Training contents - PCEP[™] – Certified Entry-Level Python Programmer (Exam PCEP-30-02)

| U I I I I U | Section 1: Computer Programming and Python Fundamentals Understand fundamental terms and definitions Interpreting and the interpreter, compilation and the compiler exis, syntax, and semantics Understand Python's logic and structure leywords istructions |
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| ki in in | omments |
| lr B si b v v r n | ntroduce literals and variables into code and use different numeral systems allocientific notation trings inary, octal, decimal, and hexadecimal numeral systems rariables raming conventions |
| C n si a u u b b B B B B B t t t | Choose operators and data types adequate to the problem numeric operators: ** * / % // + - tring operators: * + issignment and shortcut operators inary and binary operators priorities and binding itwise operators: ~ & ^ << >> Boolean operators: not, and, or Boolean expressions elational operators (== != >= < <=) he accuracy of floating-point numbers voe casting |
| 3 tr 3 tr | be county erform Input/Output console operations he print() and input() functions he sep= and end= keyword parameters he int() and float() functions |
| 4 S | Solving complex programming problems from the above topics |
| 5 | Section 2: Control flow - Conditional Blocks and Loops (29%) |
| 5 m | Make decisions and branch the flow with the if instruction conditional statements: if, if-else, if-elif, if-elif-else nultiple conditional statements sesting conditional statements |
| 6 6 ite | Perform different types of iterations he pass instruction puilding loops with while, for, range(), and in parting through sequences |
| 7 7 7 | Advanced looping techniques expanding loops with while-else and for-else lesting loops and conditional statements controlling loop execution with break and continue |
| 8 S | Solving complex programming problems from the above topics |
| S | Section 3: Data collections (25%) |
| C cr in th lit ft 9 th it in th lit cr c c c ft it in th th lit c c c c c c c c c c c c c c c c c c c | Collect and process data using lists constructing vectors ndexing and slicing he len() function st methods: append(), insert(), index(), etc. unctions: len(), sorted() he del instruction terating through lists with the for loop nitializing loops he in and not in operators st comprehensions copying and cloning sts in lists: matrices and cubes |

| Collect and process data using tuples 10 tuples: indexing, aldrag, building, immutability tuples are, lists indexing the and tuples indexing immutability tuples: velocity, and tuples indexing immutability dictionaries and tuple indexing indexing and in an emoving keys iterating through dictionaries and their keys and values checking the existence of keys methods: keys(), iters(), and values() 11 Collect and process data using dictionaries dictionaries: building, indexing, adding and removing keys iterating through dictionaries and their keys and values checking the existence of keys methods: keys(), iters(), and values() 12 Operate with strings constructing strings indexing, slicing, immutability escaping using the 'character quotes and apsorbones inside strings multi-line strings constructing strings intercloses and methods 13 Solving complex programming problems from the above topics 5 Section 4: Functions & Exceptions (28%) 14 The new keyword recursion 15 Decompose the code using functions and and their quark-defined (unctions and generators the None keyword recursion 16 Organize interaction between the function and is environment positional, keyend; and a argument passing default garanter values name scopes, name hiding (shadowing), and the global keyword 17 Solving complex programming problems from the above topics 18 Basics of Python Exception Handling TypeError Note USD 59 (them: Single-Shot) USD 76.70 (Exam: with one retake) USD 71.00 (Exam: Single-Shot + Practice Test); USD 29 | | |
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| Collect and process date using dictionaries dictionaries: usiding, indexing, adding and removing keys terating through dictionaries and their keys and values checking the existence of keys methods: keys(), items(), and values() Operate with strings constructing strings indexing, storing, immutability escaping using the \ character guotes and apostrophes inside strings multi-line strings basic string functions and methods Solving complex programming problems from the above topics Section 4: Functions & Exceptions (28%) Decompose the code using functions defining and invoking user-defined functions and generators the return keyword, results the None keyword recursion Ogenes interaction between the function and its environment parameteric values name scopes, mam biding (shadowing), and the global keyword Python Built-In Exception Heading Values Basics of python Exception Heading Values Python Built-In Exception Heading Values Particle Complex programming problems from the above topics Usb S9 (Exa:: Single-Shot) USD 70:0 (Exa:: Single-Shot + Practice Test). Note Complete training will be hands-on training. Industry and exas standard assessments will be given everyday. To increase the pass percentage all participants should complete dail yassessments without tail. OpenEUG Python Institute Test Candidaces can register and take the PCEP exams online via TestNow. | 10 | Collect and process data using tuples tuples: indexing, slicing, building, immutability tuples vs. lists: similarities and differences lists inside tuples and tuples inside lists |
| 12 Operate with strings constructing strings indexing, stiring, immutability escaping using the \character quotes and apostrophes inside strings multi-line strings basic string functions and methods 13 Solving complex programming problems from the above topics 14 Decompose the code using functions defining and invoking user-fellend functions and generators the return keyword, returning results the None keyword recursion 15 Organize interaction between the function and is environment parameters vs. arguments positional, keyword, and mixed argument passing default parameter values mane scopes, name hidring (shadowing), and the global keyword 16 Python Built-In Exception Heinarchy BaseException SystemEsst KeyboardInterupt abstract exceptions ArithmeticFore LookupError YalueError 17 Solving complex programming problems from the above topics 17 Solving complex programming problems from the above topics 18 Organize interaction between Hadiling try-except / the try-except Exception 17 Solving complex programming problems from the above topics 17 Solving complex programming problems from the above topics 18 Complex programming problems from the above topics 17 Solving complex programming problems from the above topics 18 Complex programming problems from the above topics 19 Solving complex programming problems from the above topics | 11 | Collect and process data using dictionaries dictionaries: building, indexing, adding and removing keys iterating through dictionaries and their keys and values checking the existence of keys methods: keys(), items(), and values() |
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