

## Unit 5 - Week 4

### Course outline

How does an NPTEL online course work?

Week 1

Week 2

Week 3

Week 4

Lecture 16 Fundamentals of Thermal Comfort

Lecture 17 Climatic Considerations, Physiological Objectives of Design

Lecture 18 Fundamentals of Climate Responsive Buildings - I

Lecture 19 Fundamentals of Climate Responsive Buildings - II

Lecture 20 Visual and Acoustic Comfort

Quiz : Assignment 4

Solution for Assignment 4

Week 5

Week 6

Week 7

Week 8

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Week 10

Week 11

Week 12

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## Assignment 4

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2020-02-26, 23:59 IST.**

- 1) Environmental factors that determine human thermal comfort include air temperature, Air velocity, Relative humidity and \_\_\_\_\_ **1 point**
- Globe temperature
- Partial pressure
- Radiant temperature
- Metabolic rates

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

**Accepted Answers:**  
*Radiant temperature*

- 2) Thermal comfort index developed based on Indian subjects is **1 point**
- PMV
- ASHRAE Comfort standard
- Psychrometric chart
- TSI (Tropical Summer Index)

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

**Accepted Answers:**  
*TSI (Tropical Summer Index)*

- 3) High temperature, high diurnal range, less Relative Humidity , low precipitation, cloudless sky, are the characteristics of **1 point**
- Warm and humid climate
- Hot and dry climate
- Temperate climate
- Cold climate

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

**Accepted Answers:**  
*Hot and dry climate*

- 4) Example for cold dry climate is **1 point**
- Gangtok
- Leh Ladakh
- Delhi
- Guwahati

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

**Accepted Answers:**  
*Leh Ladakh*

- 5) The circular plan form is used in a hot climate region because it has (multiple answers) **1 point**
- Less perimeter to area ratio and less heat transfer
- More perimeter area ratio and less heat transfer
- More surface area
- Less surface area

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

**Accepted Answers:**  
*Less perimeter to area ratio and less heat transfer*  
*Less surface area*

- 6) Water bodies can absorb large amount of radiation as the specific heat of water is low. **1 point**
- True
- False

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

**Accepted Answers:**  
*False*

- 7) By checking the psychrometric chart of any place with the help of climate consultant software, we can understand the percentage of comfort hours the place offer without adding any active or passive design strategies in buildings. **1 point**
- True
- False

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

**Accepted Answers:**  
*True*

- 8) Wind towers control the air temperature through **0 points**
- Evaporative cooling process
- Adiabatic cooling process
- Geothermal conditions
- Refrigerant control process

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

**Accepted Answers:**  
*Evaporative cooling process*

- 9) Suggested Reverberation time range for general purpose auditorium with music or speech in a theater is **1 point**
- 4.5 – 5.5 seconds
- Less than 0.05 seconds
- 1.5 – 2.5 seconds
- More than 10 seconds

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

**Accepted Answers:**  
*1.5 – 2.5 seconds*

- 10) Three fundamental ways of achieving acoustic control in any space are **1 point**
- Break
- Absorb
- Block
- Cover
- Close

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

**Accepted Answers:**  
*Absorb*  
*Block*  
*Cover*