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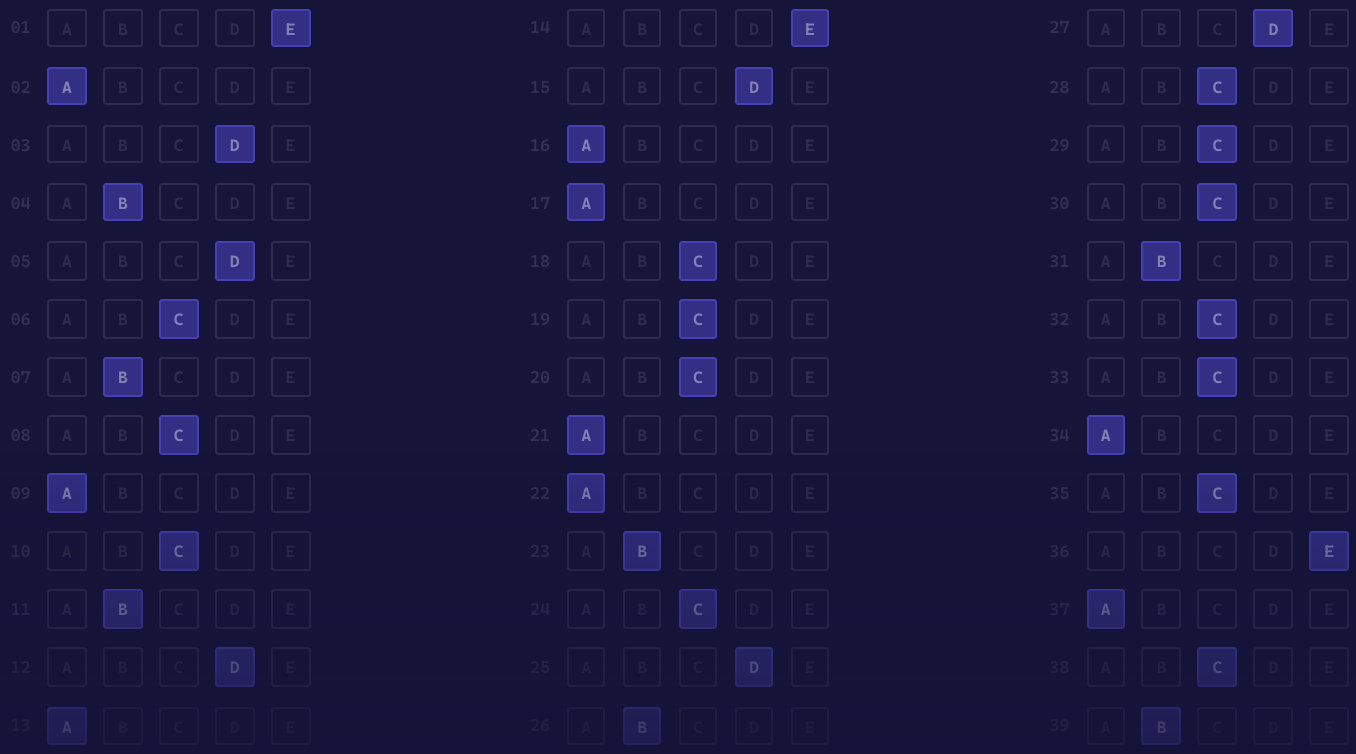

PRACTICE QUESTIONS

Association of Boards of Certification

HRX6UJEZ

WPI Biosolids Land Application Class 1-OIT

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for Association of Boards of Certification `HRX6UJEZ`, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, `HRX6UJEZ`
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

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QUESTION 1 SINGLE CHOICE

Under the U.S. EPA Part 503 Rule, biosolids that meet the Class A pathogen reduction requirements and the pollutant ceiling concentrations are classified as which of the following for land application?

A **Exceptional Quality (EQ) biosolids**

B Class B biosolids

C Pollution Prevention (P2) biosolids

D Domestic Septage biosolids

ANSWER **A**

WHY Under 40 CFR Part 503, biosolids that satisfy Class A pathogen reduction requirements, meet the pollutant ceiling limits, and pass the vector attraction reduction requirements are designated Exceptional Quality (EQ). Class B biosolids meet only Class B pathogen reduction, not the strict Class A requirements plus pollutant ceilings. 'P2' and 'Domestic Septage' are not Part 503 biosolids classes for land application.

QUESTION 2 SINGLE CHOICE

Which of the following is an acceptable Class A pathogen reduction process specified in the Part 503 Rule?

A **Composting the biosolids using an in-vessel or static aerated pile method that maintains specific time-temperature conditions**

B Storing the biosolids in a lagoon for six months

C Applying the biosolids to agricultural land and tilling them in within 24 hours

D Mixing the biosolids with lime to raise the pH above 10 for at least two hours

ANSWER **A**

WHY Part 503 Appendix B lists several Class A pathogen reduction alternatives such as in-vessel composting, static aerated pile composting, heat drying, thermophilic aerobic digestion, beta ray irradiation, gamma ray irradiation, and pasteurization, each with defined operational criteria. Storing in a lagoon is a vector attraction reduction option, not a Class A process. Lime stabilization to raise pH above 12 for 2 hours is a Class B vector attraction reduction alternative, not a Class A pathogen reduction process.

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QUESTION 3 SINGLE CHOICE

Which of the following is one of the Part 503 vector attraction reduction (VAR) options available to a biosolids generator?

