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Admission number: SN2017/11/2018

Course code: PGD002

Course: Post Graduate Diploma in Water, Hygiene and Sanitation

Year: 2019

Month of Submission: May 2019

Assignment: An Assignment of Module four

Institution of Learning: Strategia Netherlands

**Assignment**

1. List and briefly describe the measures by which the success or otherwise of a public-private partnership providing water supply services can be assessed.

Answer: The following criteria may be used to measure the success of a public-private partnership providing water supply.

1. Accessibility – the extent of coverage of the population, and the distance to the water point.
2. Affordability – the cost of the water needed should be less than 5% of the household’s income.
3. Cost recovery – the cost of providing the water should be claimed back from the population.
4. Minimization of non-revenue water – this should be reduced to 15% or less.
5. Water quality – the water should meet national standards for quality.
6. Operational efficiency – the quantity of water supplied per capita, and the duration of water supply per day.
7. Give six possible causes of water emergencies, three due to natural causes and three due to humans.

**Answer:**

1. Six possible causes are as follows;

Three possible natural causes of water emergencies:

* Drought
* Flooding
* Earthquakes

Three possible causes of water emergencies due to humans:

* Accidental contamination of the water supply (as in the Camelford incident)
* Microbial contamination of water sources due to human mismanagement (such as the cholera outbreak in Haiti)
* Deliberate poisoning of the water supply as an act of terrorism.

1. What are the options for safe water supply during a water emergency?

The possible options for safe water supply during a water emergency are:

* Delivery of water to consumers by water tanker and/or bottles
* Treatment of the water at the household to render it safe (e.g.by boiling).

1. You are about to set off to conduct a sanitary inspection of an abstraction point at a river.
2. What would you take with you?

**Answer**

You would need to take an appropriate checklist of questions to ensure that you inspect thoroughly and don’t forget anything. You will also need a notebook and pen or pencil to record all the information you collect.

1. Explain four things you will be looking for during your inspection.

**Answer**

Important things to look for include;

* The location of any latrines or other possible sources of contamination (due to farming or industrial activities) relative to the river
* A good solid fence
* A screen on the intake
* The presence of a dam

1. Explain briefly why a Water Safety Plan is necessary

**Answer**

A Water Safety Plan is necessary to ensure that the water that is produced and delivered to consumers is safe. It also ensures that the chance of an incident disrupting the continuous supply of water is minimized.

1. Distinguish between the two types of maintenance at a water utility and give reasons why one of them is better.

**Answer**

The two types of maintenance are breakdown maintenance and preventive maintenance.

Preventive maintenance is better because it helps prevent breakdowns and ensures that the assets can be used until the end of their service life. By undertaking preventive maintenance, crises – which are costly – can be avoided.

**APA Reference list**

1. WHO (2004)