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Exam : CFI-I

Title : Certified Fire Inspector I

Version : DEMO

1.What is the minimum fire resistance rating for the enclosure of floor openings connecting four or more stories in new construction?

- A. 1 hour
- B. 1½ hours
- C. 2 hours
- D. 2½ hours

Answer: C

Explanation:

The minimum fire resistance rating for the enclosure of floor openings that connect four or more stories is governed by NFPA 101®, Life Safety Code®. According to NFPA 101 (2021 edition), Section 8.6.5.1, vertical openings (such as stairwells, shafts, and floor openings) connecting multiple floors in new construction must meet specific requirements to prevent the vertical spread of fire and smoke.

For openings connecting four or more stories, the fire resistance rating must be a minimum of 2 hours.

The reasoning for the 2-hour rating is to allow sufficient time for occupant evacuation and firefighting operations while maintaining structural integrity.

Floor enclosures are required to be designed with fire-rated construction that can contain a fire and limit its spread between floors.

1-hour ratings are typical for smaller vertical openings involving fewer floors.

2½-hour ratings are more stringent and often seen in specific high-risk areas or older construction requirements.

Reference: NFPA 101, Section 8.6.5.1: Fire resistance ratings for vertical openings in new construction.

NFPA 101 ensures that these ratings are consistent with safety objectives and risk levels posed by openings connecting multiple stories.

2.What is the maximum volume of Class I, Class II, and Class III A liquids allowed to be stored in an individual storage cabinet?

- A. 80 gal (303 L)
- B. 100 gal (379 L)
- C. 120 gal (460 L)
- D. 140 gal (530 L)

Answer: C

Explanation:

The maximum volume of flammable and combustible liquids permitted in an individual storage cabinet is addressed by NFPA 30, Flammable and Combustible Liquids Code.

Specifically:

Class I liquids are flammable liquids with flashpoints below 100°F (37.8°C).

Class II and IIIA liquids are combustible liquids with higher flashpoints but still pose significant fire hazards when improperly stored.

According to NFPA 30, Section 9.5.2, the maximum allowable quantity of Class I, II, and IIIA liquids in a storage cabinet is 120 gallons (460 liters).

Why 120 gallons?

The 120-gallon limit is determined based on:

The need to minimize fire risk and contain potential ignition sources.

Storage cabinets are designed to limit vapor emissions and resist fire exposure for a minimum duration

(e.g., 10 minutes per OSHA standards).

Additional Considerations:

Cabinets must meet construction requirements outlined in NFPA 30, Chapter 9 (e.g., self-closing doors, ventilation, and fire resistance).

Exceeding the 120-gallon limit would require additional fire safety measures or a different storage approach (e.g., a flammable liquid storage room).

Reference: NFPA 30, Flammable and Combustible Liquids Code, Section 9.5.2

OSHA 1910.106(d)(3): Storage requirements for flammable and combustible liquids.

3. For flammable and combustible liquids, what is the number of control areas allowed on the 2nd floor above grade level of a building?

- A. 2
- B. 3
- C. 4
- D. 5

Answer: B

Explanation:

The number of control areas for flammable and combustible liquids is regulated under NFPA 30 and the International Fire Code (IFC). A control area is a designated area within a building where quantities of hazardous materials are allowed to be stored or used.

For the 2nd floor above grade level, the number of control areas is reduced compared to ground level due to increased risks related to fire containment, evacuation, and firefighting operations.

Specifically:

Ground floor: Up to 4 control areas are allowed.

2nd floor above grade: Up to 3 control areas are allowed.

The reduction ensures that hazardous materials are limited as the building height increases, thereby mitigating fire spread and potential risks.

Reference: NFPA 30, Flammable and Combustible Liquids Code

IFC Table 5003.8.2: Control area limits based on building levels.

4. Which of the following is true regarding the copy of an issued permit?

- A. It shall be readily accessible at each place of operation.
- B. It shall be reissued upon completion of the project.
- C. It shall be maintained by the architect of record.
- D. It shall be transferable to a new address.

Answer: A

Explanation:

Permits are required to document authorization for specific fire protection and safety activities.

According to NFPA 1, Fire Code, and general permit guidelines:

Issued permits must be readily accessible at the location of the operation to ensure:

Inspectors can verify compliance with the permit requirements.

The permit holder demonstrates authorization for ongoing work.

Reissuing a permit after completion of a project (B) is not standard practice.

Permits are not the responsibility of architects (C) unless they are the permit holder.

Permits are generally non-transferable (D) because they are site-specific and operation-specific.
Reference: NFPA 1, Fire Code, Section 1.12.13: Permit requirements for accessibility and non-transferability.

5.The authorization to issue permits is granted by the

- A. state legislature.
- B. authority having jurisdiction.
- C. Fire Inspection Handbook.
- D. NFPA 101, Life Safety Code.

Answer: B

Explanation:

The authority having jurisdiction (AHJ) is the entity responsible for enforcing codes, standards, and regulations, including the authorization to issue permits.

The AHJ is defined as the organization, office, or individual responsible for approving plans, issuing permits, and ensuring compliance.

While state legislatures (A) may create laws, the actual enforcement and issuance of permits are delegated to the AHJ.

Fire Inspection Handbooks (C) and NFPA 101 (D) are reference tools but do not directly grant authority.

Reference: NFPA 1, Fire Code, Section 3.2.2: Defines the AHJ's role and responsibilities.

NFPA 101: Acknowledges the AHJ as the enforcement body.