A Injection of liquid biosolids below the soil surface, with no surface application allowed

B Incorporation of biosolids within six hours of surface application

C Reduction of volatile solids by at least 38 percent during sludge stabilization

D Application of biosolids only during the dormant season

ANSWER B

WHY Option 3 in 40 CFR Part 503.33 is 'Incorporate into the soil within six hours of application to agricultural land, forest, or a reclamation site.' Option 1 in the rule is injection below the soil surface (also acceptable), but option A incorrectly adds 'with no surface application allowed,' which is not part of the rule. Option C confuses VAR with pathogen reduction; the 38% volatile solids reduction is a Class A pathogen reduction requirement, not a VAR option. Seasonal application is not a Part 503 VAR alternative.

QUESTION 4 SINGLE CHOICE

The Part 503 pollutant ceiling concentrations apply to which group of metals typically analyzed in biosolids?

A Arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, zinc

B Calcium, iron, magnesium, manganese, potassium, sodium, sulfur, zinc, copper

C Aluminum, barium, boron, cobalt, lithium, strontium, titanium, vanadium, zirconium

D Carbon, hydrogen, nitrogen, oxygen, phosphorus, sulfur, chlorine, silicon, iron

ANSWER A

WHY Table 1 of 40 CFR Part 503.13 lists the nine regulated pollutants with both ceiling concentrations and cumulative pollutant loading rates: arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc. Option B lists macronutrients and micronutrients that are agronomically important but not regulated under Part 503. Options C and D list elements that are not on the Part 503 pollutant list.

QUESTION 5 SINGLE CHOICE

Under Part 503, harvested crop restrictions for the application of biosolids to agricultural land prohibit which of the following?

A **Harvesting of root crops whose edible portion grows in the soil for at least 30 days after biosolids application**

B Harvesting of above-ground edible crops for at least 14 days after biosolids application

C Grazing of animals on the land for at least 30 days after biosolids application

D Tilling of biosolids into the soil more than 24 hours after surface application

ANSWER **A**

WHY 40 CFR Part 503.32(a)(1) prohibits the harvest of food crops with edible parts that may contact the biosolids (such as root crops) for 38 months after Class B biosolids application; for root crops where the edible portion grows in the soil, the restriction is to wait at least 30 days after biosolids application for Class B biosolids. The 14-day restriction is for above-ground edible crops (fruits, vegetables) with harvested parts that come in contact with the soil surface, not all above-ground crops. The 30-day grazing restriction applies to animals whose products are consumed by humans. Tilling timing is not a site restriction under Part 503.

QUESTION 6 SINGLE CHOICE

Which of the following information must be retained by the biosolids preparer or applier under Part 503 Subpart E recordkeeping requirements?

A The customer's birth date as proof of authorized land application

B **The concentration of each pollutant in the biosolids applied to the land**

C The retail price of the biosolids sold or given away

D The brand and model of equipment used to apply the biosolids

ANSWER **B**

WHY 40 CFR Part 503.17 and Part 503.25 require the preparer or applier to keep records including the concentration of each pollutant in the biosolids, the application rate, the number of acres applied, and the date and location of application. Customer birth date, retail price, and equipment brand/model are not Part 503 recordkeeping elements.

QUESTION 7 SINGLE CHOICE

For determining compliance with Part 503 pollutant concentration limits, biosolids samples must generally be collected using which protocol?

A A single grab sample taken at any point in the biosolids processing train

B **Composite samples collected at the minimum frequencies specified by Part 503, with preservation and analysis by methods capable of detecting the regulated pollutants at the required concentrations**

C Samples collected only from finished biosolids storage piles immediately before land application

D Samples taken from the influent of the wastewater treatment plant and assumed to represent biosolids composition

ANSWER B

WHY Part 503.8 requires representative samples and references the sampling and analytical methods in 40 CFR Part 136, with specific minimum frequencies for pollutants, pathogens, and vector attraction reduction parameters. A single grab sample is not adequate for compliance because biosolids are heterogeneous. Sampling only at the time of application or from the plant influent does not reflect the actual composition of the biosolids being land applied.

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QUESTION 8 SINGLE CHOICE

An agronomic rate for biosolids land application is generally determined based on which of the following?

A The maximum amount of biosolids the disposal site can physically accept in a single event

B The crop nitrogen requirement, adjusted for residual nitrogen and other nitrogen sources, consistent with applicable state nutrient management planning guidance

C The average annual precipitation at the land application site

D The price the generator charges the land applier per ton of biosolids

ANSWER B

WHY Agronomic rate is the biosolids application rate designed to supply the nitrogen (and sometimes phosphorus) needed by the crop without applying nutrients in excess of crop uptake. It is calculated based on the crop nitrogen requirement, the biosolids nitrogen availability, residual soil nitrogen, and other nitrogen credits. Maximum physical capacity, precipitation, and price are not agronomic rate considerations.

QUESTION 9 SINGLE CHOICE

Under the U.S. EPA Part 503 rule, the cumulative pollutant loading rate (CPLR) for a given metal is reached when the total amount of that pollutant applied to a site equals which of the following?

A The pollutant ceiling concentration multiplied by the annual biosolids application rate

B The pollutant concentration limit multiplied by 20 years of agronomic applications

C A fixed value specified in kilograms per hectare for each pollutant

D The cumulative amount of biosolids applied in dry tons per acre per 365-day period

ANSWER A

WHY The cumulative pollutant loading rate for each metal is calculated by multiplying the Part 503 ceiling concentration for that pollutant by the cumulative amount of biosolids (in dry tons) applied to the site. When the cumulative additions reach that calculated value, no additional biosolids containing that pollutant may be applied to the site. Options B, C, and D are not how the CPLR is defined under Part 503 Subpart B.