

QUIZ 2

FALL 21

BT503

VU HELPZONE

**GROUP OF
ZOOLOGISTA**



FEB 25

**DUE DATE
2022**

MUHAMMAD KASHIF

03064963933

Question # 3 of 10 (**Start time: 03:42:44 AM, 24 February 2022**)

-----speeds up the natural ability of resident microbes to metabolize the pollutant?

Select the correct option

☐	All of the above
☐	Addition of oxygen
☒	Dissolving oxygen in water
☐	Removal of oxygen

Click to

BT503 - Environment Biotechnology (Quiz 2)

Question # 2 of 10 (Start time: 03:42:05 AM, 24 February 2022)

Which of the following bacteria are considered as denitrifying bacteria?

Select the correct option

☒	Pseudomonas spp
☐	Enterococcus faecalis
☐	Proteous spp
☐	Acinitobactor spp

Click

Question # 7 of 10 (Start time: 03:37:52 AM, 24 February 2022)

In which of the following mechanisms nitrogen is release to atmosphere?

Select the correct option

☐	Aerobic nitrification
☒	Anaerobic denitrification
☐	Anaerobic nitrification
☐	Aerobic denitrification

Click to Save

BT503 - Environment Biotechnology (Quiz 2)

Question # 4 of 10 (Start time: 03:36:39 AM, 24 February 2022)

Metal Phytoremediation can be accomplished by the applications of -----.

Select the correct option

☐ Bioaccumulation

☐ Rhizofiltration

☒ All of the above

☐ Phytoextraction

Question # 3 of 10 (Start time: 03:35:47 AM, 24 February 2022)

----- technique is used to lock the pollutants within biomass of living organisms.

Select the correct option

☒	All of the above
☐	Bioaccumulation
☐	Phytoextraction
☐	Rhizofiltration

[Click to See Answer](#)

Question # 9 of 10 (Start time: 03:30:00 AM, 24 February 2022)

A biotechnological intervention for cleaning up the residual effects of human activities is known as-----

Select the correct option

☐	Rhizofiltration
☐	Phytoremediation
☒	Bioremediation
☐	Biofiltration

Click to Save

Question # 7 of 10 (Start time: 03:28:52 AM, 24 February 2022)

_____ method makes use of the movement of ground water through the zone of contamination to assist the remediation process.

Select the correct option

☐ Bioventing☐ Biosparging☐ All of the above☒ Injection Recovery

Click to Save Answer & Move to

BT503 - Environment Biotechnology (Quiz 2)

Question # 2 of 10 (Start time: 03:26:54 AM, 24 February 2022)

Which of the following body parts of macrophytes are efficient in storing and removing of nitrogen ?

Select the correct option

☒	Roots
☐	Stem
☐	Leaves
☐	Seed

Click

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Question # 1 of 10 (**Start time: 03:26:04 AM, 24 February 2022**)

In _____ technique air extraction rate is adjusted to maximize underground decomposition.

Select the correct option

☐	Biosparging
☐	Injection Recovery
☒	Bioventing
☐	All of the above

Click

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Question # 7 of 10 (Start time: 03:22:47 AM, 24 February 2022)

_____ is a technique used for the biological breakdown of contaminants by plants.

Select the correct option

☐	Rhizodegradation
☒	Phytodegradation
☐	Phytovolatilisation
☐	All of the above

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Question # 6 of 10 (Start time: 03:21:48 AM, 24 February 2022)

Bio accumulation takes place by-----.

Select the correct option

☒	Both A & B
☐	Microbes
☐	Plant species
☐	None of above

Question # 5 of 10 (Start time: 03:21:00 AM, 24 February 2022)

-----plant species can be used as terrestrial phyto-systems.

Select the correct option

☐	200
☒	400
☐	100
☐	300

Click to

Question # 3 of 10 (Start time: 03:19:28 AM, 24 February 2022)

The underlying relevant processes for the biological mechanisms is/are -----

Select the correct option

- | | |
|----------------------------------|------------------|
| ☐ | biosorption |
| ☐ | demethylation |
| ☒ | All of the above |
| ☐ | methylation |

Click to Save A

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Question # 10 of 10 (Start time: 03:16:27 AM, 24 February 2022)

Eichhornia spp. can increase their biomass by _____ under optimum conditions ?

