

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

- Lecture 26 : Water Quality and Testing Part I
- Lecture 27 : Water Quality and Testing Part II
- Lecture 28 : Water Treatment Part I
- Lecture 29 : Water Treatment Part II
- Lecture 30 : Water Treatment Part III
- Week 6 Lecture Material
- Quiz: Week 6 : Assignment 6
- Week 6 Feedback Form

Week 7

Week 8

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Week 10

Week 11

Week 12

Detail Solution

Live Interactive session

Week 6 : Assignment 6

The due date for submitting this assignment has passed. Due on 2021-09-08, 23:59 IST.

As per our records you have not submitted this assignment.

1) Match the following and mark the option for the correct match. 1 point

Term	Description
P. Wholesome water	I. Tasteful and aesthetically pure
Q. Palatable water	II. Free from impurities, tasteful and aesthetically pure
R. Potable water	III. Free from impurities that can be harmful to public health

- a. P-III; Q-I; R-II
 b. P-I; Q-II; R-III
 c. P-III; Q-II; R-I
 d. P-I; Q-III; R-II

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 a.

2) Colloidal impurities in the water can be removed by:

- a. Sedimentation
 b. Filtration
 c. Disinfection
 d. Coagulation

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 d.

3) According to CPHEEO, what should be the acceptable pH of the drinking water?

- a. 6.5 – 7.5
 b. 6.0 – 8.0
 c. 7.0 – 8.5
 d. 7.5 – 9.0

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 c.

4) Match the following and mark the correct option. 1.5 points

Source	Recommended treatment
P. Protected deep wells free from faecal contamination	I. Pre-disinfection, filtration, additional treatment, disinfection
Q. Unprotected lowland rivers with low faecal contamination	II. Disinfection
R. Unprotected shallow wells with faecal impurities	III. Pre-disinfection, filtration, disinfection
S. Unprotected watersheds with heavy faecal impurities	IV. Filtration and disinfection

- a. P-III; Q-IV; R-II; S-I
 b. P-II; Q-IV; R-I; S-III
 c. P-III; Q-IV; R-I; S-II
 d. P-II; Q-III; R-IV; S-I

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 d.

5) Which physical property of water is measured by Nephelometer?

- a. Turbidity
 b. pH value
 c. Total solids
 d. Taste

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 a.

6) Which statement is correct among the given statements?

- a. Total solids = Suspended solids + Organic solids + Inorganic solids
 b. Total solids = Suspended solids + Dissolved solids + Colloidal solids
 c. Total solids = Suspended solids + Organic solids + Colloidal solids
 d. Total solids = Dissolved solids + Organic solids + Inorganic solids

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 b.

7) Match the following and mark the option for the correct match. 1.5 points

Water testing method	Physical attribute to be tested
P. Photometer	I. pH
Q. Starch-iodide test	II. Colour
R. Electrometric method	III. Oxygen
S. DO meter	IV. Chlorine

- a. P-III; Q-IV; R-II; S-I
 b. P-II; Q-IV; R-I; S-III
 c. P-III; Q-IV; R-I; S-II
 d. P-II; Q-III; R-IV; S-I

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 b.

8) The presence of nitrogen in water mainly indicates presence of:

- a. Organic matter and bacteria
 b. Bacteria and dissolved gases
 c. Suspended impurities and ammonia
 d. Organic and inorganic material

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 a.

9) Match the following and mark the appropriate option for the correct match. 1 point

Types of impurities	Treatment method
P. Silt	I. Filtration
Q. Scum	II. Sedimentation
R. Dissolved gases	III. Clarification
S. Microorganisms	IV. Aeration

- a. P-III; Q-IV; R-II; S-I
 b. P-II; Q-IV; R-I; S-III
 c. P-III; Q-IV; R-I; S-II
 d. P-II; Q-III; R-IV; S-I

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 d.

10) The correct sequence of treatment units for groundwater with excessive iron, CO2 and odour:

