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NPTEL

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Courses » Energy Efficiency, Acoustics and daylighting in Building

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Unit 6 - Thermal Comfort

Register for Certification exam

Course outline

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Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-06, 23:59 IST.**

Note : In Numeric type questions, kindly please enter the numeric value only upto 2 decimal places. Do Not enter units or some other expression as this might evaluate the answer as wrong. eg: if answer is '32.60' then '32.60 degree Celsius' as an answer would be taken as wrong by the computer.

1) ***2 points***

Value of one clothing resistance (1 clo) is_____ $m^2{}^0C/W$

- **0.155**
- **0.0155**
- **1.55**
- **0.00155**

No, the answer is incorrect.
Score: 0

Accepted Answers:
0.155

2) **Effective temperature means_____** ***2 points***

- **Equivalent temperature of still saturated environment which will produce the same effect as environment with 100% saturation and no air velocity**
- **Equivalent temperature of still saturated environment which will produce the same effect as environment with 50% saturation and no air velocity**
- **Equivalent temperature of still saturated environment which will produce different effect as environment with 50% saturation and no air velocity**
- **Equivalent temperature of still saturated environment which will produce different effect as environment with 100% saturation and no air velocity**

3) **Corrected effective temperature (CET) can be found by using _____** *2 points*

- **Bioclimatic chart**
- **Psychrometric Chart**
- **Nomogram**
- **None of the above**

No, the answer is incorrect.
Score: 0

Accepted Answers:
Nomogram

4) **Given DBT > WBT, The corrected effective temperature (CET)_____ with increase in air velocity.** *2 points*

- **Increase**
- **Decrease**
- **Constant**
- **None of the above**

No, the answer is incorrect.
Score: 0

Accepted Answers:
Decrease

5) **Which of the following is the most suitable objective function for optimal thermal design (from orientation point of view)?** *2 points*

- **Minimize (2x Summer gain – Winter gain)**
- **Minimize (Summer gain – 2x Winter gain)**
- **Minimize (Summer gain- Winter gain)**
- **Minimize (Winter gain – Summer gain)**

No, the answer is incorrect.
Score: 0

Accepted Answers:
Minimize (2x Summer gain – Winter gain)

6) **Desirable effective temperature (in degrees Celsius) range for Indian scenario___** *2 points*

- **30 - 34**
- **15 - 21**
- **22 - 27**
- **32 - 38**

No, the answer is incorrect.
Score: 0

Accepted Answers:
22 - 27

7)

Calculate the mean radiant temperature (in °C) for a room given that the a temperature is 32°C and the globe thermometer temperature is 35°C. It is given th ratio of radiation heat transfer coefficient (hr), to sum of radiation and convectio heat transfer coefficients (hr+hc) is 0.55

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 37,39

4 points

8)

Given upper limit of comfortable TSI is 30°C and wet bulb temperature of room 25°
Calculate the upper limit of comfortable room temperature (DBT in °C) for a roo
with still air?

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 28,30

4 points

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