

LEBANESE UNIVERSITY

University Institute of Technology



الجامعة اللبنانية
المعهد الجامعي للتكنولوجيا

Entrance Exam: September 11, 2014

GENERAL CULTURE

Duration: 1 hour

If you were told "the water tower of the Middle East" or "the Switzerland of the Middle East," what would come to your mind? Lebanon, of course. The country holds many nicknames that reveal greenery and water abundance. Lebanon is, indeed, the only country in the region that is autonomous and self-sufficient in water supply. Whether it comes from groundwater or snowmelt (which feeds the rivers and springs), water has always flowed freely and was used without care.

This situation, however, started to change in recent years. Precipitation¹ is decreasing. It is raining less and snowing less in the spring. The dry season is starting earlier and lasting longer. Temperatures have risen by an average of two degrees. The danger of desertification² is menacing. According to Roland Riachy, economist and author of a thesis on the economics of water, quoted by L'Orient Le Jour, "since the 1970's, rainfall in Lebanon has decreased by 16%. In the late 1990's, two-thirds of Lebanon was already subject to the risk of desertification" he wrote.

Extract from "L'Orient Le Jour" appeared July 29, 2013

Lebanon is beginning to suffer the consequences of climate change affecting the Near and Middle East: desertification is spreading, the dry season is longer, rainfall is decreasing, and temperatures are rising significantly. But until now, no policy for water management has been implemented to respond to such adversity. Instead, we are witnessing the development of private initiatives that increase human pressure on water resources: urbanization is becoming denser vertically as well as horizontally; illegal wells are proliferating to deal with the water shortage; consumption is often times unnecessary and excessive ...etc. Finally, we are beginning to witness signs of aridity³. All that, coupled with the absence of environmental management, is putting Lebanon at risk of losing its preferred position, mainly from a water supply perspective, in an arid or semi-arid region.

Therefore, it is urgent for Lebanon to learn to collect, save, and optimally manage the precious liquid, if it does not want to face water shortage.

Questions:

1. Suggest a title for the above text. Justify your choice. (1 ½ pts)
2. According to the above text, list the signs of aridity in Lebanon. (1 ½ pts)
3. Why was Lebanon called "the water tower of the Middle East"? (1 ½ pts)
4. List and describe the main causes of water supply shortage (both human & natural). (2 ½ pts)
5. Comment on the last paragraph and propose solutions:
 - a) At the individual level (1 ½ pts)
 - b) At the Government level (1 ½ pts)

Notes:

1. **Precipitation** occurs when a portion of the atmosphere becomes saturated with water vapor, so that the water condenses and "precipitates" in forms such as rain, snow, and hail etc.
2. **Desertification** occurs when land becomes increasingly dry, typically losing its bodies of water as well as vegetation and wildlife.
3. A region is **arid** when it is characterized by a severe lack of available water, to the extent of hindering or preventing the growth and development of plant and animal life.