

ODD SEMESTER EXAMINATION, 2023 – 24

IInd yr B.Tech.
Python Programming

Duration: 3:00 hrs

Max Marks: 50

Note: - Attempt all questions. All Questions carry equal marks. In case of any ambiguity or missing data, the same may be assumed and state the assumption made in the answer.

Q 1.	<p>Answer any two parts of the following.</p> <p>a) What do you mean by Python IDE? Explain in detail.</p> <p>b) Write a Python program to construct the following pattern, using a nested for loop.</p> <pre> * </pre> <p>c) Explain the following terms briefly. Also, list some of their applications :</p> <ul style="list-style-type: none"> • Tuples • Lists • Dictionary • Set 	5x2=10
Q 2.	<p>Answer any two parts of the following.</p> <p>a) Explain why Python is considered as an interpreted language.</p> <p>b) Explain with the help of program how can you randomize the items of a list in place in Python?</p> <p>c) Write a Program to display Fibonacci sequence upto 20 terms.</p>	5x2=10
Q 3.	<p>Answer any two parts of the following.</p> <p>a) Discuss what are file input and output operations in Python Programming?</p> <p>b) Explain any five basic operators of Python with examples.</p> <p>c) Write the output of the given Python codes :</p> <p>i)</p> <pre> L1 = [500, 800, 600, 200, 900] START = 1 SUM = 0 for C in range(START,4): SUM = SUM + L1[C] print(C,":",SUM) SUM = SUM + L1[0]*10 print(SUM) </pre> <p>ii)</p> <pre> my_dict = {"name": "Aman", "age": 26} my_dict['age'] = 27 my_dict['address'] = "Delhi" print(my_dict.items()) </pre>	5x2= 10

Q 4.	<p>Answer any two parts of the following.</p> <p>a) Write a Python program to capitalize the first and last character of each word in a string. (input string- hello world)</p> <p>b) State whether the following statement is true or false.</p> <ol style="list-style-type: none"> 1. Python is a case-sensitive language. 2. Python is an object-oriented language. 3. Variable declaration is implicit in Python. 4. When executing a Python program, Python first compiles source code(file statement) into a format known as pseudo-code. 5. An int can be converted to a string while a string cannot be converted to an int. <p>c) Explain why Python has become one of the most popular language among the programmers. Also, highlight the features of Python.</p>	5x2= 10
Q 5.	<p>Answer any two parts of the following.</p> <p>a) Write the output of the given Python codes :</p> <p>i)</p> <pre> tuple1 = (11, 22, 33, 44, 55 ,66) list1 = list(tuple1) new_list = [] for i in list1: if i%2==0: new_list.append(i) new_tuple = tuple(new_list) print(new_tuple) </pre> <p>ii)</p> <pre> def Diff(N1, N2): if N1>N2: return N1-N2 else: return N2-N1 NUM = [10,23,14,54,32] for CNT in range (4,0,-1): A = NUM[CNT] B = NUM[CNT-1] print(Diff(A,B), '#', end = ' ') </pre> <p>b) Explain the following:</p> <ol style="list-style-type: none"> 1. Global variable and Local Variable 2. What are Python modules? Name some commonly used built-in modules in Python. <p>c) Explain the concept of file handling in Python. Also, differentiate between text files and binary files.</p>	5x2= 10
