

01	☒ A	☐ B	☐ C	☐ D	☐ E
02	☐ A	☐ B	☐ C	☐ D	☒ E
03	☐ A	☐ B	☐ C	☒ D	☐ E
04	☐ A	☐ B	☐ C	☒ D	☐ E
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14	☐ A	☒ B	☐ C	☐ D	☐ E
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27	☒ A	☐ B	☐ C	☐ D	☐ E
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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

Saudi Commission For Health Specialties (SCFHS)

LABTE

Lab Tech

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Saudi Commission For Health Specialties (SCFHS) LABTE , 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, LABTE
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

A laboratory's Levey-Jennings control chart shows ten consecutive control values falling within ± 1 standard deviation of the mean. According to Westgard rules, this pattern most likely indicates:

- ☐ A Random error requiring repeat of patient testing
- ☐ B Systematic error; the analytical run must be rejected
- ☒ C Acceptable analytical performance with no rule violation
- ☐ D An instrument malfunction requiring immediate recalibration

ANSWER C

WHY Ten consecutive results within ± 1 SD does not violate any Westgard rule. The common Westgard rules (1_{3s}, 2_{2s}, R_{4s}, 4_{1s}, 10_x) trigger on specific deviations; staying within ± 1 SD across 10 points is acceptable performance. Options A and B describe situations that would involve rule violations, and option D would typically produce values outside control limits, not a tight cluster within ± 1 SD.

QUESTION 2

SINGLE CHOICE

A blood sample for serum glucose determination is left at room temperature for 6 hours before centrifugation. Which pre-analytical error is most likely to affect the result?

- ☐ A Hemolysis from prolonged contact with the clot
- ☐ B Increased potassium from cellular leakage into serum
- ☒ C Decreased glucose due to glycolysis by blood cells
- ☐ D Increased sodium due to evaporation of water

ANSWER C

WHY Unseparated whole blood continues to undergo glycolysis, reducing serum glucose concentrations over time. Sodium is not increased by water evaporation in a meaningful way, and although potassium rises with prolonged contact with cells, glucose decrease is the classic and most clinically significant pre-analytical change when tubes are not centrifuged promptly.

QUESTION 3

SINGLE CHOICE

Which class of biological safety cabinet (BSC) provides protection to the laboratory worker, the environment, AND the product (sample) being manipulated?

- ☐ A Class I BSC
- ☒ B Class II BSC (Type A2)
- ☐ C Class III BSC
- ☐ D Laminar flow clean bench

ANSWER B

WHY Class I protects the worker and environment only. Class III is a gas-tight glove box that protects the worker and environment but is designed for high-risk pathogens and is not used for routine product protection in the same way. A laminar flow clean bench protects only the product and exposes the worker. Class II BSCs (such as Type A2) are the standard cabinets that protect the worker, environment, and product through HEPA-filtered laminar downflow and exhaust.

QUESTION 4

SINGLE CHOICE

On a peripheral blood smear, a technologist notes red blood cells that appear smaller than normal with increased central pallor. These findings are most consistent with:

- ☒ A Iron deficiency anemia (microcytic, hypochromic)
- ☐ B Hereditary spherocytosis (normocytic, normochromic)
- ☐ C Megaloblastic anemia (macrocytic, normochromic)
- ☐ D Thalassemia major with target cells only

ANSWER A

WHY Cells that are smaller than normal (microcytic) with increased central pallor (hypochromic) are the classic morphologic description of iron deficiency anemia. Spherocytes are not smaller with increased pallor, megaloblastic anemia produces macrocytes, and although thalassemia can produce target cells, the dominant morphologic feature described (small cells with increased central pallor) matches iron deficiency.

QUESTION 5

SINGLE CHOICE

In the Jaffe reaction for creatinine, which interfering substance is most likely to cause a falsely elevated result?

- ☐ A Glucose
- ☐ B Uric acid
- ☒ C Acetoacetate (ketone body)
- ☐ D Bilirubin

ANSWER C

WHY The alkaline picrate (Jaffe) reaction is known to be non-specific and reacts with other chromogens including acetoacetate, acetone, pyruvate, and certain cephalosporins. Acetoacetate is the classic endogenous interferent that causes falsely elevated creatinine by the Jaffe method, which is why enzymatic creatinine methods or kinetic Jaffe measurements are preferred to minimize this interference.

QUESTION 6

SINGLE CHOICE

A urine culture grows >100,000 CFU/mL of a non-lactose fermenting, oxidase-positive, gram-negative rod that produces a blue-green pigment. The most likely organism is:

- ☐ A Escherichia coli
- ☐ B Klebsiella pneumoniae
- ☒ C Pseudomonas aeruginosa
- ☐ D Proteus mirabilis

ANSWER C

WHY Pseudomonas aeruginosa is a non-lactose fermenting, oxidase-positive gram-negative rod that classically produces pyocyanin (blue-green) and pyoverdine (yellow-green) pigments. E. coli and Klebsiella are lactose fermenters and oxidase-negative; Proteus is oxidase-negative and is associated with swarming motility on agar.

QUESTION 7

SINGLE CHOICE

In hepatitis B serology, the presence of HBsAg, anti-HBc (IgM), and HBeAg in a patient's serum most likely indicates:

- ☐ A Chronic hepatitis B infection
- ☐ B Resolved past infection with immunity
- ☒ C Acute hepatitis B infection with high infectivity
- ☐ D Successful vaccination

ANSWER C

WHY HBsAg indicates current infection. IgM anti-HBc is the marker of acute infection (recent onset within approximately 6 months). HBeAg indicates active viral replication and high infectivity. Vaccination produces only anti-HBs, and resolved infection shows anti-HBs and anti-HBc IgG with no HBsAg.

QUESTION 8

SINGLE CHOICE

A patient's hemoglobin is reported as 12.0 g/dL. What is the equivalent value in g/L?

- ☐ A 1.20 g/L
- ☒ B 120 g/L
- ☐ C 1,200 g/L
- ☐ D 12,000 g/L

ANSWER B

WHY To convert g/dL to g/L, multiply by 10 (because 1 dL = 0.1 L). Therefore $12.0 \text{ g/dL} \times 10 = 120 \text{ g/L}$.

QUESTION 9

SINGLE CHOICE

An immediate spin crossmatch is performed at room temperature. Which of the following is the primary antibody class it is designed to detect?

- ☐ A IgG antibodies reactive at 37 °C
- ☒ B IgM antibodies (e.g., ABO incompatibility)
- ☐ C IgA antibodies in saline
- ☐ D IgG antibodies detected only by the antiglobulin phase

ANSWER B

WHY Immediate spin crossmatch at room temperature detects IgM antibodies, which agglutinate red cells directly and are responsible for most ABO incompatibilities. IgG antibodies require the antiglobulin (Coombs) phase at 37 °C for detection. IgA antibodies typically do not cause transfusion reactions under these conditions.