

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.) –201306

POST GRADUATE DIPLOMA IN MANAGEMENT (2024-26)
END TERM EXAMINATION (TERM-III)

Subject Name: **Hands on Python Tools**
Sub. Code: **PG33**

Time: **90Min+30 Min**
Max Marks: **40**

Note: All questions are compulsory. Section A carries 12 marks: 6 questions of 2 marks each, Section B carries 18 marks having 3 questions (with internal choice question in each) of 6 marks each and Section C carries 10 marks one Case Study having 2 questions of 5 marks each.

Instruction:

1. All questions are to be solved using Jupiter notebook on individual Computer/Laptops.
2. The first cell of Jupiter notebook: Enter Subject Name, Date, Course & Session, Semester, Student's Name, Admission No. & Section on top eg. # Subject Name, # Date and so on
3. Save the file using your Admission No., Name & Section for example (PGDM24---_Name_Section) with .ipynb extension and submit the soft copies using a PD.
4. During examination, no student is allowed to use mobile phones/Smart watch/Internet in any conditions.

SECTION - A

Attempt all questions. All questions are compulsory.

2×6 = 12 Marks

Q. 1: (A). Write a Python program to add two numbers 99, 55 and print their sum.

Q. 1: (B). Write a Python program to check if a number is even or odd.

Q. 1: (C). Write a program to create a tuple for the elements – 1,2,3,4,5,6

Q. 1: (D). Input a string and print its length.

Q. 1: (E). Write a program to input the age of a person and check if they are eligible to vote (age ≥ 18).

Q. 1: (F). Convert temperature from Celsius to Fahrenheit using the formula $F = (C \times 9/5) + 32$.

SECTION – B

All questions are compulsory (Each question has an internal choice. Attempt anyone (either A or B) from the internal choice)

6 x 3 = 18 Marks

Q. 2: (A). Write a Python program to calculate the area and perimeter of a rectangle using user inputs.

Or

Q. 2: (B). Write a Python program to calculate the volume of a cube (side × side × side).

Q. 3: (A). Create a Pandas DataFrame using the following data of 5 employees:

Name: ["Ravi", "Anita", "Vikram", "Sneha", "Aman"]

Department: ["Sales", "HR", "IT", "Finance", "Marketing"]

Salary: [55000, 48000, 60000, 52000, 58000]

Or

Q. 3: (B). Write a program to create a NumPy array with the values: [10, 20, 30, 40, 50]

Calculate and print the following:

- Mean
- Median
- Standard Deviation

Q. 4: (A). Create a **pie chart** to represent the **proportion of revenue** from each product category using the following information:

A company sells four product categories with the following annual revenue distribution (in ₹ lakhs):

- Electronics: 120
- Clothing: 80
- Groceries: 100
- Furniture: 60

Or

Q. 4: (B). Given marks of students:

[55, 65, 75, 85, 45, 90, 62, 78, 88, 72]

Create a **histogram** to show the distribution of scores using **bins of 10** (e.g., 40–50, 51–60, etc.).

SECTION - C

Read the case and answer the questions

5×02 = 10 Marks

Q. 5: Case Study: A bookstore records daily sales using Python. For each book sold, they record the book name, price, and quantity sold.

Book	Price (₹)	Quantity Sold
Python Basics	450	10
Data Science 101	550	7
AI for Beginners	600	5

Questions:

Considering the above table,

Q. 5: (A). Create dictionary for 3 books with keys: 'Book', 'Price', and 'Quantity'. Print the dictionary.

Q. 5: (B). Add a new book to the dictionary with the values – Book: Finance and its Concepts, Price (₹): 580, Quantity Sold:6.

Kindly fill the total marks allocated to each CO's in the table below:

COs	Blooms Taxonomy Level	Marks Allocated	Questions
CO1	L1, L2 & L4	18	1 & 2
CO2	L5 & L4	16	3 & 5
CO3	L4	6	4

(Please ensure the conformity of the CO wise marks allocation as per your TLEP.)

Blooms Taxonomy Levels given below for your ready reference:

L1= Remembering

L2= Understanding

L3= Apply

L4= Analyze

L5= Evaluate

L6= Create