

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
10	A	B	C	D	E
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
19	A	B	C	D	E
20	A	B	C	D	E
21	A	B	C	D	E
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

National Inspection Testing and Certification Corporation

ML24

Medical Gas Generalist 2024

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for National Inspection Testing and Certification Corporation **ML24**, 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, **ML24**
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

Which medical gas is most commonly used in hospitals to provide life-support ventilation and to drive pneumatically powered ventilators and resuscitators?

- ☒ **A Oxygen**
- ☐ B Nitrous oxide
- ☐ C Medical air
- ☐ D Carbon dioxide

ANSWER A

WHY Oxygen (USP) is the principal medical gas used for patient respiration, life-support ventilation, and as the driving gas for many pneumatically powered ventilators and resuscitators. Medical air is used for ventilation, but oxygen is the primary gas used to drive these devices and is the standard answer for life-support/resuscitation support.

QUESTION 2

SINGLE CHOICE

In the U.S. medical gas pipeline color-coding per NFPA 99, which color is used to identify oxygen piping?

- ☐ A Yellow
- ☐ B Green
- ☒ **C White**
- ☐ D Blue

ANSWER C

WHY Per NFPA 99, oxygen is identified by the color white on piping and station outlets. Medical air is yellow, vacuum (suction) is white-with-black-stripe (historically black), and nitrous oxide is blue. Selecting yellow (medical air) or blue (nitrous oxide) is a common distractor.

QUESTION 3

SINGLE CHOICE

What is the primary purpose of a zone valve in a medical gas pipeline distribution system?

- ☐ A To regulate downstream line pressure to a specific value for each outlet
- ☒ B To isolate a section of the piping system for maintenance or emergency shutoff without interrupting the entire facility
- ☐ C To mix medical gases before they reach patient outlets
- ☐ D To prevent cross-connection between different medical gas systems

ANSWER B

WHY Zone valves (sometimes called area shutoff valves) are used to isolate a portion of the medical gas piping system for maintenance, repair, or emergency response while keeping the rest of the facility operational. Pressure regulation is performed by line pressure regulators, gas mixing is performed by separate mixing equipment, and cross-connection prevention is handled by the use of gas-specific (non-interchangeable) DISS/CGA fittings and check valves.

QUESTION 4

SINGLE CHOICE

Which test is performed on newly installed medical gas piping to verify that the system holds pressure and has no leaks?

- ☒ A Standing pressure (initial pressure) test
- ☐ B Cross-connection test
- ☐ C Particulate test
- ☐ D Purity test

ANSWER A

WHY The standing pressure (initial pressure) test is performed on a newly installed pipeline at a pressure higher than operating pressure (typically 1.5 times the working pressure or per NFPA 99 requirements) for a specified duration to verify system integrity and confirm there are no leaks before the system is concealed or placed into service. Cross-connection, particulate, and purity tests are also required, but they verify different properties and are not the leak/integrity test.

QUESTION 5

SINGLE CHOICE

An automatic medical gas manifold is designed to switch from the primary (in-service) cylinder bank to the secondary (reserve) bank under what condition?

- ☐ A When the reserve cylinder bank is heavier than the primary bank
- ☒ B When the primary cylinder bank's pressure drops below a preset threshold, signaling depletion of the in-service cylinders
- ☐ C When the alarm panel loses power
- ☐ D When a zone valve is closed downstream

ANSWER B

WHY An automatic manifold continuously monitors the pressure of the in-service (primary) cylinder bank. When that pressure falls to a preset value (indicating that the cylinders are nearly empty), the manifold automatically switches delivery to the reserve bank and signals an alarm so the empty cylinders can be replaced. The other conditions listed do not trigger an automatic changeover.

QUESTION 6

SINGLE CHOICE

Which feature distinguishes a Diameter Index Safety System (DISS) medical gas connection from a non-medical gas connection of the same size?

- ☐ A It uses a color-coded handle for each gas
- ☒ B It is keyed so that fittings for different gases are physically non-interchangeable
- ☐ C It operates at a higher pressure than non-medical fittings
- ☐ D It requires a special tool to tighten

ANSWER B

WHY The Diameter Index Safety System (DISS) uses two concentric bore diameters and a specific pin configuration so that, for any given thread size, fittings for different gases cannot be cross-connected. This non-interchangeability is a critical patient-safety feature. While color-coded handles are also used, the defining safety property of DISS is mechanical non-interchangeability.

QUESTION 7

SINGLE CHOICE

Which marking must appear on a medical gas cylinder to confirm that it has been tested and requalified for continued service?

- ☐ A The manufacturer's shipping name
- ☒ B A star stamp (*) following the most recent hydrostatic test date
- ☐ C A colored band corresponding to the gas type
- ☐ D The net weight of the contents

ANSWER B

WHY A star (*) stamp adjacent to the most recent hydrostatic test date indicates that the cylinder has been requalified by the seamless method (e.g., ultrasonic examination in lieu of a full hydrostatic test) and is approved for continued service per DOT/TC regulations. The colored band identifies the gas hazard class, not requalification status.

QUESTION 8

SINGLE CHOICE

Which storage condition is required for medical gas cylinders per NFPA 99?

- ☐ A Full and empty cylinders of the same gas may be stored together without separation
- ☒ B Cylinders must be chained or otherwise secured to prevent tipping, and stored in a well-ventilated area away from heat sources
- ☐ C Cylinders should be stored lying flat on their sides to maximize floor space
- ☐ D Oxygen and nitrous oxide cylinders must be stored in the same room for ease of access

ANSWER B

WHY NFPA 99 requires that cylinders be secured (e.g., chained or held in proper racks) to prevent tipping, stored upright, kept away from heat and ignition sources, and that full and empty cylinders be segregated. Oxygen and fuel gases must be separated, and nitrous oxide (an oxidizer) must be stored separately from flammables. The other choices describe unsafe practices.

QUESTION 9

MULTIPLE CHOICE

Which conditions are typically monitored and alarmed by a medical gas master alarm panel? (Choose two.)

- ☒ **A** High or low line pressure for each medical gas
- ☒ **B** Reserve (secondary) medical gas supply in use
- ☐ **C** Patient room temperature
- ☐ **D** Loss of power to the alarm system itself

ANSWER A • B

WHY A medical gas master alarm panel monitors source/supply-side conditions, including high or low line pressure for each gas, changeover of the manifold to the reserve supply, and often the status of the secondary supply (e.g., liquid reserve level). Patient room temperature is monitored by the facility's building automation/HVAC system, and although loss of power to the alarm itself should trigger a separate trouble signal, the master panel's primary monitored conditions are line pressure and reserve supply status.