Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Ninth Semester MCA Integrated Degree Regular and Supplementary Examination December 2021

Course Code: RLMCA369
Course Name: PYTHON PROGRAMMING

Max. Marks: 60   Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.   Marks

1	What are the input/output statements used in python language	(3)
2	What are assertions in python? Give example.	(3)
3	Illustrate with an example, the data hiding in python language.	(3)
4	Is python support polymorphism? Prove your answer using an example.	(3)
5	Distinguish between match () and search () functions.	(3)
6	Write short note on following-COMMIT and ROLLBACK.	(3)
7	What is TKinter? How it support GUI application development.	(3)
8	What are projects and apps in Django.	(3)

PART B

Answer any one question from each module. Each question carries 6 marks.

Module I

9 Explain uses of following data types in python programming
a List (3)
b Tuple (3)

OR

10 Explain different loop structures in python. How control statements are useful to construct loops. (6)

Module II

11 List out different types of function argument passing mechanism in Python. Explain important of each argument with suitable examples. (6)

OR

12 Define an exception. Is python language has enough features to handle exceptions? Justify your answer with examples. (6)

Module III

13 How python language support file operations. Write a program to copy a text file to another text file. (6)

OR

14   Define a class to represent a bank account. Include the following details like name   (6)
of the depositor, account number, type of account, balance amount in the account.
Write methods to assign initial values, to deposit an amount, withdraw an amount
after checking the balance, to display name, account number, account type and
balance.

Module IV

15   Write a python program to check the validity of password input by users.   (6)
Validation (At least 1 letter between [a-z] and 1 letter between [A-Z]. At least 1
number between [0-9]. At least 1 character from [$#@]. Minimum length 6
characters. Maximum length 16 characters.

OR

16   Develop a database application using a table STUDENT with fields-ROLLNO,   (6)
NAME, AGE and COURSE. Include connection and disconnection statements to
STUDENT database. Write a menu driven python program to implement
following operations.

         a. INSERT
         b. UPDATE
         c. DELETE
         d. READ

Module V

17   Develop a GUI application using TKinter module. Use following TK Widgets-   (6)
Label, Scale and Button. Customize the program to implement following
operations.

     i.   Controls the size of the text font in the label widget by Scale slider.
     ii.   Exit the application, when click on the button

OR

18   Explain the following

   a   Python web client tools   (3)

   b   Python Web Servers   (3)

Module VI

19   What is Django? Explain application development in Django   (6)

OR

20   Explain following

   a   matplotlib   (3)

   b   NumPy   (3)

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PART A
Answer all questions, each carries3 marks.   Marks

1	What is a dictionary? Write a Python program to merge two dictionaries.	(3)
2	What are lambda functions? Explain how lambda function is used with filter() functions	(3)
3	Explain any six file opening modes in Python.	(3)
4	Explain how operator overloading can be done in Python with an example	(3)
5	Explain the use and syntax of compile() and findall() method with an example for each.	(3)
6	Explain the steps required for connecting a Python with the database	(3)
7	Write a Python program to identify favorite programming languages from a given set by the user using Checkbutton. Display the languages selected.	(3)
8	Explain any two functions in matplotlib for drawing charts.	(3)

PART B
Answer any one question from each module. Each question carries 6 marks.

Module I

9	Explain different types of operators in Python.	(6)

OR

10	List the features of set data type. Explain the methods in set data type for implementing union, intersection, difference operation with an example for each.	(6)

Module II

11	a)	Explain how a module can be located.	(2)
	b)	Write a module to check a year is leap year or not. Import the module to generate leap years between a given range of years. For Eg, display leap years between 1990 and 2050	(4)

OR

12	Explain exception handling in python.	(6)

What are user defined exceptions? give an example.

Module III

13	Write a Python program to count the number of lines in a file.	(6)

OR

14	Explain how constructors and destructors are used in Object Oriented Programming using Python with an example.	(6)

Module IV

15	Explain any three character classes and repetition patterns defined in re module with an example for each.	(6)

OR

16	a) With the help of an example explain how insert, update and delete operations in a database table done in python.	(3)
	b) Briefly explain fetchone(),fetchall() and rowcount.	(3)

Module V

17	Using Tkinter gadgets design a page to accept the name, id, salary and gender of an employee. Use scale widget to display the salary and radio button to identify gender.	(6)

OR

18	What are web clients. Explain any three web client tools.	(6)

Module VI

19	Explain any six functions in NumPy module for manipulating arrays.	(6)

OR

20	Explain how a project and an app can be created using Django	(6)

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