Select the correct option

☐ 120 g/m²/month

☐ 110 g/m²/hour

☒ 10 g/m²/day

☐ 10 g/m²/year

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Question # 9 of 10 (**Start time: 03:14:55 AM, 24 February 2022**)

-----speeds up the natural ability of resident microbes to metabolize the pollutant?

Select the correct option

☐	Addition of oxygen
☐	All of the above
☐	Removal of oxygen
☒	Dissolving oxygen in water

Question # 7 of 10 (Start time: 03:13:45 AM, 24 February 2022)

_____ technique is used to immobilize the pollutants.

Select the correct option

☒	All of the above
☐	Rhizofiltration
☐	Bioaccumulation
☐	Phytoextraction

Click to

Question # 6 of 10 (Start time: 03:13:04 AM, 24 February 2022)

Which of the following technique is used to remediate contamination at, or below, the water table boundary?

Select the correct option

☐	Bioventing
☒	Biosparging
☐	All of the above
☐	Injection Recovery

Click to Save Ans

Question # 4 of 10 (Start time: 03:12:02 AM, 24 February 2022)

Bioremediation relies on the inherent abilities and characteristics of following ----- species.

Select the correct option

☒	All of the above
☐	Fungi
☐	Plant species
☐	Indigenous bacteria

Click to Save

Question # 9 of 10 (Start time: 03:08:30 AM, 24 February 2022)

Macrophytes can uptake the nitrogen from water directly up to.....?

Select the correct option

☐	600 kg/ha/week
☒	6000 kg/ha/year
☐	60 kg/ha/year
☐	6000 kg/ha/month

[Click to](#)

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Question # 6 of 10 (Start time: 03:06:31 AM, 24 February 2022)

Which kind of compounds can be degraded by macrophytes effectively?

Select the correct option

☐	Carbon
☒	Phenols
☐	Carbon dioxide
☐	Chloroform

Question # 5 of 10 (Start time: 03:06:03 AM, 24 February 2022)

How much oxygen transported to the parts of the plant can pass out into the rhizosphere?

Select the correct option

☐	30%
☐	45%
☐	90%
☒	60%

Click to Save

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Question # 4 of 10 (Start time: 03:04:49 AM, 24 February 2022)

----- are ideal candidates for process of phytoremediation.

Select the correct option

☐	Both
☒	Organic pollutants
☐	Inorganic pollutants
☐	Heavy metals

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Question # 3 of 10 (Start time: 03:03:42 AM, 24 February 2022)

-----method is more sophisticated and refined used normally in bioremediation.

Select the correct option

☐	Biosparging
☐	All
☐	Bioventing
☒	Injection Recovery

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Question # 1 of 10 (**Start time: 03:01:51 AM, 24 February 2022**)

Which of the following are considered as organic pollutants?

Select the correct option

☒	Lubricants
☐	Chloroform
☐	Alcohol
☐	Carbon dioxide

Question # 10 of 10 (Start time: 02:59:54 AM, 24 February 2022)

Uptake of metal contaminants from soil by the roots is known as-----

Select the correct option

☒	Phytoextraction
☐	Rhizofiltration
☐	All of the above
☐	Bioaccumulation

Click to

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Question # 9 of 10 (Start time: 02:59:19 AM, 24 February 2022)

-----metal is considered as a low value material.

Select the correct option

☐	Gold
☐	Cadmium
☐	Nickel
☒	Lead

Click

Question # 8 of 10 (Start time: 02:58:41 AM, 24 February 2022)

Which of the following methods is considered as an effective biological water treatment method?

Select the correct option

☐	Bio-attenuation
☐	Natural attenuation
☒	All of the above
☐	Passive remediation

[Click to S](#)

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Question # 7 of 10 (Start time: 02:58:10 AM, 24 February 2022)

An aquatic plant that grows in or near water and is either emergent, submergent, or floating?

Select the correct option

☐	Microphyte
☒	Macrophyte
☐	Mesophyte
☐	Acrophyte

Click

Question # 6 of 10 (Start time: 02:57:57 AM, 24 February 2022)

which of the following best describes contaminant?

Select the correct option

☐	High toxicity range
☐	Rarely available
☐	Should not dissolve
☒	Low to medium toxicity range

Click to

Question # 5 of 10 (Start time: 02:57:44 AM, 24 February 2022)

Bioremediation is most suited to?

