E-013

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

DEPARTMENT: Artificial Intelligence and Data Science

CAT-I (2023-24) Odd Sem

SEMESTER: B.Tech.VII　　　　　　　　　　　　DATE : 04/09/2023
SUBJECT: Python Programming　　　　SUBJECT CODE: BTECH_AI&DS-604T
DURATION: 1 Hr 30 Min　　　　　　　　　　　　MAX MARKS: 35

Note:
1) All questions are Compulsory.
2) All questions carry marks as indicated.
3) Assume suitable data whenever necessary.

Que. No.		Question	Marks	CO	BL
Que 1. A		I. _____ keyword is used for function in Python language. a) Function　　　　　b) def c) Fun　　　　　　　d) Define	1	CO1	1
		II. Python supports the creation of anonymous functions at runtime, using a construct called _____ a) pi　　　　　　　b) Anonymus c) lamda　　　　　　d) none	1	CO1	1
	B	Explain in brief diffrent types of Operators in Python.	5	CO1	2
	C	Which are the build in data-types in python and how we can declare them in the program	7	CO1	2
		OR			
Que 2. A		I. _____ is the built-in function in python. a) sqrt()　　　　　　b) scan() c) speed()　　　　　d) print()	1	CO1	1
		II. Which of the following is the truncation division operator in Python? a) |　　　　　　　b) / c) //　　　　　　　d) %	1	CO1	1
	B	Diffrentiate between Python Module and Python Functions	5	CO1	2
	C	Write a Program to find area and circumference of circle by giving the radius as input from user end	7	CO1	3

Que 3. A	I. What will be the output of the following Python code?	1	CO1	

	`x = 'abcd'`
	
	`for i in x:`
	
	    `print(i.upper())`
		1	CO1	1

	a) error b) abcd			
	c) AbCd d) ABCD			
	II. Which of the following operators cannot be used with strings in Python?			
	a) + b) /			
	c) - d) All of the above			
B	Diffrentiate between Method Overloading and Method Overridding.	5	CO1	2
C	Write a Python Program using Function to calculate the factorial of a number	7	CO1	3
	OR			
Que 4. A	I. What will be the output of the following Python code?	1	CO2	1

	`class test:`
	
	    `def _ _ init_ _ (self,a):`
	
	        `self.a=a`
	
	    `def display(self):`
	
	        `print(self.a)`
	
	`obj=test()`
	
	`obj.display()`
		1	CO2	1

	a) Runs normally, doesn't display anything b) Displays 0, which is the automatic default value c) Error as one argument is required while creating the object d) Error as display function requires additional argument			
	II. What is Instantiation in terms of OOP terminology?			
	a) Deleting an instance of class b) Modifying an instance of class c) Copying an instance of class d) Creating an instance of class			
B	What is mean by inheritance and explain different types of inheritance.	5	CO2	2
C	Write a Python program to create a calculator class. Include methods for basic arithmetic operations.	7	CO2	

ue 5. A	I. Pandas deals with which of the following data structure a) series b) data frames c) panel d) all of the above	1	CO3	1
	II. pandas is the library that deals with a) data sets b) arrays c) none of the above d) both a and b	1	CO3	1
B	What are the attributes of pandas series, explain with examples.	5	CO3	2
	OR			
Que 6. A	I. The most important object defined in NumPy is an N-dimensional array type called? a) ndarray b) narray c) nd_array d) darray	1	CO3	1
	II. Which of the following Numpy operation are correct? a) Mathematical and logical operations on arrays. b) Fourier transforms and routines for shape manipulation. c) Operations related to linear algebra. d) All of the above	1	CO3	1
B	Explain in detail what are the operations to be performed on arrays using numpy library.	5	CO3	2