

B.C.A Semester - 6 (CBCS) Examination

March/April -2020

CS-33 PROGRAMMING IN PYTHON (CORE)

Time: 2:30 Hours

Marks: 70

Instructions:

1. All questions are compulsory.
 2. Figures to the right indicate marks.
-

Q-1 (A): Attempt the following questions: {Attempt: ALL} [4]

- 1) What is the full form of IDLE?
- 2) What is the output for – >>> “python” [-3]?
- 3) _____ keyword is used to create User Defined Function in Python.
- 4) Which predefined Python function is used to find length of string?

Q-1 (B): Attempt the following questions: {Attempt: Any One} [2]

- 1) Explain the format () method with example.
- 2) Name the supported data types available in python?

Q-1 (C): Attempt the following questions: {Attempt: Any One} [3]

- 1) Explain the features of Python in details.
- 2) What is lambda function in Python? Explain with an appropriate example

Q-1 (D): Attempt the following questions: {Attempt: Any One} [5]

- 1) Give a comparison between List, Tuple and Dictionaries in Python.
- 2) Write a program to make a simple calculator that can add, subtract, multiply and divide using functions.

Q-2 (A): Attempt the following questions: {Attempt: ALL} [4]

- 1) Which method is used to create a Constructor in python class?
- 2) When is the finally block executed?
- 3) When will the else part of try-except-else be executed?
- 4) _____ is used to create an object.

Q-2 (B): Attempt the following questions: {Attempt: Any One} [2]

- 1) What are Exceptions?
- 2) What do you mean by Assertions?

Q-2 (C): Attempt the following questions: {Attempt: Any One} [3]

- 1) What is Inheritance? Write an example of Single Inheritance.
- 2) Explain the Linear Search Algorithm.

Q-2 (D): Attempt the following questions: {Attempt: Any One} [5]

- 1) Write an algorithm of Selection Sort with an appropriate example.
- 2) Differentiate Object-oriented vs Procedure-oriented Programming.

Q-3 (A): Attempt the following questions: {Attempt: ALL} [4]

- 1) _____ library is used for plotting in Python language.
- 2) What is pylab?
- 3) What is scatter plot?
- 4) What is the use of legend () in plots.

Q-3 (B): Attempt the following questions: {Attempt: Any One} [2]

- 1) What is the use of Matplotlib in Python?
- 2) List out the markers available in plots.

- Q-3 (C): Attempt the following questions:** {Attempt: Any One} [3]
- 1) Explain plot(), title(), xlabel(), ylabel(), xlim(), ylim(), show() with suitable example.
 - 2) Write a program for Fibonacci sequence.
- Q-3 (D): Attempt the following questions:** {Attempt: Any One} [5]
- 1) Explain the 0/1 Knapsack Algorithm using diagram.
 - 2) Explain Dynamic programming and divide & conquer method.
- Q-4 (A): Attempt the following questions:** {Attempt: ALL} [4]
- 1) Full form of JSON?
 - 2) Full form of CSV?
 - 3) _____ matches the string to begin, _____ matches the string to be end in Regular Expression.
 - 4) What is the use of “\d” operator in Regular Expression?
- Q-4 (B): Attempt the following questions:** {Attempt: Any One} [2]
- 1) What is Regular Expression?
 - 2) Explain the search() with an appropriate example.
- Q-4 (C): Attempt the following questions:** {Attempt: Any One} [3]
- 1) What are various methods of Regular Expressions?
 - 2) Explain special characters which are used in Python Regular Expression.
- Q-4 (D): Attempt the following questions:** {Attempt: Any One} [5]
- 1) Create a Python script to convert python dictionary object into JSON string.
 - 2) Write a Python script to find out that an email id entered by a user is valid or not using the python ‘re’ module.
- Q-5 (A): Attempt the following questions:** {Attempt: ALL} [4]
- 1) When the labels are numeric, the problem is called a _____ problem.
 - 2) The Pandas package makes it possible to read data into a specialized data structure called a _____.
 - 3) _____ is a process through which a future outcome or behavior is predicted based on the past and current data.
 - 4) What is Data Set?
- Q-5 (B): Attempt the following questions:** {Attempt: Any One} [2]
- 1) What is Machine Learning?
 - 2) What is Complexity?
- Q-5 (C): Attempt the following questions:** {Attempt: Any One} [3]
- 1) Explain Big Data.
 - 2) How to use Correlation Heat Map for Regression.
- Q-5 (D): Attempt the following questions:** {Attempt: Any One} [5]
- 1) Characteristics of the Rocks versus Mines Data Set.
 - 2) Difference between a Simple Model and a Complex Model.
