KAMARAJ COLLEGE (Autonomous)

Accredited with A+ Grade by NAAC

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(4 Pages) **Reg. No:……**

Question Code: 26E01401 **Course Code : 24PMCA12/25PMCA12**

PG Degree - End Semester Examinations, April 2026

First Semester

M.C.A

Advanced Python Programming

(For those who joined in July 2024 and June 2025 onwards)

Time : 3Hours **Maximum : 75 Marks**

PART – A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

CO:1 K:1 1. Label the term for "computing agent transforms the given information according to well defined rules and produces new information".

(a) Input (b) Data

(c) Output (d) Information

CO:1 K:2 2. Let x=8, y=2. Show the value of the following expressions: (x + y) * 3 and x ** y

(a) 30 and 16 (b) 30 and 64

(c) 14 and 16 (d) 14 and 64

CO:2 K:1 3. Find the output:

>>>name="Alan Turing"

>>>name[-6:]

(a) Alan T (b) Alan Tu

(c) nTuring (d) Turing

CO:2 K:2 4. Outline the dictionary operation that returns the number of entries in d.

(a) length(d) (b) len(d)

(c) count(d) (d) len{d}

CO:3 K:1 5. Which deck method is used if the deck is not empty, removed and returns the topmost card, otherwise returns None?

(a) deal() (b) deck()

(c) shuffle() (d) __len__()

CO:3 K:2 6. Infer the term that allows the programmer to save and load objects using a process.

(a) Storing (b) Mapping

(c) Pickling (d) Parsing

CO:4 K:1 7. Which are responsible for the labels on the axes and other metadata as the name of the axes?

(a) Arrays (b) Index objects

(c) Series (d) Data frames

CO:4 K:2 8. Show a special function for plotting horizontal bar charts.

(a) barh() (b) bar()

(c) barv() (d) plot()

CO:5 K:1 9. Choose a field that is a short label used to build beautiful, SEO-friendly URLs for blog posts.

(a) Status (b) Slug

(c) Publish (d) Title

CO:5 K:2 10. Outline the method that used to the model that returns the canonical URL for the object.

(a) absolute_url() (b) get_url()

(c) get_abs_url() (d) get_absolute_url()

PART – B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

CO:1 K:3 11. (a) Give a short notes on strings & assignments.

(OR)

(b) How do you make use of numeric data types and character sets in Python?

CO:2 K:3 12. (a) Identify some useful String methods in Python.

(OR)

(b) What are the key concepts for defining, tracing a recursive function and infinite recursion in Python?

CO:3 K:4 13. (a) Analyze the purpose of __init__ method, __str__ method, Accessors & Mutators and life time of objects with example.

(OR)

(b) Compare the behaviour of terminal-based programs and GUI-based programs with examples.

CO:4 K:3 14. (a) Apply indexing and slicing to Ndarray with examples.

(OR)

(b) Can you identify and list the various layers of the Matplotlib architecture?

CO:5 K:4 15. (a) Inspect the need of Django and list the steps for Installing Django.

(OR)

(b) Examine the following:

i. Creating list and detail views

ii. Adding URL patterns for views

PART – C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).
Answer should not exceed 600 words.

CO:1 K:4 16. (a) Analyze the selection process using if and if-else statements with syntax and example.

(OR)

(b) Examine the structure and behaviour of a while loop with example.

CO:2 K:3 17. (a) Describe the following in terms:

i. List Literals and Basic Operators

ii. List Methods for Inserting and Removing elements

(OR)

(b) Provide examples that utilize the various Higher-Order functions.

CO:3 K:4 18. (a) Explain the importance of Structuring Classes with Inheritance and Polymorphism.

(OR)

(b) Interpret the various windows components, command buttons and responding to events with example.

CO:4 K:4 19. (a) Discuss in detail about the Data Frame in Pandas.

(OR)

(b) Elaborate on adding elements to the chart and pie charts in Matplotlib with examples.

CO:5 K:4 20. (a) Analyze the process of creating an administration site for models.

(OR)

(b) Examine the methods used for retrieving objects when working with query sets.