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| **Semester: Aug 2024**  **Maximum Marks: 50 Examination: End Sem ATKT Exam Date: 11/8/2024 Duration:2.5hrs** | | |
| **Programme code:18.**  **Programme: MBA for Working Executive** | **Class:** FY | **Semester/Trimester: I**  **Batch 1 (2023-24)** |
| **College:**  **K. J. Somaiya Institute of Management** | **Name of the department/Section/Center:**  Centre for Executive Education | |
| **Course Code: 117P18C104** | **Name of the Course: Data Science Using Python** | |
| **Instructions:**  **1. Question No.1 is compulsory.**  **2. Answer any four from Q2. to Q6.**  **3. Try to write the output without using Python editors.**  **4. Do not mix up sub questions.**  **5. Simple Calculator is allowed.** | | |

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| **Question No.** |  | **Max.**  **Marks** |
| Q1. | i) Explain if-elif condition. When do we use it? Explain with example.  ii) Mention & explain the python features in brief. | (05)  (05) |
| Q2. | i) What will be the output of following python statements?  a. print(23 // 5)  b. print(2 << 2)  c. print(2 >> 0)  d. print(2 ^ 2)  e. print(2 != 2)  f. print(2 < 0)  ii) Find the output of the following:  str = "Pythonforbeginners is easytolearn"  str2 = "easy"  print("The first occurrence of str2 is at : ", end="")  print(str.find( str2, 4))  print("The last occurrence of str2 is at : ", end="")  print(str.rfind( str2, 4))  iii) How are lists different from strings when both are sequences? | (06)  (02)  (02) |
| Q3. | 1. Write short notes on types of operators in python with appropriate example? 2. Describe any five methods of Dictionary with example. | (05)  (05) |
| Q4. | i) What is the difference between lists, tuples and dictionaries? Give an example for their usage.  ii) Explain break and continue statements when do we use it? | (06)  (04) |
| Q5. | i) What is Data science? Why data science is needed? Explain various applications of data science?  ii) What is List? Discuss “list” data type in regards with the following points   1. Declaration and initialization of variable of “list “data type 2. Displaying second element of a list. 3. Delete third element of a list. 4. Display all elements starting from third position in a list. 5. Repeat list twice and display it | (05)  (05) |
| Q6. | i) How does NumPy differ from Pandas?  ii) Explain what is ndarray in NumPy?  iii) What are some of the NumPy aggregate functions?   1. How can we reshape a NumPy array with an example? | (02)  (02)  (03)  (03) |