

Date:12-03-2022

Registration number:

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

**B.Sc.- III SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2021**

**(Examination conducted in February - March 2022)**

**CS 318 - Object Oriented Programming Using Python and**

**Database Management System**

**Time- 2 ½ hrs Max Marks-70**

**This question paper contains THREE printed pages and three parts**

**Part A**

**Answer all the following (10\*2=20)**

1. which is the correct statement to instantiate the class?

class student:

 def \_\_init\_\_(self, name, age):

 self.name = name

self.age = age

1. obj=student()
2. obj=student(1, “jack”,10)
3. obj=student(“jack”,10)
4. all of the above
5. Which among the following best describes encapsulation?
6. combining various data members and member functions that operate on those data members into a single unit
7. combining various data members into a single unit
8. combining various member functions into a single unit
9. combining various data members and member functions into a single unit which can operate on any data
10. Which of the following is correct?

class A:

 def \_\_init\_\_(self,name):

 self.name=name

a1=A("john")

a2=A("john")

1. id(a1) and id(a2) will have same value.
2. id(a1) and id(a2) will have different values.
3. Two objects with same value of attribute cannot be created.
4. None of the above
5. Write the output of the following code:

L=[1,2,3,4,5,[6,7,8]]
print(L[5][1])

1. [6, 7, 8]
2. 6, 7, 8
3. Error
4. 7
5. What will be the output of the following Python code snippet?

x = 'abcd'

for i in range(len(x)):

 x[i].upper()

print (x)

1. abcd
2. ABCD
3. Error
4. none of the mentioned

### List the different types of relationships in RDBMS..

### **What do you understand by functional dependency and transitive dependency in DBMS?**

### **What do you understand by the terms Entity, and Weak entity in DBMS?**

### **What are the differences between DROP and DELETE commands?**

### What are some common clauses used with SELECT query in SQL?

**Part B**

**Answer any five of the following (5\*6=30)**

1. Make a list of first ten letters of the alphabet then using the slice operation do the following: (2+2+2)
2. Print the first three letters from the list.
3. Print four letters from the middle.
4. Print the letters from 5th position to the end to the list.
5. Discuss inheritance in Python programming language.
6. Create a student class and initialize it with name and roll number. Design method to:
7. Display \_ to display all information of the student. (3+3)
8. Set\_ to assign age and marks to the student.
9. Compare the feature of Network, Hierarchical and Relational model.
10. Draw an ER diagram of Banking system taking into account at least five entities. indicate all the keys, constraints and assumptions that are made.
11. Write SQL query for following consider table

 EMP(empno , deptno, ename ,salary, Designation, joiningdate, DOB,city) (2+2+2)

1. Display names of employees whose experience is more than 10 years
2. Display age of employees
3. Display average salary of all employee
4. Explain the following operations in relational algebra with suitable examples:
	1. Union`` (2+2+2)
	2. Difference
	3. Intersection

**Part C**

**Answer any two of the following (2\*10=20)**

1. i) Write a python program to find the given number is odd or even. (5+5)

ii) Explain break and continue statement with the help of for loop.

1. What are modules in python? How will you import them? Explain the concept by creating and importing a module.
2. Discuss the purspose of BCNF and describe how BCNF different from 3NFprovide an example to illustrate your answer.