

01	☐ A	☐ B	☐ C	☐ D	☒ E
02	☐ A	☐ B	☐ C	☒ D	☐ E
03	☒ A	☐ B	☐ C	☐ D	☐ E
04	☐ A	☐ B	☒ C	☐ D	☐ E
05	☐ A	☒ B	☐ C	☐ D	☐ E
06	☐ A	☐ B	☐ C	☒ D	☐ E
07	☒ A	☐ B	☐ C	☐ D	☐ E
08	☐ A	☐ B	☐ C	☐ D	☒ E
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12	☐ A	☐ B	☐ C	☒ D	☐ E
13	☒ A	☐ B	☐ C	☐ D	☐ E

14	☐ A	☒ B	☐ C	☐ D	☐ E
15	☐ A	☐ B	☒ C	☐ D	☐ E
16	☐ A	☐ B	☐ C	☐ D	☒ E
17	☐ A	☐ B	☐ C	☐ D	☒ E
18	☐ A	☐ B	☐ C	☒ D	☐ E
19	☐ A	☐ B	☐ C	☐ D	☒ E
20	☒ A	☐ B	☐ C	☐ D	☐ E
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22	☐ A	☒ B	☐ C	☐ D	☐ E
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24	☒ A	☐ B	☐ C	☐ D	☐ E
25	☐ A	☒ B	☐ C	☐ D	☐ E
26	☐ A	☒ B	☐ C	☐ D	☐ E

27	☐ A	☐ B	☒ C	☐ D	☐ E
28	☐ A	☒ B	☐ C	☐ D	☐ E
29	☐ A	☐ B	☒ C	☐ D	☐ E
30	☐ A	☐ B	☒ C	☐ D	☐ E
31	☐ A	☒ B	☐ C	☐ D	☐ E
32	☐ A	☐ B	☐ C	☐ D	☒ E
33	☐ A	☒ B	☐ C	☐ D	☐ E
34	☒ A	☐ B	☐ C	☐ D	☐ E
35	☐ A	☒ B	☐ C	☐ D	☐ E
36	☐ A	☒ B	☐ C	☐ D	☐ E
37	☐ A	☒ B	☐ C	☐ D	☐ E
38	☐ A	☐ B	☒ C	☐ D	☐ E
39	☐ A	☐ B	☐ C	☐ D	☒ E

PRACTICE QUESTIONS

Association of Boards of Certification

KGNRTT9A

WPI Water Laboratory Analyst Class 1

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Association of Boards of Certification **KGNRTT9A**, 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, **KGNRTT9A**
- the question number
- the email address on your order

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

QUESTION 1 SINGLE CHOICE

When collecting a water sample for total coliform/E. coli testing, which practice is correct?

- ☐ A Rinse the sterile sample bottle with the source water before filling it
- ☒ B Leave adequate air space in the bottle and avoid touching the inside of the cap or bottle
- ☐ C Fill the bottle completely to the brim with no air space
- ☐ D Add sodium thiosulfate only if the sample will be held longer than 48 hours

ANSWER B

WHY Sterile bacteriological sample bottles should not be rinsed, must be filled leaving air space for mixing, and the interior surfaces must not be contaminated by touching. Dechlorinating agent (sodium thiosulfate) is typically pre-added by the manufacturer, not optional based on hold time.

QUESTION 2 SINGLE CHOICE

In the DPD colorimetric method for chlorine residual, what does the development of a pink/red color indicate?

- ☒ A Presence of chlorine reacting with the DPD indicator
- ☐ B Presence of nitrate in the sample
- ☐ C Sample turbidity interfering with the reading
- ☐ D Complete absence of chlorine

ANSWER A

WHY In the DPD method, chlorine oxidizes the DPD (N,N-diethyl-p-phenylenediamine) indicator to produce a pink/red color, the intensity of which is proportional to the chlorine concentration.

QUESTION 3

SINGLE CHOICE

What unit is used to report turbidity measurements in drinking water laboratories?

- ☒ **A Nephelometric Turbidity Units (NTU)**
- ☐ B Milligrams per liter (mg/L)
- ☐ C Colony forming units (CFU)
- ☐ D Parts per billion (ppb)

ANSWER A

WHY Turbidity is measured using a nephelometer and reported in Nephelometric Turbidity Units (NTU), based on the scattering of light by suspended particles.

QUESTION 4

MULTIPLE CHOICE

Which of the following are standard quality control practices used in a water testing laboratory? (Choose two.)

- ☒ **A Running a method blank to check for contamination**
- ☒ **B Analyzing a duplicate sample to check analytical precision**
- ☐ C Discarding calibration standards after a single use regardless of expiration
- ☐ D Reporting results without documenting instrument calibration

ANSWER A • B

WHY Method blanks verify the absence of contamination, and duplicate analyses verify precision/reproducibility. Proper QC requires documented calibration, not omission, and standards are used per manufacturer/method expiration, not discarded arbitrarily.

QUESTION 5 SINGLE CHOICE

Before measuring the pH of a water sample, a pH meter should be calibrated using buffer solutions that:

- ☒ **A** Bracket the expected pH range of the sample
- ☐ **B** Are always at pH 7.0 and pH 14.0 only
- ☐ **C** Match the temperature of the room but not the sample
- ☐ **D** Have been stored open to the atmosphere for several weeks

ANSWER A

WHY pH meters should be calibrated with at least two buffer solutions that bracket the expected sample pH to ensure accurate readings across that range.

QUESTION 6 SINGLE CHOICE

What is the primary purpose of a chain-of-custody form when transporting water samples to a laboratory?

- ☒ **A** To document sample handling and ensure sample integrity from collection to analysis
- ☐ **B** To calculate the required dilution factor for analysis
- ☐ **C** To replace the need for sample preservation
- ☐ **D** To determine the laboratory's accreditation status

ANSWER A

WHY A chain-of-custody form tracks every person who handles a sample, along with times and conditions, ensuring the legal and scientific defensibility of the sample's integrity.

QUESTION 7

TRUE FALSE

The Most Probable Number (MPN) method provides a statistical estimate of the density of coliform bacteria in a water sample.

☒ **A** True☐ **B** False**ANSWER A**

WHY MPN is a statistical estimation technique based on positive/negative results from multiple dilution tubes, used to estimate microbial density rather than provide an exact count.

QUESTION 8

SINGLE CHOICE

Alkalinity of a water sample is typically determined by titrating with:

☒ **A** A standardized sulfuric acid solution to a specified pH endpoint☐ **B** A standardized sodium hydroxide solution to a specified pH endpoint☐ **C** Silver nitrate to a chloride endpoint☐ **D** EDTA to a hardness endpoint**ANSWER A**

WHY Alkalinity is determined by titrating the sample with a standardized strong acid (typically sulfuric acid) to specific pH endpoints (approximately pH 8.3 for phenolphthalein and pH 4.5 for total alkalinity).

QUESTION 9

SINGLE CHOICE

Which practice best supports laboratory safety when working with concentrated acids in a water testing lab?

- ☒ **A** Always add acid to water slowly, not water to acid
- ☐ **B** Always add water to concentrated acid rapidly
- ☐ **C** Store concentrated acids next to concentrated bases for convenience
- ☐ **D** Mix acids and oxidizers in the same secondary containment for space efficiency

ANSWER A

WHY The standard safety rule is to add acid to water slowly to control the exothermic reaction and prevent violent splattering; incompatible chemicals like acids and bases should be stored separately.