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Courses » Fire Protection, Services and Maintenance Management of Building

Announcements **Course** Ask a Question Progress Mentor FAQ

Unit 3 - Week 2

Course outline

How to access the portal

Week 1

Week 2

- Process of Combustion: ventilation and fuel controlled fire
- Process of Combustion: Flashover condition
- Effect of Fire on Construction Materials
- Design for Fire Resistance: Steel
- PDF slides of week 2
- Quiz : Assignment 2
- Solution of week 2 assignment

Week 3

Week 4

Assignment 2

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2018-08-15, 23:59 IST.**

Please follow the following instructions while answering the questions:

1. Question 1 to 6 have only one correct answer.
2. For numeric type answers, question 7, please do not write units in the answer box. Write only the numeral, otherwise software will evaluate the answer as incorrect.

1) For which of the following conditions, no flash over would occur inside the enclosure **2.5 points**

$$A_W H^{1/2} < 0.8m^{5/2}$$

$$A_W H^{1/2} > 0.8m^{5/2}$$

$$A_W H^{1/2} = 0.8m^{5/2}$$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$A_W H^{1/2} < 0.8m^{5/2}$$

2) The cement loses its cementing property due to loss of chemically bonded water and dehydration of CH (Calcium Hydroxide) at a temperature range of: **2.5 points**

100-150° C

200-400°C

400-600° C

600-800° C

No, the answer is incorrect.

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Week 9

Week 10

Week 11

Week 12

 450° C 550° C 650° C**No, the answer is incorrect.****Score: 0****Accepted Answers:**

550° C

4) If m_b is the rate of burning and m_a be the mass flow rate of air, the for the fire **2.5 points** to be fuel controlled, which of the following relation holds true

 $m_b > m_a$ $m_b < m_a$ $m_b = m_a$ none of the above**No, the answer is incorrect.****Score: 0****Accepted Answers:** $m_b < m_a$

5) Which of the following is the correct formula for ventilation factor

2.5 points $A_w H^{1/2}$ $A_w H$ $A_w H^{3/2}$ $A_w^{1/2} H$ **No, the answer is incorrect.****Score: 0****Accepted Answers:** $A_w H^{1/2}$

6) What is the effect of temperature on modulus of elasticity of concrete?

2.5 points

Increases with temperature

Decreases with temperature

Remains unaffected by the change in temperature

No, the answer is incorrect.**Score: 0****Accepted Answers:**

Decreases with temperature

7) Calculate the average temperature rise of a steel column 400' 400mm outer side and a thickness of 20 mm exposed to standard fire for 2 minutes assuming a time step of 2 minutes given that equivalent e is 0.65, $h=0.023 \text{ W/m}^2\text{°K}$, density= 7850 kg/m^3 , specific heat= 0.54 kJ/kg °K and Stefan Boltzmann's constant is $5.7 \cdot 10^{-8} \text{ W/m}^2 \text{°K}^4$. Assume ambient temperature as 25° C

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Range) 25,30

5 points

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