

Total No. of Questions : 5]

SEAT No. :

P5784

[Total No. of Pages : 2

[6120]-106

First Year M.C.A. (Management)
IT - 21 : PYTHON PROGRAMMING
(2020 Revised) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*
- 3) *Assume suitable data if necessary.*

Q1) a) Write a program to create a list of words from the given string which are less than size 'A' .

Input String: "Python programming language has lot of applications in data analytics".

Input $n = 8$ [5]

b) Explain the concept of modules and packages with suitable example. [5]

OR

a) Explain generators with example. [5]

b) Write a program to swap two numbers without using temporary variable accept input from the user. [5]

Q2) a) What is thread? Write a program that creates two threads. One thread should print even numbers from 2 to 8 and the other should print odd numbers from 1 to 7. [5]

b) Write a program to accept an integer number and use try/except to catch the exception if a floating point number is entered. [5]

OR

a) What is thread synchronization? Explain with suitable example. [5]

b) Write a program that reads a text file and counts the number of lines and words in the file. [5]

P.T.O.

- Q3)** a) Write a program to validate strong password using regular expression - specify rules for the strong password. [5]
- b) Create a class “Bank” having attributes “Bank name” “Branch”, “City”, “Manager Name” and methods “Change manager name” and “Display details.” Write a constructor to initialize the instance variables. Write a main program to demonstrate the use of Bank class. [5]

OR

- a) Write a program to find the occurrence and position of the substrings within a string consider user input. [5]
- b) Write a program to demonstrate the overriding of the base class method in the derived class. [5]
- Q4)** a) Write a program using mongo DB database to create a “employee”. Collection having fields Emp ID, Name, Designation, Mobile, Department. Accept the input from the user to insert the documents. [5]
- b) What is string slice? How it is useful. [5]

OR

- a) Explain deep copy with suitable example. [5]
- b) Write a program using mongo DB database to create a collection “Chess competition” with fields (Player_id, player_name, player_age, player_phone) and display all registrations. [5]
- Q5)** a) Create pandas dataframe using 2D list and perform following operations. [5]
- i) Display first 5 rows.
- ii) Count missing values in column 2nd.
- b) Create 3×3 numpy array and determine median and mode. [5]

OR

- a) Create dataframe using three series having size 10. series are account number, name and balance. [5]
- b) Draw pie chart using matplotlib lib and decorate it by adding various elements use suitable data. [5]