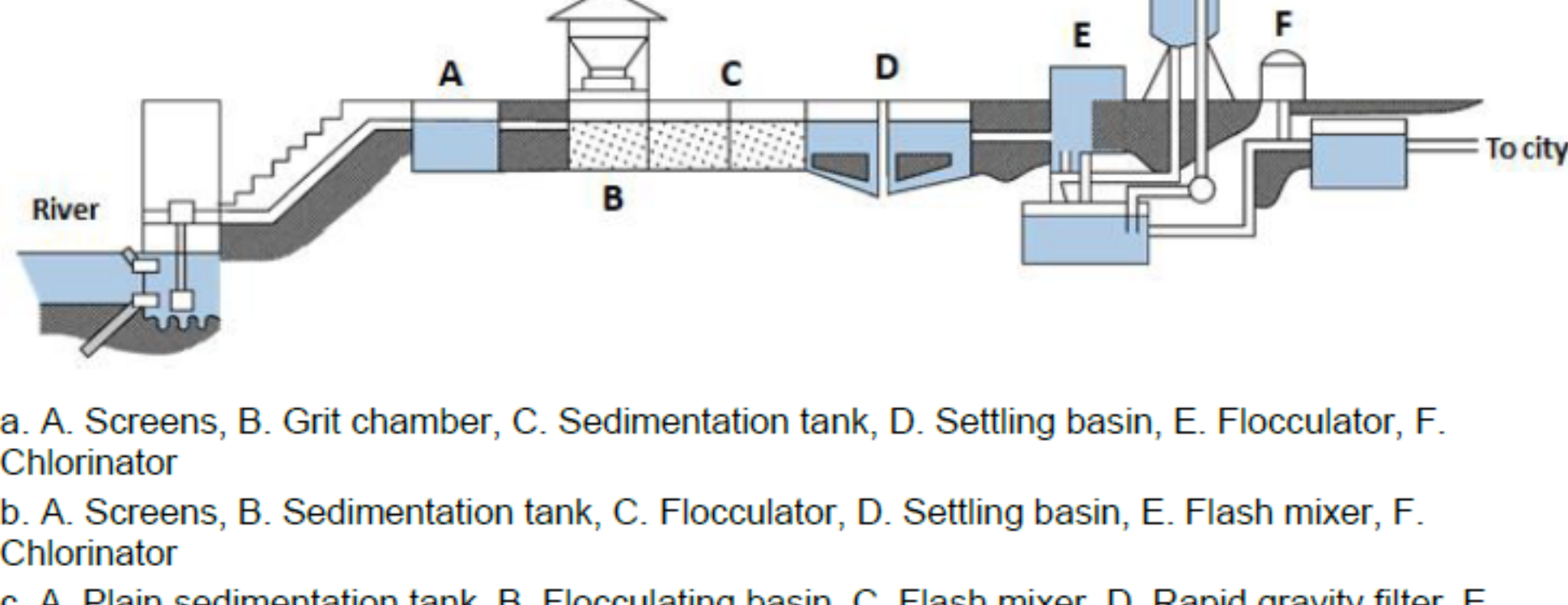
- a. Sedimentation, Rapid mixing, Chlorination
 b. Sedimentation, Slow sand filtration, Chlorination, Demineralisation
 c. Aeration, Rapid mixing, Flocculation, Sedimentation, Rapid sand filtration, Chlorination
 d. Rapid mixing, Sedimentation, Softening

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 c.

11) Identify the water treatment units as shown in the Figure. 1 point



- a. A. Screens, B. Grit chamber, C. Sedimentation tank, D. Settling basin, E. Flocculator, F. Chlorinator
 b. A. Screens, B. Sedimentation tank, C. Flocculator, D. Settling basin, E. Flash mixer, F. Chlorinator
 c. A. Plain sedimentation tank, B. Flocculating basin, C. Flash mixer, D. Rapid gravity filter, E. Settling basin, F. Chlorinator
 d. A. Plain sedimentation tank, B. Flash mixer, C. Flocculating basin, D. Settling basin, E. Rapid gravity filter, F. Chlorinator

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 d.

12) Match the following and mark the option for the correct match. 1.5 points

Term	Description
P. Spray aerators	I. Water falls from edges of trays to a collection tray
Q. Water-fall aerators	II. Trays to collect artificially created water droplets and mist.
R. Cascade aerators	III. Water flows along inclined surfaces through steps

- a. P-III; Q-II; R-I
 b. P-I; Q-II; R-III
 c. P-II; Q-I; R-III
 d. P-II; Q-III; R-I

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 c.

13) Which factors influence the sedimentation of particles during the treatment of water?

- A. Temperature of water
 B. Viscosity of water
 C. pH of water
 D. Density of water

- a. A, B, D
 b. A, B, C, D
 c. A, B, C
 d. A, B

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 a.

14) Identify the correct sequence of steps of chemical sedimentation.

- a. Feeding, mixing, clarification, flocculation
 b. Feeding, mixing, flocculation, clarification
 c. Feeding, clarification, mixing, flocculation
 d. Feeding, flocculation, mixing, clarification

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 b.

15) A typical length to width ratio for rectangular sedimentation tank design is

- a. 3:1 to 5:1
 b. 4:1 to 6:1
 c. 2:1 to 6:1
 d. 4:1 to 5:1

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 a.

16) Which statement is incorrect regarding sand filters?

- a. Depth of the sand bed should be between 60-90 m.
 b. Sand media should be supported with a gravel bed.
 c. Effective size of sand particles in the sand bed in a slow sand filter is less than that of a rapid gravity filter.
 d. Rapid gravity filters do not require backwashing.

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 d.

17) In rural areas, disinfection of water in wells and ponds is performed by adding:

- a. Iodine
 b. Lime
 c. Potassium permanganate
 d. Chlorine

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 c.

18) Which treatment technique is recommended for the treatment of saltwater?

- a. Distillation
 b. Fluoridation
 c. Water softening
 d. Oxidation

- a.
 b.
 c.
 d.

No, the answer is incorrect.
 Score: 0

Accepted Answers:
 a.