

Water: Self-Test for Water Conservation Lecture

1. Explain briefly what you understand by the following terms and provide an example of each:
 - South African water situation relative to the world rainfall
 - Principles and definitions of Water Conservation and Water Demand Management
 - Reverse Osmosis
 - Water Pinch Analysis
 - Rain Water Harvesting
 - Cleaner Production
 - Integrated Resource Planning (21)
2. Outline Water Conservation and Water Demand Management intervention measures that can be implemented to realize water use efficiency and savings targets.
3. Using the generic WC/WDM guideline framework that has been provided devise a comprehensive programme of action to give effect to water use efficiency within Pentech. Consider all areas of intervention: lecture halls, residences, kitchen/mess facilities, recreational and sporting areas. Explain how the programme would be marketed to the head of Pentech so that buy-in is achieved. Provide estimates of expected savings as well as the economic implications. Assume a value of R 3.50 per kilolitre of water. (47)
4. Given the recent drought and subsequent water restrictions in the City of Cape Town, comment on their effectiveness and sustainability. How would you have approached the situation? What do you think were the strengths of the water conservation campaign and what areas need more attention? (22)
5. How would you balance the water needs of the environment with those of industry, which provides employment and contributes to the economy? (10)