

Shiv Nadar University Chennai

Mid Semester Examinations 2023-2024 Even

Question Paper

Name of the Program: Common to B.Tech. AI & DS, B.Tech. CSE (IoT) and B.Tech. CSE (Cyber Security)		Semester: II
Course Code & Name: CS1002 PROGRAMMING IN PYTHON		
Regulation 2021		
Time: 2 Hours	Answer All Questions	Marks: 50

Q.No.	Questions	Marks	CO	KL
1	Identify the output that would be produced by the following lines of code: A, B = 23, 48 c = b / a print(c) (a) 2.0869565 (b) 2 (c) 2.0 (d) Error	1	CO1	KL4
2	Identify the output that would be produced by the following statement: format(25/4, '.3e') (a) 6.250 (b) 6.250 e+00 (c) 6.25 (d) 6.25 e+000	1	CO1	KL2
3	Identify the output that would be produced by the following lines of code: for i in range(5): c = 2*i print(c, end = " ") (a) 0 2 4 6 8 (b) 0 2 4 6 8 10 (c) 8 (d) 10 (e) Error	1	CO2	KL4
4	What would be the output of the following lines of code? s = 'qwertyytrewq' s1 = s[2:5] s2 = s[9:6] print(s1==s2) (a) Error (b) True (c) False (d) 0 (e) 1	1	CO1	KL4
5	The following lines of code are expected to produce an output of '2' (string not an integer). Modify the code as required to obtain the desired output. s = 20 t = s/10.0 print(t)	2	CO1	KL4
6	Correct the error(s) in the following lines of code: import math as m r = 2 a = math.pi * r^2 if a > 10: print('less than 10') else if(a > 10 and a < 20): print('between 10 and 20') else: print('greater than 20')	2	CO2	KL4

7	<p>What would be the output of the following lines of code?</p> <pre> N = 20 def func1(): n = 10 print(n) print(N) def func2(): n = 2 print(n, N) func1() print(n, N) func2() </pre>	2	CO3	KL4
8	<p>Write a program to generate the sum of the series, $1 - \frac{x^2}{2} + \frac{x^4}{4} - \frac{x^6}{6} + \dots$ up to N terms. Obtain the values of N and x from the user.</p>	5	CO2	KL3
9	<p>Write a program to check if a given string is a valid URL. Assume that the URL must be of the form <code>www.website_name.com/page_name</code>. The <code>website_name</code> and <code>page_name</code> must begin with an alphabet and may contain alphabets, numbers, underscore, and hyphen.</p>	5	CO2	KL3
10	<p>Write a function to compute the simple interest. The arguments to the function should be the principal amount, P, the no. of years, N, and the rate of interest, R (in the same order as listed here). Let R be an optional argument. Get values for P, N, and R from the user and pass them in the sequence, N, R, P to the function.</p>	5	CO3	KL3
11	<p>Write a recursive function to generate the sum of the series, $n + (n - 2) + (n - 4) + \dots$ until $n - x \leq 0$. Obtain n from the user and pass it to the function.</p>	5	CO3	KL3
12	<p>Write a program to generate the following pattern up to N rows:</p> <pre> A A A A B A A C C A A D F D A </pre>	10	CO2	KL3
13	<p>Write a menu driven program to perform the following tasks, where each task is implemented in a separate function.</p> <ul style="list-style-type: none"> Check if a given integer is a Magic number. (Sum the digits of the given number, then sum the digits of the previous sum, and repeat the same till you arrive at a 1-digit number. If the 1-digit number is equal to 1, it is a magic number. E.g.: $1234 \rightarrow 1 + 2 + 3 + 4 = 10 \rightarrow 1 + 0 = 1$. Therefore, 1234 is a magic number.) Check if a given integer is an Abundant number. (The sum of divisors of the number, including 1, must be greater than the number itself.) Exit the program. 	10	CO3	KL3

KL – Bloom's Taxonomy Levels

(KL1: Remembering, KL2: Understanding, KL3: Applying, KL4: Analyzing, KL5: Evaluating, KL6: Creating)

CO – Course Outcomes
