[5865] - 201

F.Y.M.C.A. (Management)
IT21-PYTHON PROGRAMMING
(2020 Pattern) (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) *Answer all subquestions at one place.*

Q1) Choose the correct option. (½ mark each)   **[10]**

   i)   Which type of programming does python support?

        a)   Object-oriented programming

        b)   Structured programming

        c)   Functional programming

        d)   all of the mentioned

   ii) Which keyword is used for function in python language?

        a)   function   b)   def

        c)   fun   d)   define

   iii) Which of the following function is used to export graph generated in matplotlib to-png file format?

        a)   savefig   b)   savefigure

        c)   save   d)   export

   iv) Which of the following method used for displaying plot?

        a)   display   b)   show

        c)   execute   d)   plot

   v)   In python, a class is _____ for a concrete object.

        a)   a distraction   b)   an instance

        c)   a nuisance   d)   a blue print

P.T.O.

vi) You can delete properties of objects by using the _____ keyword.

    a) delete   b) dedl

    c) del   d) drop

vii) The class has a documentation string, which can be accessed via?

    a) ClassName

    b) ClassName___ doc___

    c) _doc_

    d) ClassName. — doc —

viii) Which of the following function can be used to check if a file 'Sample,txt' exists?

    a) OS. Path. is Exits ('sample.txt')

    b) OS. Path. exists ('sample.txt')

    c) OS.Path. is file ('sample.txt')

    d) OS. is File ('sample.txt')

ix) Which of following is NOT a correct was of importing math module?

    a) amport * from math   b) From math import*

    c) Import math as mt   d) From math import pi,sin

x) Which of following functions clears the regular expression cache?

    a) re. sub ( )   b) re. pos( )

    c) re.purge ( )   d) re.Subn ( )

xi) Command to keep thread in sleep mode?

    a) Thread.sleep   b) Thread_sleep

    c) Threadsleep   d) Thread - sleep

xii) Which of the following is not an exception hardling keyword is python?

    a) try   b) except

    c) accept   d) finally

xiii) W.r.t MongoDB, which of the following commands will delete a collection named EMP?

    a) db.emp. drop ( )   b) db.emp delete ( )

    c) db. emp. deletemany ( )   d) db. emp. deleteall ( )

xiv) Chose the correct syntax of reshape ( ) function is Numpy array____.

    a) array. reshape (shape)   b) reshape (Shape, array)

    c) reshape (array, shape)   d) reshape (shape)

xv) If zoo = ['lion', 'tiger'], what will be zoo×2?

    a)   ['lion', 'lion,' 'tiger,' 'tiger']

    b)   ['lion']

    c)   ['tiger']

    d)   ['lion,' 'tiger', 'lion,' 'tiger']

xvi) What is correct syntax for creating single valued tuple?

    a)   (a)   b)   (,)

    c)   (a,)   d)   {a}

xvii) _____ is a string literal denotated by triple quote for providing the specifications of certain program elements.

    a)   client   b)   docstrng

    c)   modularity   d)   interface

xviii) The command that is used to install a third-party module in python is

    a)   pip   b)   import

    c)   py   d)   install

xix) The character_____ and _____matches the start and end of strng, respectively.

    a) $ and $ b)   * and &

    c)   ^ and •   d)   ^ and $

xx) The most important object defined in Numpy is an N-dimensional array type called?

    a)   narry   b)   Ndarry

    c)   ndrray   d)   NdArray ( )

Q2) a)   Write a program to check the number entered by user is even or odd. Program should accept integer digits only.   **[3]**

    b)   Illustrate types of arguments used in python function with example. **[3]**

    c)   Discuss the polymorphism concept in python create suitable python classes.   **[4]**

OR

a) Write a python program for the following. **[3]**
   i)   Create list of fruits
   ii) Add new fruit in list.
   iii) sort the list.
   iv) delete last fruit name from list.

b) Write a python function to check the given number is even or odd. Handle suitable exceptions. **[3]**

c) Explain constructor concept in python with example. **[4]**

Q3) a) Write a python program to create an employee. txt file and store employee name and address. **[2]**

b) Write a python program to create "employee" collection with fields" (ID, name, address, phone email and dept) in mongoDB. Prform the following operations. **[5]**
   i)   Display all employees in "Accounts" department
   ii) Delete employee with ID - 210345
   iii) Update phone with new phone for employee ID -123

c) What is tuple?
   What is the difference between list and tuple? **[3]**

OR

a) What is set? Explain with example. **[3]**

b) Write a program to retrieve and display employee details from "Employee" collection stored in mongoDB database. **[3]**

c) Write a program to update the employee details stored in "Employee" collection stored in Mangodb database. **[2]**

d) Write python program to read "employee" . txt" file and display alternate employee record. **[2]**

Q4) a) Write a program for extracting email address from a given webpage. **[4]**

b) What is synchronization in threading? Explain with example. **[4]**

c) What is module? Explain with example. **[2]**

OR

a) Write a program to validate URL using regular expression. Explain every special character of the regular expression used in this program. **[4]**

b) Write a multithreading program, where one thread prints square of a number and another thread prints factorial of a number. Also display the total time taken for the execution. **[4]**

c) What is anonymous function in python? Demonstrate with example. **[2]**

Q5) a) Create 5×5 2D numpy assay and retrieve top left corner 2×2 array from it. **[2]**

b) Write a program to illustrate slicing in numpy array. **[2]**

c) Create paundas dataframe using two dimensional list. Perform following operations. **[4]**
   i) Count number of rows.
   ii) Count missing values in first column.
   iii) Display number of columns in data frame.

d) Explain the terms w.r.t. oops in python. **[2]**
   i) --Init--   ii) Self

OR

a) Create 3×3 numpy array and display column wise mean and median. **[2]**

b) Create a series from numpy array and find max and mean of unique items of series. **[2]**

c) Given data frame as below: **[4]**

ID	Name	HRA	TA	DA
1001	Mohan	12000	6000	10000
1002	Sachin	13000	5000	9000
1003	Virat	11000	4000	8000

   i) Compute sum of each column.
   ii) Compute mean of each integer column.
   iii) Compute median of each integer column.

d) Explain overloading in python with example. **[2]**

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