SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

Ramapuram Campus, BharathiSalai, Ramapuram, Chennai - 600089

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

QUESTION BANK

DEGREE / BRANCH: B.Tech/CSE with Specializations AIML, BDA,CS and IOT

IV SEMESTER

SUB CODE – SUBJECT NAME: 18CSC207J/ADVANCED PROGRAMMING PRACTICE

Regulation– 2018

AcademicYear: 2022-23

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SUBJECT : 18CSC207J -ADVANCED PROGRAMMING PRACTICE

SEM/YEAR:IV/II

Course Outcomes

CO1:Create Programs using structured, procedural and object oriented programming paradigms
CO2:Create Programs using event driven, declarative and imperative programming paradigms
CO3:Create Programs using parallel, concurrent and functional programming paradigms
CO4:Create Programs using logic, dependent type and network programming paradigms
CO5:Create Programs using symbolic, automata based and graphical user interface programming paradigms
CO6:Create Programs using different programming paradigms using python language

UNIT I			
Structured Programming Paradigm- Programming Language Theory- Bohm-Jacopini structured program theorem- Sequence, selection, decision, iteration, recursion- Other languages: C, C++, Java, C#, Ruby - Demo: Structured Programing in Python- Procedural Programming Paradigm- Routines, Subroutines, functions- Using Functions in Python- logical view, control flow of procedural programming in various aspects- Other languages: Bliss, ChucK, Matlab- Demo: creating routines and subroutines using functions in Python- Object Oriented Programming Paradigm- Class, Objects, Instances, Methods- Encapsulation, Data Abstraction- Polymorphism, Inheritance- Constructor, Destructor- Example Languages: BETA, Cecil, Lava Demo: OOP in Python			
PART-A (Multiple Choice Questions)			
Q. No	**Questions**	**Course Outcome**	**Competence BT Level**
1	In Python which parameter passing mechanism is used with function call. a) Pass by value b) Pass by Reference c) Both Pass by value and Pass by reference d) None	CO1	L1
2	Which one is correct about variable names in Python. a) All variable names must begin with an underscore. b) Unlimited length c) The variable name length is a maximum of 2. d) All of the above	CO1	L1
3	Which of the following is not the type of function argument? a) Positional argument b) Keyword argument c) Initial argument d) Default argument	CO1	L1
4	What will be the output of the following Python code? **x = 50**	CO1	L2

	def func(x): **print('x is', x)** **x = 2** **print('Changed local x to', x)** **func(x)** **print('x is now', x)** a) x is 50 Changed local x to 2 x is now 50 b) x is 50 Changed local x to 2 x is now 2 c) x is 50 Changed local x to 2 x is now 100 a) None		
5	What will be the output of the following Python code? **values = [[3, 4, 5, 1], [33, 6, 1, 2]]** **v = values[0][0]** **for row in range(0, len(values)):** **for column in range(0, len(values[row])):** **if v < values[row][column]:** **v = values[row][column]** **print(v)** a) 3 b) 5 c) 6 d) 33	CO1	L3
6	What will be the output of the following piece of code. [CLO-1,L3] **def greet(name,msg='Good Day'):** **print("Hello",name + ', ' + msg)** **greet("AAA")** **greet("BBB","Good Morning")** a) Hello AAA Good Morning, Hello BBB Good Morning b) Hello AAA Good Morning, Hello BBB Good Day c) Hello AAA Good Day, Hello BBB Good Day d) Hello AAA Good Day, Hello BBB Good Morning	CO1	L2
7	What is the correct syntax to create a class named Student that will inherit properties and methods from a class named Person in Python? a) class Student from Person: b) class Student(Person): c) Student(Person): d) class Student : Person	CO1	L1
8	What value will be printed by the print statement given in the following code? **odd=lambda x: bool(x%2)** **numbers=[n for n in range(10)]** **print(numbers)** **n=list()** **for i in numbers:** **if odd(i):** **continue** **else:** **break** a) [0, 2, 4, 6, 8, 10] b) [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] c) [1, 3, 5, 7, 9]	CO1	L3

