

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
09	☐ A	☐ B	☒ C	☐ D	☐ E
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11	☐ A	☐ B	☐ C	☐ D	☒ E
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
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22	☐ A	☒ B	☐ C	☐ D	☐ E
23	☐ A	☒ B	☐ C	☐ D	☐ E
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

JGLW665Y

WPI Wastewater Laboratory Analyst Class 4

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Association of Boards of Certification **JGLW665Y**, 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, **JGLW665Y**
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

In the standard 5-day BOD test, dilution water is seeded and incubated at what temperature?

- ☒ **A** 20°C
- ☐ **B** 35°C
- ☐ **C** 4°C
- ☐ **D** 25°C

ANSWER A

WHY Standard Methods specifies BOD5 incubation at 20°C for 5 days in the dark to standardize microbial oxygen consumption rates.

QUESTION 2

SINGLE CHOICE

In the Winkler azide modification method for dissolved oxygen, sodium azide is added primarily to eliminate interference from which substance?

- ☒ **A** Nitrite ions
- ☐ **B** Ferrous iron
- ☐ **C** Free chlorine
- ☐ **D** Sulfide

ANSWER A

WHY Sodium azide is added to the alkali-iodide reagent to destroy nitrite, which otherwise interferes by reoxidizing iodide during the titration.

QUESTION 3 SINGLE CHOICE

Total Suspended Solids (TSS) is determined by filtering a well-mixed sample through a glass fiber filter and then drying the residue at what temperature range?

- ☒ **A** 103–105°C
- ☐ **B** 179–181°C
- ☐ **C** 550°C
- ☐ **D** 40–50°C

ANSWER A

WHY TSS residue is dried at 103–105°C to a constant weight, per Standard Methods, before weighing to determine suspended solids concentration.

QUESTION 4 SINGLE CHOICE

Before measuring sample pH, a laboratory analyst should calibrate the pH meter using at least how many standard buffer solutions bracketing the expected sample pH?

- ☒ **A** Two
- ☐ **B** One
- ☐ **C** Four
- ☐ **D** Zero, factory calibration is sufficient

ANSWER A

WHY A minimum two-point calibration using buffers that bracket the expected sample pH ensures accurate slope and offset for the electrode.

QUESTION 5 SINGLE CHOICE

In the DPD colorimetric method for chlorine residual, the intensity of the pink/red color developed is directly proportional to what?

- ☒ **A** The concentration of chlorine present
- ☐ **B** The sample turbidity
- ☐ **C** The sample temperature
- ☐ **D** The alkalinity of the sample

ANSWER A

WHY DPD reagent reacts with chlorine to form a colored compound whose intensity is proportional to chlorine concentration, measured colorimetrically.

QUESTION 6 MULTIPLE CHOICE

Which of the following are correct sample preservation practices commonly required for wastewater laboratory analysis? (Choose two.)

- ☒ **A** Cool samples to 4°C for BOD and TSS analysis
- ☒ **B** Preserve samples for metals analysis with nitric acid to pH less than 2
- ☐ **C** Store all samples at room temperature indefinitely
- ☐ **D** Freeze all samples regardless of parameter

ANSWER A - B

WHY Cooling to 4°C is standard for many parameters like BOD and TSS, while metals samples are acid-preserved with nitric acid to pH <2 to keep metals in solution and prevent adsorption/precipitation.

QUESTION 7

SINGLE CHOICE

In the membrane filtration technique for fecal coliform analysis, the filter is placed on selective media and incubated at what typical temperature for fecal coliforms?

☒ **A** 44.5°C☐ **B** 20°C☐ **C** 98.6°C☐ **D** 4°C**ANSWER A**

WHY Fecal coliform membrane filtration incubation is performed at an elevated temperature of 44.5°C to select for fecal-origin organisms, distinguishing them from general coliforms.

QUESTION 8

TRUE FALSE

Running a duplicate sample analysis is a QA/QC practice used to assess the precision of laboratory test results.

☒ **A** True☐ **B** False**ANSWER A**

WHY Duplicate analyses measure the reproducibility (precision) of results by comparing two separately analyzed portions of the same sample.

QUESTION 9

SINGLE CHOICE

Total alkalinity of a wastewater sample is typically determined by titrating with standardized sulfuric acid to which endpoint pH?

- ☒ **A** 4.5
- ☐ **B** 8.3
- ☐ **C** 7.0
- ☐ **D** 10.0

ANSWER A

WHY Total alkalinity titration is carried out to a pH endpoint of approximately 4.5, corresponding to the bicarbonate equivalence point.