture
- (b) Why is water harvesting essential for human and agricultural sustainability ? 5
- (c) What does in situ water harvesting mean ? 5

2. (a) How does contour hedgerow technology/ contour vegetative leimer help sustainable farming on hill slopes ? Explain it with the help of Figure. 5
- (b) Explain Paar system of rainwater harvesting. 5
- (c) What are percolation tanks and for what purpose are they used ? 5

3. (a) What is rainwater harvesting ? Explain its importance in the present context ? 5
- (b) What are the factors effecting collection efficiency ? 5
- (c) Compute volume of harvested water from roof area of 200 m² receiving rainfall of 300 mm during July. Assume collection efficiency 80%. 5

4. (a) What are the main components of roof top rainwater harvesting system ? 4
- (b) What is the concept of rainwater harvesting for crop production ? 4
- (c) What are main factors deciding the types of water harvesting structures ? 3
- (d) How is drinking water from storage tank kept pure and free from impurities ? 4

5. (a) What do you understand by irrigation scheduling ? Write two main advantages of irrigation scheduling ? 8
- (b) Enumerate surface and sub surface techniques of groundwater recharge. 7
6. (a) How will you compute domestic and livestock water demand ? 8
- (b) What do you understand by water conservation ? List various benefits of water conservation. 7
7. (a) Why is water conservation in agriculture of vital importance ? Explain with some examples. 5
- (b) What is meant by irrigation efficiency ? What is the present level of irrigation efficiency in surface irrigation methods in the country ? 5
- (c) Compute the water conveyance efficiency if 80 litre per second flow was released from the source and 60 litre per second was delivered to the field. 5

8. (a) Distinguish between water distribution efficiency and uniformity coefficient what do they represent ? 8
- (b) Enumerate different materials for lining of ponds for seepage control. Which material is the most effective ? 7
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