Select the correct option



All of the above:



Organic substances



Hydrocarbons



Herbicides

Click to See

Question # 4 of 10 (start time: 02:57:24 AM, 24 February 2022)

Total Marks: 1

Most significant temperature for bio-remediation is _____

Select the correct option

 Reload Math Equations

30-40°C



10-20°C



20-30°C



60-70°C

[Click to Save Answer & Move to Next Question](#)

Question # 3 of 10 (Start time: 02:56:14 AM, 24 February 2022)

Biodegradation of contaminants in the soil by edaphic microbes enhanced by the inherent character of the rhizosphere is known as?

Select the correct option

☐	Dewatering
☐	Thickening
☐	Phytodegradation
☒	Rhizodegradation

Click to Save Answer & Move

Question # 2 of 10 (Start time: 02:55:35 AM, 24 February 2022)

The ability of emergent _____ to transfer oxygen to their submerged portions is a well appreciated phenomenon.

Select the correct option

☐	Aluminium sulphate
☐	Ferric chloride
☒	Macrophytes
☐	Ferrous chloride

Click to Save Answer

Question # 1 of 10 (Start time: 02:55:03 AM, 24 February 2022)

The plant variety, Yellow Poplar, *Liriodendron tulipifera* Engineered by the introduction of phytovolatilization:

Select the correct option

☐	CTX gene
☐	mec A gene
☐	Col3a gene
☒	mercuric reductase gene (mer A)

[Click to S](#)

BT503 - Environment Biotechnology (Quiz 2)

Question # 10 of 10 (Start time: 02:50:26 AM, 24 February 2022)

The plant variety, Yellow Poplar, *Liriodendron tulipifera* Engineered by the Introduction of phytovolatilization

Select the correct option

☐	Col3a gene
☐	mec A gene
☒	mercuric reductase gene (mer A)
☐	CTX gene

Click

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Question # 8 of 10 (Start time: 02:49:05 AM, 24 February 2022)

There are -----major routes of Bioremediation.

Select the correct option

01



04



03



02



Solved by Muhammad Kashif

Question # 7 of 10 (Start time: 02:48:19 AM, 24 February 2022)

Which of the following technique involves introducing oxygen and nutrients to the contaminated area by various methods?

Select the correct option

☐	Both
☒	In situ Techniques
☐	None
☐	Ex situ techniques

Click to Save Answer

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Question # 6 of 10 (Start time: 02:47:03 AM, 24 February 2022)

Some other plants species enable the biodegradation of relatively large-----.

Select the correct option

☐	Heavy metals
☐	Inorganic molecules
☐	Soil particles
☒	Organic molecules

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Question # 5 of 10 (Start time: 02:45:20 AM, 24 February 2022)

Bio accumulation takes place by-----,

Select the correct option

☐	Plant species
☐	Microbes
☐	None of above
☒	Both A & B

Question # 4 of 10 (Start time: 02:44:32 AM, 24 February 2022)

In which of the following technique of bioremediation, contaminant is used as a food source by the microbes?

Select the correct option

☐	Immobilization
☐	Co- metabolism
☒	Mineralization
☐	None

Click to

BT503 – Environment Biotechnology (Quiz 2)

Question # 3 of 10 (**Start time: 02:42:27 AM, 24 February 2022**)

_____ technique is used to immobilize the pollutants.

Select the correct option

☐	Rhizofiltration
☐	Phytoextraction
☒	All of the above
☐	Bioaccumulation

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Question # 2 of 10 (Start time: 02:41:42 AM, 24 February 2022)

Which of the following technique concentrates solely on the existing micro-fauna?

Select the correct option

☒	Bio enhancement
☐	Both
☐	Bioremediation
☐	Bio augmentation

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Question # 1 of 10 (Start time: 02:41:27 AM, 24 February 2022)

Soils with _____ inherent mineral content tend to encourage direct nutrient uptake.?

Select the correct option

☐	High
☒	Low
☐	Intermediate
☐	Zero

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Question # 10 of 10 (Start time: 02:36:23 AM, 24 February 2022)

The most appropriate soil for bioremediation is -----.

Select the correct option

☐	Loam soil
☐	Sand
☐	Gravel
☒	Both

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Question # 9 of 10 (Start time: 02:34:30 AM, 24 February 2022)

All of the following factors affect the process of bioremediation except-----.

Select the correct option

☒	Type of contaminant
☐	None of the above
☐	Nutrient availability
☐	Deoxygenation

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Question # 8 of 10 (Start time: 02:33:23 AM, 24 February 2022)

Most significant temperature for bio-remediation is_____.

