

(Potable water and water treatment (practical methods))

Q1. (2020)

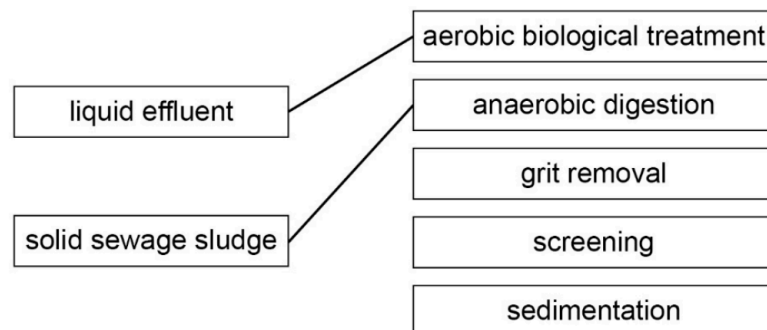
- choose an appropriate source of fresh water
- such as rivers, streams, lakes, boreholes
- pass through filter beds
- (which) removes undissolved solids
- sterilise
- using chlorine / ozone / UV light
- (which) destroys harmful microbes

Q2.(2020)

any **one** from:

- distillation
- reverse osmosis

Q3. (2020)



Q4. a). (2020)

$$\frac{260}{1413} \times 100$$

$$= 18.40056617 (\%)$$

$$= 18.4 (\%)$$

Q4. b). (2020)

any **one** from:

- the population increased
- more waste water produced
- less untreated sewage discharged

Q4. c). (2020)

any **two** from:

- increased demand for food (due to increasing population)
- conserves energy / resources
- landfill space is running out

- increased demand for organic fertiliser

Q5. (2022)

screening

or

grit removal

sedimentation (to produce sewage sludge and effluent)

anaerobic digestion of (solid sewage) sludge

aerobic biological treatment of (liquid) effluent

Q6. a). (2022)

$\text{Na}^+ : 0.003 \text{ mol/dm}^3$ $\text{Cl}^- : 0.003 \text{ mol/dm}^3$

Q6. b). (2022)

the ions pass through the filter

(because) the ions are in
solution

Q6. c). (2022)

(the ground water) contains
microbes which are harmful (to
health)

(so) the water is sterilised

or

(so) the microbes are destroyed

Q6. d). (2022)

(the water is) unadulterated

or

(the water is) in its natural state

Q7.(2024)

Potable water production

- pass water through filter beds
- to remove solids
- use chlorine / ozone / UV light
- to sterilise water
- to destroy microbes

Waste water treatment

- screening
- using a metal grid
- to remove solids
- to remove grit
- sedimentation
- to produce sewage sludge and effluent
- anaerobic digestion of sewage sludge
- aerobic biological treatment of effluent

access to **Level 3** requires reference to **both** potable water production **and** waste water treatment.