(6 pages)   Reg. No. : ....

Code No. : 5732   Sub. Code : ZCIM 13

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

First Semester

Computer Science With Artificial Intelligence

PYTHON FOR DATASCIENCE

(For those who joined in July 2022 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions

Choose the correct answer :

1. Which of the following is the correct extension of the python file?
   (a) .py   (b) .python
   (c) .p   (d) None

2. Which of the following is not a keyword in python language?
   (a) val   (b) raise
   (c) try   (d) with

3. PANDAS stands for ————
   (a) Panel Data Analysis
   (b) Panel Data Analyst
   (c) Panel Data
   (d) Panel Dashboard

4. How can we convert the Numpy array to the list in python?
   (a) list (array)   (b) list. array
   (c) array.list   (d) none

5. In the ———— methods or functions must have the same name and same signatures.
   (a) Method overloading
   (b) Method overriding
   (c) Inheritance
   (d) Abstraction

6. Which of the following option is note a core datatype in the python language? ————
   (a) Dictionary   (b) Lists
   (c) Class   (d) All the above

7. Which one of the widget is not in Python? ————
   (a) Button   (b) Radio Button
   (c) Text Area   (d) label

8. Which of the following argument we need to pass in reshape ( ) function? ————
   (a) Array
   (b) Shape
   (c) Only Array
   (d) Both array and shape

9. Function name for cumulative sum of non-NA values ————
   (a) Cumprod   (b) Cumsum
   (c) Both (a) and (b)   (d) None

10. Which one is not a Data Visualization library?
    (a) Matplot lib   (b) Pandas
    (c) Seaborn   (d) Ploter

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) List out the features of python language.

    Or

    (b) Find out the area and perimeter of a circle with the user Input.

12. (a) Write short note on Data Frames.

    Or

    (b) Comment on: "Selection and Filtering in Series".

13. (a) What are python dictionaries?

    Or

    (b) Give a brief note on Inheritance in python programming language.

14. (a) Briefly explain reshaping with suitable example.

    Or

    (b) What are the ways to create Tables in python?

15. (a) What is cross Tabulation?

Or

(b) Write a python code to create an Employee table with suitable columns and insert two records.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write down the syntax and usage of 'for' loop and 'while' loop with suitable example.

Or

(b) What operators does python support? Explain with suitable example.

17. (a) Discuss in detail about Arithmetic operations or Data frames and Series.

Or

(b) Explain any five statistical functions in Numpy with suitable example.

18. (a) Write down any five Dictionary methods with suitable examples.

Or

(b) "Object oriented programming (OOP) in python" – Discuss.

19. (a) Discus in detail about Data Transformation in python – Pandas.

Or

(b) Illustrate string manipulation with suitable example for each one of them.

20. (a) Describe the concept of data aggregation and group operations available in python.

Or

(b) What are the different types of Data Visualization methods available in python? Explain.

————