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PRACTICE QUESTIONS

Saudi Council of Engineers

PE009

Practice of Engineering (PE) - Fire Protection and Preventio

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Saudi Council of Engineers **PE009**, 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, **PE009**
- 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 fire protection engineer is determining the required number and arrangement of exits for an assembly occupancy. Which basis is normally used to determine exit capacity?

- ☒ **A** The occupant load of the occupancy and the prescribed egress capacity factor
- ☐ **B** Only the number of exterior doors
- ☐ **C** The fire department response time alone
- ☐ **D** The total floor area regardless of occupant classification

ANSWER A

WHY Egress requirements are based on the calculated occupant load and the applicable egress capacity factors. The number of exterior doors, fire department response time, or floor area alone does not establish exit capacity.

QUESTION 2

SINGLE CHOICE

In a sprinkler system design, what is the primary purpose of a sprinkler head's thermal element?

- ☒ **A** To activate water discharge when the surrounding air reaches the design temperature
- ☐ **B** To regulate the building's domestic water pressure
- ☐ **C** To detect smoke before a fire develops
- ☐ **D** To provide a manual alarm signal to the fire department

ANSWER A

WHY A sprinkler head's thermal element releases or opens the head when its rated temperature is reached, allowing water to discharge over the fire area. It is not primarily a smoke detector, pressure regulator, or manual alarm device.

QUESTION 3 SINGLE CHOICE

Which fire alarm system function is intended to provide an audible and visible warning to building occupants when an alarm condition is detected?

- ☒ **A** Notification appliance operation
- ☐ **B** Supervisory signal monitoring
- ☐ **C** Fire department retransmission
- ☐ **D** Sprinkler waterflow switch operation

ANSWER A

WHY Notification appliances, such as audible and visible devices, alert occupants. Supervisory signals and sprinkler waterflow signals generally indicate system conditions to monitoring equipment rather than serving as occupant notification appliances.

QUESTION 4 SINGLE CHOICE

What is the principal function of a fire damper installed in a duct penetration of a fire-rated wall?

- ☒ **A** To close the duct opening when heat activates the damper, helping maintain the wall's fire resistance
- ☐ **B** To increase the airflow capacity of the duct system
- ☐ **C** To replace the required structural fireproofing of the wall
- ☐ **D** To provide a permanent route for smoke exhaust

ANSWER A

WHY A fire damper closes automatically when exposed to heat, limiting the spread of fire through a duct penetration. It does not increase airflow, replace the wall's required fire resistance, or function as a permanent smoke-exhaust route.

QUESTION 5

SINGLE CHOICE

Which occupancy classification is primarily associated with spaces used for the display and sale of merchandise?

- ☒ **A** Mercantile occupancy
- ☐ **B** Industrial occupancy
- ☐ **C** Storage occupancy
- ☐ **D** Business occupancy

ANSWER A

WHY Spaces used for the display and sale of merchandise are generally classified as mercantile occupancies. Industrial, storage, and business classifications describe different uses and characteristics.

QUESTION 6

SINGLE CHOICE

A fire protection design requires a separation between a hazardous area and an adjacent occupied area. Which construction measure is most directly intended to resist the spread of fire for a specified period?

- ☒ **A** A fire-resistance-rated wall assembly
- ☐ **B** A decorative nonrated partition
- ☐ **C** An unprotected opening in the wall
- ☐ **D** A standard ventilation grille without a rated closure

ANSWER A

WHY A fire-resistance-rated wall assembly is designed and tested to resist fire propagation for a specified duration. Decorative partitions, unprotected openings, and unrated ventilation grilles do not provide the required fire separation.

QUESTION 7

SINGLE CHOICE

What is the main purpose of a fire risk assessment in a building?

- ☒ **A** To identify fire hazards, evaluate consequences, and determine appropriate risk-reduction measures
- ☐ **B** To calculate only the number of occupants in the building
- ☐ **C** To select the color of fire alarm devices
- ☐ **D** To determine the contractor's payment schedule

ANSWER A

WHY A fire risk assessment identifies potential ignition sources and fire hazards, evaluates their likely consequences, and supports selection of measures to reduce risk. Occupant-load calculation, device color, and payment scheduling are separate activities.

QUESTION 8

SINGLE CHOICE

Which extinguisher class is intended primarily for fires involving energized electrical equipment?

- ☒ **A** Class C
- ☐ **B** Class A
- ☐ **C** Class D
- ☐ **D** Class K

ANSWER A

WHY Class C extinguishers are intended for energized electrical equipment. Class A addresses ordinary combustibles, Class D addresses combustible metals, and Class K addresses cooking oils and fats.

QUESTION 9

MULTIPLE CHOICE

Which two measures commonly support fire safety in a building? (Choose two.)

- ☒ **A** Installation and maintenance of an appropriate fire alarm system
- ☒ **B** Provision of clear and accessible means of egress
- ☐ **C** Using combustible interior finishes without evaluation
- ☐ **D** Blocking fire-rated doors in the open position

ANSWER **A - B**

WHY An appropriate fire alarm system provides detection and notification, while clear, accessible means of egress support occupant evacuation. Uncontrolled combustible finishes and blocked fire-rated doors increase fire risk and are not appropriate fire-safety measures.