

Unit 9 - Week 8

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Energy Efficient Design of Buildings

Design Optimization of Buildings

Building Design Optimization Using Genetic Algorithm

Quiz : Assignment 8

PDF File

Feedback Form

Week 9

Week 10

Week 11

Week 12

Solution of Assignment

Assignment 8

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

Due on 2019-10-02, 23:59 IST.

1) Which of the following method is advantageous for selection of building parameters at the design stage: 1 point

- Forward Analysis
 Backward analysis
 Both
 None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Forward Analysis

2) Which of the following optimization methods is best suited for optimization of qualitative and discrete parameters in building design optimization process? 1 point

- Single function optimization
 Gradient methods
 Genetic algorithm
 Direct search methods

No, the answer is incorrect.
Score: 0

Accepted Answers:
Genetic algorithm

3) Which of the following is not an operator in genetic algorithm: 1 point

- Selection
 Derivative
 Mutation
 Crossover

No, the answer is incorrect.
Score: 0

Accepted Answers:
Derivative

4) Temperature of calm air, at 50 percent relative humidity, which imparts the same thermal sensation as the given environment is known as: 1 point

- Dry bulb temperature
 Wet bulb temperature
 Tropical summer index
 Thermal load

No, the answer is incorrect.
Score: 0

Accepted Answers:
Tropical summer index

5) Consider 8 orientations, 16 wall constructions, 16 roof construction and 4 shapes, forming the solution domain for optimal envelope design using GA. What is the size of the chromosome in terms of binary bits? 2 points

- 11
 12
 13
 14

No, the answer is incorrect.
Score: 0

Accepted Answers:
13

6) Supposing you are considering U-value of walls, shape and orientations as the only decision variables and you have 16 options of U-values, 8 options of shape and orientation each. You are using GA for energy optimization; which of the following represents the chromosome string of a parent having 3rd U-value; 1st shape, and 2nd orientation. 2 points

- 001000001
 0010001001
 0001001001
 0011001001

No, the answer is incorrect.
Score: 0

Accepted Answers:
001000001