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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

Technical Standards and Safety Authority (TSSA)

1A-2

OE 1st Class A2

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Technical Standards and Safety Authority (TSSA) 1A-2 , 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, 1A-2
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

What is the primary purpose of a low water fuel cutoff device on a boiler?

- ☒ **A** To shut off the fuel supply when the water level drops below a safe operating level
- ☐ **B** To regulate the feedwater pump speed under normal conditions
- ☐ **C** To control the steam pressure during normal firing
- ☐ **D** To automatically blow down the boiler on a schedule

ANSWER A

WHY The low water fuel cutoff shuts off fuel to the burner when water level falls below a preset safe level, preventing overheating and possible boiler failure.

QUESTION 2

SINGLE CHOICE

Why is external and internal water treatment necessary for boiler feedwater?

- ☐ **A** To increase the dissolved oxygen content for better combustion
- ☒ **B** To prevent scale formation, corrosion, and carryover within the boiler
- ☐ **C** To raise the boiling point of the water above design pressure
- ☐ **D** To reduce the need for blowdown entirely

ANSWER B

WHY Water treatment controls hardness, dissolved oxygen, and dissolved solids to prevent scale, corrosion, and carryover, protecting the boiler and its efficiency.

QUESTION 3 SINGLE CHOICE

Which three elements are required for complete combustion of fuel in a boiler furnace?

- ☒ **A** Fuel, oxygen, and ignition temperature
- ☐ **B** Fuel, steam, and draft
- ☐ **C** Air, water, and pressure
- ☐ **D** Fuel, nitrogen, and heat

ANSWER A

WHY Complete combustion requires an adequate fuel supply, sufficient oxygen (air), and temperature high enough to sustain ignition.

QUESTION 4 TRUE FALSE

Before entering a boiler for internal inspection or repair, the boiler must be isolated using lockout/tagout procedures and confirmed free of hazardous atmosphere.

- ☒ **A** True
- ☐ **B** False

ANSWER A

WHY Confined space entry procedures require isolation (lockout/tagout of steam, fuel, and electrical supplies) and atmosphere testing before entry to protect worker safety.

QUESTION 5

SINGLE CHOICE

What is the main reason an operating engineer must maintain an accurate plant log book?

- ☐ A To satisfy insurance company advertising requirements
- ☒ B To provide a legal record of operating conditions and support safe, informed decision-making
- ☐ C To replace the need for pressure gauge readings
- ☐ D To document employee vacation schedules

ANSWER B

WHY Log books provide a documented history of plant operating parameters, which supports safety, troubleshooting, and regulatory compliance.

QUESTION 6

SINGLE CHOICE

What is the function of a boiler safety valve?

- ☒ A To relieve excess steam pressure automatically before it exceeds the boiler's safe working pressure
- ☐ B To regulate the water level in the boiler drum
- ☐ C To indicate the temperature of the flue gases
- ☐ D To control the amount of fuel entering the furnace

ANSWER A

WHY A safety valve opens automatically to release steam when pressure exceeds the set safe limit, preventing overpressure damage or explosion.

QUESTION 7

MULTIPLE CHOICE

Which two components are part of the basic mechanical refrigeration cycle? (Choose two.)

- ☒ **A** Compressor
- ☒ **B** Condenser
- ☐ **C** Economizer
- ☐ **D** Deaerator

ANSWER A - B

WHY The basic refrigeration cycle includes a compressor, condenser, expansion device, and evaporator. Economizers and deaerators are boiler plant components, not refrigeration cycle components.

QUESTION 8

MULTIPLE CHOICE

Which two conditions can result from operating a pressure vessel beyond its rated working pressure? (Choose two.)

- ☒ **A** Rupture of the vessel shell
- ☒ **B** Failure of welded joints or fittings
- ☐ **C** Improved thermal efficiency
- ☐ **D** Reduced need for periodic inspection

ANSWER A - B

WHY Exceeding rated working pressure stresses the vessel beyond design limits, risking shell rupture or joint/fitting failure; it does not improve efficiency or reduce inspection requirements.

QUESTION 9

SINGLE CHOICE

In Ontario, under TSSA regulations, who is generally required to hold a valid Operating Engineer certificate of qualification?

- ☐ A Any person entering the plant premises for maintenance work
- ☒ B A person who operates or has charge of a boiler or pressure plant of the applicable class
- ☐ C Only the plant manager responsible for administrative duties
- ☐ D Only manufacturers of boiler equipment

ANSWER B

WHY TSSA regulations require persons who operate or are in charge of a boiler/pressure plant to hold the appropriate class of Operating Engineer certificate.