	d) Error		
9	The number of arguments taken by lambda function a) 1 b) 2 c) Any number d) None	CO1	L1
10	Which of the following is true regarding Generic/meta programming? a) generates semantic associations b) Programs about programs c) generates higher-order programs d) is used for assembly level manipulations	CO1	L1
11	If a is a dictionary with some key-value pairs, what does a.pop('key') do? a) Removes an arbitrary element b) Removes all the key-value pairs c) Removes the key-value pair for the key given as an argument d) Invalid method for dictionary	CO1	L2
12	According to Bohm-Jacopini, a function is possible by combining subprograms in which three manners? a) Jump, Sequence and Loop b) Sequence, Function Calls and Subroutines c) Sequence, Iteration and Selection d) Iteration, Macros and Branching	CO1	L1
13	What are the values printed by the two print statements given below? **a=10** **b=20** **def change():** **global b** **a=45** **b=56** **change()** **print(a)** **print(b)** a) 10 56 b) 45 56 c) 10 20 d) Syntax Error	CO1	L3
14	Which of the following is the use of id() function in Python? a) Every object doesn't have a unique id b) id returns the identity of the object c) All of the mentioned d) None of the mentioned	CO1	L1
15	What will be the value printed by the last print statement in the following Python code? **d={"id":101, "name":"AAA", "dept":"QA"}** **print(d)** **print("Emp ID=",d['id'])** **print("Emp Name=",d['name'])** **print("EmpDept=",d['dept'])** **d['dept']="RA"**	CO1	L3

	print(d) **d.pop('dept')** **print(d['dept'])** a) QA b) RA c) KeyError: 'dept' d) None		
16	Which of the following is correct way to add all classes, methods or other datatypes(list, tuple, dictionary) etc.. of a module in Python? a) import * from module_name b) from module_name import * c) from module_name import all d) import module_name as m	CO1	L2
17	---------- refers to the spaces at the beginning of a code line which is considered as the special important feature of Python. a) Indentation b) Input c) Inherit d) Identification	CO1	L1
18	_____ is a graphical representation of structured programming using Top down analysis. a) Programming Paradigm b) Structogram c) Flowchart d) Proess block	CO1	L1
19	Which of the following statements is incorrect about the following code? **class People():** **def __init__(self, name):** **self.name = name** **def namePrint(self):** **print(self.name)** **person1 = People("John")** **person2 = People("Sai")** **person1.namePrint()** a) person1 and person2 are two different instances of the People class b) The __init__ method is used to set initial values for attributes c) 'self' is not needed in def namePrint(self): d) person2 has a different value for 'name' than person1	CO1	L3
20	_____ is not a keyword, but by convention it is used to refer to the current instance (object) of a class. a) class b) def c) self d) init	CO1	L2
21	Which of the following is the correct way to define an initializer method? a) def __init__(title, author): b) def __init__(self, title, author): c) def __init__():	CO1	L2

	d) __init__(self, title, author):		
22	How the constructors and destructors can be differentiated? a) Destructor have a return type but constructor doesn't b) Destructors can't be defined by the programmer, but constructors can be defined c) Destructors are preceded with a tilde symbol, and constructor doesn't d) Destructors are same as constructors in syntax	CO1	L2
23	What is the output of the function complex()? a) 0j b) 0+0j c) 0 d) Error	CO1	L2
24	What does ~~~5 evaluate to? a) +5 b) -11 c) +11 d) -5	CO1	L2
25	Which specifier should be used for member functions of a class to avoid inheritance? a) Private b) Default c) Protected d) Public	CO1	L2
PART B (4 Marks)			
1	What is Structured programming? How does it minimize the complexity?	CO1	L1
2	Write a python program with an add() function to return the sum of two integers.	CO1	L3
3	List on Python Variables and its types.	CO1	L1
4	Compare structured programming and Procedural programming.	CO1	L2
5	Write a program to implement recursion.	CO1	L3
6	What is Data abstraction and explain its types.	CO1	L1
7	Define Inheritance.	CO1	L1
8	Write a program to create a list and print the values.	CO1	L3
PART C (12 Marks)			
1	There are 50 computers available in computer programming lab where each computers are used six hours per day. Write a Python program using classes and objects that contain getDetail() for getting input from user,calculatesecondperDay() for calculating the usage of each computer in seconds per day, calculateminutesperWeek() for calculating the usage of each computer in minutes per week ,calculatehourperMonth() for calculating usage of each computer in hour per month and calculatedayperYear() for calculating usage of	CO1	L3

	each computer in day per yearList all the Components of structured programming language		
2	Discuss the features of Procedural programming.	CO1	L2
3	Define Function and recursion and explain them in detail	CO1	L2
4	List out the Features of object oriented programming	CO1	L2
5	Write a python program to get square and cube of a number using Inheritance concept.	CO1	L3