**CERTIFICATE IN FIRE AND RISK MANAGEMENT**

**Element 4 Fire Protection in Buildings**

1. **Give the purpose and typical contents of the Building Regulations Approved Document B.**
2. **Give three factors which could affect the fire resistance of materials**
3. **Explain the meaning of :**

**Compartmentalisation**

**Fire stopping**

**Penetration seals**

**Fire Dampers**

1. **What are the main methods which can be used to prevent external fire spread?**
2. **Give the meaning of the term “means of escape” and six minimum standards for a means of escape in a multi-storey building.**
3. **Carbon dioxide (CO2) extinguishers have been installed in new office premises.**

(a) **Outline** the types of fire that these extinguishers can safely extinguish. **(2)**

(b) **Outline** advantages of this type of extinguisher. **(2)**

(c) **Outline** disadvantages of this type of extinguisher. **(4)**

7. (a) **Identify** products of a fire that can be detected by an automatic fire detection system. **(4)**

(b) **Outline** ways of reducing false alarms from automatic fire detection systems. **(4)**

**8. True or False**

1. The Building Regulations are written by the HSE
2. Approved document B gives the main structural elements of a building as any part of the structural frame, load bearing elements, floors and stairs.
3. Cavities and voids control the spread of fire
4. Compartmentalisation is one of the best ways of limiting fire spread
5. Penetration seals can be used around pipes and ducts to seal them against smoke spread
6. The means of escape is a procedure designed to get people out of a building safely
7. FD60 means the fire door is rated to give one hour protection, with standing the temperature of the fire and limiting smoke at certain temperatures
8. A point of emphasis is where emergency lighting will be needed
9. The classes M,N and P are used for different fire detection systems
10. Emergency voice communication systems can be installed to enable the fire service to communicate with those in fire refuges or places of safety
11. Smoke detectors are better than heat detectors in areas such as kitchens
12. Laser smoke detectors can cover large open plan areas
13. Flame detectors look for different types of light given off by a fire including visible, infrared and ultraviolet
14. Fire sprinkler systems can be dry, wet or combined
15. All sprinkler heads react at the same temperature
16. Hose reels can be automatic and manual
17. A fire hydrant allows he fire service to access water on and off site
18. It is an offence if fire water is allowed to pollute a river or stream
19. Booms can be used to stop fire water spreading
20. The waste from fire water will be classified as controlled waste when disposed of