What is Emergency Egress Planning?

Worksheet

Emergency egress planning uses code-based rules - occupant load, required exit width (W = P f) and maximum travel distance - to ensure a building has enough safely sized, unobstructed exits for everyone to evacuate quickly.

Questions

1. What is the formula for required egress width?

A) W = P/f
B) W = P f
C) W = f/P
D) W = P + f

2. What does 'travel distance' limit in egress planning?

A) The number of exits required
B) The maximum walking distance to the nearest exit
C) The width of a door
D) The height of a stairwell

3. Why do most buildings need at least two remote exits?

A) To reduce construction cost
B) So one blocked exit doesn't trap occupants
C) To improve natural lighting
D) To reduce occupant load

4. A space has 200 occupants and a width factor of 5 mm/person. What is the minimum required egress width?

A) 500 mm
B) 1000 mm
C) 1500 mm
D) 2000 mm

5. An office floor has 300 occupants. Using a width factor of 6 mm/person, what is the minimum required egress width?

6. A 450-person auditorium must exit through doors sized at 5 mm/person. What total door width is required, and how many 1000 mm doors are needed?

7. A corridor on an unsprinklered floor has a code-maximum travel distance of 60 m. The farthest desk is 68 m from the nearest stair. Is this compliant, and what must be done?

8. Define: What is occupant load?

9. Define: What is the egress width formula?

10. Define: What is travel distance?

Answer Key

1. B) W = P f - Required width equals occupant load (P) multiplied by the width factor per person (f): W = P f.

2. B) The maximum walking distance to the nearest exit - Travel distance is the maximum distance an occupant may walk to reach an exit, set by code.

3. B) So one blocked exit doesn't trap occupants - Redundant exits ensure occupants have an alternate path if one exit becomes unusable.

4. B) 1000 mm - W = P f = 200 5 = 1000 mm.

5. W = P f W = 300 6 W = 1800 mm (three 600 mm exit units, or two 900 mm doors)

6. W = P f = 450 5 = 2250 mm required Doors needed = 2250 / 1000 = 2.25 round up to 3 doors of 1000 mm each

7. Compare actual distance (68 m) to code maximum (60 m) 68 m > 60 m non-compliant Fix: add a second stairwell/exit closer to that desk, or reconfigure the layout to shorten the path

8. The maximum number of people a space is designed to hold safely, calculated from floor area and occupancy type per code tables.

9. W = P f - required width equals occupant load times the width factor per person.

10. The maximum distance a person must walk from any point in a space to reach the nearest exit, capped by code.