Select the correct option

☐	10-20°C
☐	30-40°C
☒	20-30°C
☐	60-70°C

BT503 - Environment Biotechnology (Quiz 2)

Question # 7 of 10 (Start time: 02:32:47 AM, 24 February 2022)

Two indica rice cultivars MORETSU and IR-8 are used for extraction of -----

Select the correct option

☐	Copper
☐	Nickel
☒	Cadmium
☐	Zinc



BT503 – Environment Biotechnology (Quiz 2)

Question # 6 of 10 (Start time: 02:32:32 AM, 24 February 2022)

which of the following best describes contaminant?

Select the correct option

- | | |
|----------------------------------|------------------------------|
| ☐ | High toxicity range |
| ☒ | Low to medium toxicity range |
| ☐ | Should not dissolve |
| ☐ | Rarely available |

Solved by Muhammad Kashif

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Question # 5 of 10 (**Start time: 02:31:36 AM, 24 February 2022**)

Some plants act as pumps or siphons, removing contaminants from the-----

Select the correct option

☒	Soil
☐	All of the above
☐	Air
☐	Water

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Question # 4 of 10 (Start time: 02:30:56 AM, 24 February 2022)

In Immobilization, removal of contaminants, typically metals, occur by means of _____.

Select the correct option

☒	Both A & B
☐	Bio-accumulation
☐	None of the above
☐	Adsorption

BT503 - Environment Biotechnology (Quiz 2)

Question # 3 of 10 (Start time: 02:30:16 AM, 24 February 2022)

Which of the following methods is considered as an effective biological water treatment method?

Select the correct option

☐	Natural attenuation
☐	Passive remediation
☒	All of the above
☐	Bio attenuation

Click

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Question # 2 of 10 (Start time: 02:29:19 AM, 24 February 2022)

Rhizofiltration is typically used to deal with -----contamination.

Select the correct option

☐	Soil
☐	Air
☐	None of the above
☒	Groundwater

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Question # 1 of 10 (Start time: 02:28:07 AM, 24 February 2022)

-----is/ are the mechanism(s) used for organic phytoremediation.

Select the correct option

☐	Phytovolatilisation
☐	Phytodegradation
☒	All of the above
☐	Rhizodegradation

BT503 – Environment Biotechnology (Quiz 2)

Question # 10 of 10 (Start time: 02:20:00 AM, 24 February 2022)

_____ is another name used for Rhizodegradation.

Select the correct option

☐	Phytodegradation
☒	Phytostimulation
☐	Phytovolatilisation
☐	All of the above

Question # 9 of 10 (Start time: 02:19:14 AM, 24 February 2022)

Which of the following technique involves introducing oxygen and nutrients to the contaminated area by various methods?

Select the correct option

☐	Both
☐	None
☒	In situ Techniques
☐	Ex situ techniques

Click to Save Answer &

Question # 8 of 10 (Start time: 02:18:40 AM, 24 February 2022)

Soils with _____ inherent mineral content tend to encourage direct nutrient uptake?

Select the correct option

☐	High
☐	Intermediate
☐	Zero
☒	Low

Click t

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Question # 7 of 10 (Start time: 02:18:26 AM, 24 February 2022)

What is the major constraints on the use of aquatic systems throughout the year?

Select the correct option

☐	Sulphur
☐	Nitrogen
☒	Water
☐	Carbon

BT503 - Environment Biotechnology (Quiz 2)

Question # 6 of 10 (Start time: 02:16:56 AM, 24 February 2022)

_____ bacterial species are known as denitrifying bacteria.

Select the correct option

☐	Streptococcus spp.
☐	All
☐	Clostridium Spp
☒	Pseudomonas spp

BT503 – Environment Biotechnology (Quiz 2)

Question # 6 of 10 (Start time: 02:16:56 AM, 24 February 2022)

_____ bacterial species are known as denitrifying bacteria.

Select the correct option

☒ Streptococcus spp

☐ All

☐ Clostridium Spp

☐ Pseudomonas spp

Question # 5 of 10 (Start time: 02:15:58 AM, 24 February 2022)

Hyperaccumulators have ability to absorb large amounts of metals typically _____ more as compared to most ordinary plants.

Select the correct option

☒	50-100 times
☐	20-30 times
☐	30-50 times
☐	100-150 times

Click to Save Answer &