



R A N - 2 0 1 1 0 0 0 7 0 3 0 1 0 0 0 2

**RAN-2011000703010002**

**M.Sc.(I.C.T.) (Semester - III) Examination**

**January - 2021**

**Introduction to Python and Data Science**

**Time: 3 Hours ]**

**[ Total Marks: 70**

**સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિયાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

■ M.Sc.(I.C.T.) (Semester - III)

Name of the Subject :

■ Introduction to Python and Data Science

Subject Code No.: 2011000703010002

Seat No.:

<input type="text"/>					
----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

Student's Signature
---------------------

(2) Draw the Figure and give example wherever necessary.

**Q1. Answer the following: (Attempt any two)**

**[14]**

**A) Answer the following:**

**[7]**

- a) How can you find an object's data type? (2)
- b) How can you verify if an object is of a certain data type? (2)
- c) How can you convert the data type to another data type? (1)
- d) What are the various naming conventions in Python? (2)

**B) Write a note on life cycle of Data Science.**

**[7]**

**C) Write a note on Computer Vision.**

**[7]**

**Q2. Answer the following: (Attempt any two) [14]**

- A) What is the difference between Deep Copy and Shallow Copy?
- B) Explain the attributes : .size, .shape, .ndim, .loc[], at[], iat[] can be used for what purpose? (1,1,2,2,1)
- C) What is the difference between ndarray and Array ? Explain with examples.

**Q3. Answer the following questions: (Attempt any two) [14]**

- A) How can you remove the unwanted column added as 'Extra Id' while reading a a .csv file? How can you convert multiple junk values as Missing values? Give an example .
- B) You read a '.txt' file and all columns that were read were stored in a single column of data frame. How can you avoid this? Explain with an example.
- C) What is data normalization? Explain with an example.

**Q4. Answer the following: (Answer any two) [14]**

- A) What would be the output of following statements:

**Given :**

Cube\_var = [1, 3, 9, 18, 85]

Cube\_var [-2]

Cube\_var [0]

Cube\_var [-1]

Cube\_var[:]

Cube\_var +[100,200,300]

Cube\_var.append(3 \*\* 4)

Clear the list by replacing all the elements with an empty list

- B) What is the difference between category and object?
- C) What are the steps performed in EDA? Explain with an example.

**Q5. Answer the following: (Answer any two)**

**[14]**

- A) Explain Set and Frozen set.
  - B) What is dimensional reduction? Give an example of any one technique.
  - C) Explain List data structure to perform Adding, insertion by Slicing, Nested List.
-



R A N - 2 0 1 1 0 0 0 7 0 3 0 1 0 0 0 2

**RAN-2011000703010002**

**M.Sc.(I.C.T.) (Semester - III) Examination**

**January - 2021**

**Introduction to Python and Data Science**

**Time: 3 Hours ]**

**[ Total Marks: 70**

**સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિશાનીવાળી કિગતો ઉત્તરવહી પર અપણું લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

■ M.Sc.(I.C.T.) (Semester - III)

Name of the Subject :

■ Introduction to Python and Data Science

Subject Code No.: 2011000703010002

Seat No.:

--	--	--	--	--	--	--

Student's Signature

(2) Draw the Figure and give example wherever necessary.

**Q1. Answer the following: (Attempt any two)**

**[14]**

**A) Answer the following:**

**[7]**

- How can you find an object's data type? (2)
- How can you verify if an object is of a certain data type? (2)
- How can you convert the data type to another data type? (1)
- What are the various naming conventions in Python? (2)

**B) Write a note on life cycle of Data Science.**

**[7]**

**C) Write a note on Computer Vision.**

**[7]**

Q.4

1) What do you mean by  
2) Explain short quest.  
3) Explain tempe.  
4) List out.

**Q2. Answer the following: (Attempt any two)**

[14]

- A) What is the difference between Deep Copy and Shallow Copy?  
B) Explain the attributes : .size, .shape, .ndim, .loc[], at[], iat[] can be used for what purpose? (1,1,2,2,1)  
C) What is the difference between ndarray and Array ? Explain with examples.

**Q3. Answer the following questions: (Attempt any two)**

[14]

- A) How can you remove the unwanted column added as 'Extra Id' while reading a a .csv file? How can you convert multiple junk values as Missing values? Give an example .  
B) You read a '.txt' file and all columns that were read were stored in a single column of data frame. How can you avoid this? Explain with an example.  
C) What is data normalization? Explain with an example.

**Q4. Answer the following: (Answer any two)**

[14]

- A) What would be the output of following statements:

**Given :**

(A) Cube\_var = [1, 3, 9, 18, 85]

(B) Cube\_var [-2]

(C) Cube\_var [0]

(D) Cube\_var [-1]

(E) Cube\_var[:]

(F) Cube\_var +[100,200,300]

(G) Cube\_var.append(3 \*\* 4)

Clear the list by replacing all the elements with an empty list

- B) What is the difference between category and object?  
C) What are the steps performed in EDA? Explain with an example.

Q5. Answer the following: (Answer any two) [14]

- A) Explain Set and Frozen set.
  - B) What is dimensional reduction? Give an example of any one technique.
  - C) Explain List data structure to perform Adding, insertion by Slicing, Nested List.
-