Course outline

How does an NPTEL online course work? ()

Week 1 : Introduction ()

Week 1 Quiz ()

Week 2: Basics of Python ()

Week 2 Quiz ()

Week 2 Programming Assignment ()

Week 3: Lists, inductive

Sample Online Test Question 5

Due on 2021-03-09, 23:59 IST

Instructions

There will be two online programming tests on 9 March, 2021. This is a sample test to explain what the actual test will look like.

- These tests account for 25% of the total evaluation for the course.
- The duration of the test is 2 hours.
- The first test will be from 10:00 am–12:00 noon and the second from 8:00 pm–10:00 pm, on Tuesday, 9 March, 2021.
- You can attempt one or both of the tests. The best score will be counted..

Question 5

A positive integer *n* is said to be perfect if the sum of the factors of *n*, other than *n* itself, add up to *n*. For instance 6 is perfect since the factors of 6 are {1,2,3,6} and 1+2+3=6. Likewise, 28 is perfect because the factors of 28 are {1,2,4,7,14,28} and 1+2+4+7+14=28.

Write a Python function `perfect(n)` that takes a positive integer argument and returns `True` if the integer is perfect, and `False` otherwise.

Sample Test Cases

	Input	Output
Test Case 1	`perfect(6)`	`True`

function definitions, sorting ()

Week 3 Programming Assignment ()

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension ()

Week 4 Quiz ()

Week 4 Programming Assignment ()

Week 5: Exception handling, input/output, file handling, string processing ()

Week 5 Programming Assignment ()

Week 6: Backtracking, scope, data structures; stacks, queues and heaps ()

Week 6 Quiz ()

Test Case 2	`perfect(7)`	`False`
Test Case 3	`perfect(33550336)`	`True`
Test Case 4	`perfect(8128)`	`True`
Test Case 5	`perfect(6)`	`True`
Test Case 6	`perfect(12)`	`False`
Test Case 7	`perfect(28)`	`True`
Test Case 8	`perfect(60)`	`False`

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

Week 7: Classes, objects and user defined datatypes ()

Week 7 Quiz ()

Week 8: Dynamic programming, wrap-up ()

Week 8 Programming Assignment ()

Text Transcripts ()

Books ()

Download Videos ()

Online Programming Test - Sample ()

- Sample Online Test Question 1 (/noc20_cs26/progassignment?name=118)
- Sample Online Test Question 2 (/noc20_cs26/progassignment?name=119)
- Sample Online Test Question 3 (/noc20_cs26/progassignment?name=120)
- Sample Online Test Question 4 (/noc20_cs26/progassignment?name=121)

- **Sample Online Test Question 5 (/noc20_cs26/progassignment?name=122)**
- Sample Online Test Question 6 (/noc20_cs26/progassignment?name=123)
- Sample Online Test Question 7 (/noc20_cs26/progassignment?name=124)
- Sample Online Test Question 8 (/noc20_cs26/progassignment?name=125)

Online Programming Test 1, 01 Dec 2020, 10:00-12:00 ()

Online Programming Test 2, 01 Dec 2020, 20:00-22:00 ()

Online Programming Test 1, 09 Mar 2021, 10:00-12:00 ()

Online Programming Test 2, 09 Mar 2021, 20:00-22:00 ()