ii.   What is dictionary in Python? Explain with an example.   **5**

iii. What do you mean by exception handling in python? Explain at   **5**
      least six types of exceptions.

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Enrollment No....................................

Faculty of Engineering
End Sem (Odd) Examination Dec-2019
OE00018 Python Essentials

Programme: B.Tech.   Branch/Specialisation: All

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1   i.   IronPython is written in: **1**
            (a) C Language   (b) C++ Language
            (c) Python Language   (d) C# Language

      ii.   The invalid variable initialization is: **1**
            (a) abc = 1,000,000   (b) a b c = 1000 2000 3000
            (c) a,b,c = 1000, 2000, 3000   (d) a_b_c = 1,000,000

      iii. What is the output of the following?   **1**

            ```
            for x in range(5.0):
            print(x)
            ```
            (a) 0.0 1.0 2.0 3.0 4.0   (b) 0 1 2 3 4
            (c) Error   (d) 0 1 2 3 4 5

      iv.   What is the output of the following?   **1**
            ```
            x=0
            while x<5:
                  x+=1
                  if x==3:
                        continue
                  print(x)
            ```
            (a) Error   (b) 0 1 2 3 4   (c) 1 2 4 5   (d) 0 1 2 4

      v.   In Python setattr() is used :   **1**
            (a) To access the attribute of the object
            (b) To set an attribute
            (c) To check if an attribute exists or not
            (d) To delete an attribute

vi. Correct syntax of file.writelines() is **1**
(a) file.writelines(sequence)
(b) fileobject.writelines()
(c) fileobject.writelines(sequence)
(d) None of these

vii. What is the use of duck typing? **1**
(a) More restriction on the type values that can be passed to a given method
(b) No restriction on the type values that can be passed to a given method
(c) Less restriction on the type values that can be passed to a given method
(d) Makes the program code smaller

viii. Which of the following statements is true? **1**
(a) A non-private method in a superclass can be overridden
(b) A subclass method can be overridden by the superclass
(c) A private method in a superclass can be overridden
(d) Overriding isn't possible in Python

ix. What will be the output of the following Python code? **1**
x=10
y=8
assert x>y, 'X too small'
(a) Assertion Error   (b) 10 8
(c) No output   (d) 108

x. Which one of the following keyword is not used for exception handling in python? **1**
(a) try   (b) catch   (c) finally   (d) except

Q.2 i. Define indentation in python. Write at least four differences between C and Python programming. **4**

ii. Write a program in python which accepts length and breadth from user and compute the area. **6**

OR iii. Write a short note on Frozen Binaries, Docstring and Frozenset Datatype with example of each. **6**

Q.3 i. What is lambda function in python? Explain with any one example. **4**

ii. Write a python program to search a specific value from a given list of values using binary search method. **6**

OR iii. Explain and write codes for following functions: **6**
(a) str()   (b) globals()   (c) locals()   (d) exec()
(e) eval()   (f) vars()

Q.4 i. What do you mean by pickle and unpickle in python? Give an example to illustrate each. **4**

ii. Write a python program to search for city name in the file and display the record number that contains the city name. **6**
Expected outcome:
Size of file (in Bytes) = 80 Bytes
No. of records   = 4
Enter City Name   = Indore
Found at record no. = 2

OR iii. Differentiate read(), readline() & readlines() and write a program to demonstrate all three methods. **6**

Q.5 i. How operator overloading can be implemented in Python? Give an example. **4**

ii. What are the differences between abstract class and interface? Write a python program in which Maruti and Santro sub classes implement the abstract methods of the super class Car. **6**

OR iii. Create a class student with following member attributes: roll no, name, age and total marks. Create suitable methods for reading and printing member variables. Write a python program to overload '==' operator to print the details of students having same marks. **6**

Q.6 Attempt any two:
i. Describe how aliasing creates a problem in mutable data type with an example. **5**

Marking Scheme
OE00018 Python Essentials

Q.1 i. IronPython is written in: **1**
(d) C# Language

ii. The invalid variable initialization is: **1**
(b) a b c = 1000 2000 3000

iii. What is the output of the following? **1**
(c) Error

iv. What is the output of the following? **1**
(c) 1 2 4 5

v. In Python setattr() is used : **1**
(b) To set an attribute

vi. Correct syntax of file.writelines() is **1**
(c) fileobject.writelines(sequence)

vii. What is the use of duck typing? **1**
(c) Less restriction on the type values that can be passed to a given method

viii. Which of the following statements is true? **1**
(a) A non-private method in a superclass can be overridden

ix. What will be the output of the following Python code? **1**
(c) No output

x. Which one of the following keyword is not used for exception **1**
handling in python?
(b) catch

Q.2 i. Definition of indentation in python 2 marks **4**
At least four differences between C and Python programming
0.5 mark for each difference (0.5 mark * 4) 2 marks

ii. Write a program in python compute the area. **6**
Stepwise marking

OR iii. Frozen Binaries, Docstring and Frozenset Datatype **6**
1 mark for each definition (1 mark * 3) 3 marks
I mark for each example (1 mark * 3) 3 marks

Q.3 i. Lambda function in python 2 marks **4**
Any one example 2 marks

ii. Write a python program **6**
User input 2 marks
Binary search concept 2 marks
Correct output 2 marks

OR iii. Explain and write codes for following functions: **6**
1 mark for each function (1 mark * 6)

Q.4 i. Pickle 2 marks **4**
Unpickle 2 marks

ii. Write a python program **6**
Stepwise marking

OR iii. Differentiate read(), readline() & readlines() 3 marks **6**
Program to demonstrate all three methods. 3 marks

Q.5 i. How operator overloading can be implemented in Python **4**
Definition 2 marks
Example 2 marks

ii. Differences between abstract class and interface 3 marks **6**
Program 3 marks

OR iii. Python program to overload '==' operator to print the details of **6**
students having same marks.
Class creation 2 marks
Methods 2 marks
Overloading 2 marks

Q.6 Attempt any two:
i. Aliasing creates a problem in mutable data type **5**
Definition 3 marks
Example 2 marks

ii. Definition of dictionary in Python 3 marks **5**
Example 2 marks

iii. Exception handling in python 2 marks **5**
At least six types of exceptions
0.5 mark for each (0.5 mark * 6) 3 marks

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