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Reg. No. :

Code No. : 6024

Sub. Code : WCAM 13/
VCAC 12

M.C.A. (CBCS) DEGREE EXAMINATION,
APRIL 2025.

First Semester

Computer Applications – Core

PYTHON PROGRAMMING/ADVANCED PYTHON
PROGRAMMING

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL questions.

Choose the correct answer :

1. What will be the value of the following python expression? $4 + 3 * 5$

- (a) 35 (b) 19
(c) 4 (d) 1

2. Which of the following is used to define a block of code in python language?

- (a) Indentation (b) key
(c) brackets (d) single quote

3. Which of the following character is used to give single-line comments in python?

- (a) || (b) #
(c) ! (d) /*

4. What is the output when we execute list ("hello")?

- (a) ['h', 'e', 'l', 'l', 'o'] (b) ['hello']
(c) ['olleh'] (d) [llo]

5. A function calls itself is _____.

- (a) class (b) object
(c) recursion (d) exception

6. What will be the output of the following python statement? `>>>"a"+"bc"`

- (a) a (b) bc
(c) bca (d) abc

7. The 'init' method must begin and end with _____ connective underscores.
(a) Three (b) Four
(c) One (d) Two
8. Methods that allow a user to observe but not change the state of an object are called _____.
(a) Mutators (b) Accessors
(c) Polymorphism (d) Inheritance
9. A _____ number consists of two integer parts, a numerator and a denominator and is written using the format numerator/denominator
(a) Relational (b) Integer
(c) Float (d) Complex
10. Array indexing always uses _____ to index the elements of the array.
(a) () (b) ""
(c) '' (d) []
11. The _____ is the object of the Pandas library designed to represent one-dimensional data structures.
(a) Dataframe (b) Series
(c) Index (d) Class

12. The specific value _____ is used in Pandas data structures to indicate the presence of an empty field.
(a) WaN (b) LaN
(c) MaN (d) NaN
13. Which file is not a part of the Django project content _____
(a) Settings .py
(b) Manage .py
(c) Templates .py
(d) Py manage .py run server
14. How do you create a new Django project?
(a) django new project_name
(b) django startproject project_name
(c) django create project_name
(d) django init project_name
15. What is the default database used by Django?
(a) MySQL (b) PostgreSQL
(c) MongoDB (d) SQLite

PART B — (5 × 4 = 20 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

16. (a) Write down the two fundamental ideas of computer science.

Or

- (b) What are the different types of numeric datatypes available in python?

17. (a) What is a Namespace in Python? How to manage a program's namespace?

Or

- (b) Describe the design of the text-analysis program.

18. (a) Define the terms : (i) class and (ii) object.

Or

- (b) What do you mean by polymorphism?

19. (a) What is the use of slicing?

Or

- (b) Give a note on line chart with Pandas.

20. (a) List out the procedure to install Django.

Or

- (b) How to retrieve an object in Django?

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 600 words.

21. (a) Write short note on the following statements:

(i) while

(ii) for

Or

- (b) Define expression. Explain arithmetic expressions and mixed mode arithmetic and type conversions.

22. (a) How to create list? What are the basic operations on lists?

Or

- (b) What is function? How does it work?

23. (a) Write a sample code for simple GUI based programs.

Or

- (b) Discuss in detail about windows and window components.

24. (a) Expand and explain about Narray.

Or

- (b) Articulate Pandas and its data structures.

25. (a) How to build list and detail views in Django?

Or

(b) Write a sample code to create a project in Django.
