

Branch – SOFTWARE SYSTEMS (FIVE YEARS INTEGRATED)

PROGRAMMING IN PYTHON

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Identify the statement used to skip the current loop iteration. (i) break (ii) pass (iii) continue (iv) exit	K1	CO1
	2	Predict the output type of 5/2 in Python 3. (i) int (ii) float (iii) complex (iv) boll	K2	CO1
2	3	Identify how a dictionary stores data? (i) Index-value (ii) Key-value (iii) Value-value (iv) Key-index	K1	CO2
	4	Show which data structure does not allow duplicate elements? (i) List (ii) Tuple (iii) Dictionary (iv) Set	K2	CO2
3	5	Identify a class is a _____ of objects (i) Instance (ii) Blueprint (iii) Variable (iv) Function	K1	CO3
	6	Express the use of Operator overloading (i) Code duplication (ii) Code readability (iii) Execution time (iv) Memory usage	K2	CO3
4	7	Identify the keyword that is used to import all names from a module (i) Include (ii) from module import * (iii) import all (iv) load module	K1	CO4
	8	Show which standard library module provides operating system interfaces? (i) sys (ii) math (iii) os (iv) pathlib	K2	CO4
5	9	What is the core data structure in NumPy ? (i) list (ii) tuple (iii) ndarray (iv) Series	K1	CO5
	10	Show the use of Numpy funtion dot() (i) Element-wise multiplication (ii) Matrix multiplication (iii) Sorting arrays (iv) Indexing arrays	K2	CO5

Cont...

SECTION - B (35 Marks)
 Answer ALL questions
 ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain different data types available in Python with suitable examples.	K4	CO1
		(OR)		
	11.b.	Figure out the use of break and continue statements in loops with sample programs.		
2	12.a.	Explain dictionary operations to store and retrieve student details in a program.	K5	CO2
		(OR)		
	12.b.	Prescribe a user-defined function to perform arithmetic operations.		
3	13.a.	Analyse the execution flow in multilevel inheritance.	K4	CO3
		(OR)		
	13.b.	Examine how polymorphism is achieved using operator overloading.		
4	14.a.	Evaluate the advantages of using Python standard library modules.	K5	CO4
		(OR)		
	14.b.	Assess the benefits of organising code into packages.		
5	15.a.	Create a Matplotlib program to visualize given data using different chart.	K6	CO5
		(OR)		
	15.b.	Construct a small data analysis task using NumPy ndarray operations.		

SECTION - C (30 Marks)

Answer ANY THREE questions
 ALL questions carry EQUAL Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the various decision-making statements in Python and illustrate their usage with examples.	K4	CO1
2	17	Prescribe a program that reads data from a file, processes it, and writes the results into another file.	K5	CO2
3	18	Analyse multiple inheritance with an example and explain the flow of control.	K4	CO3
4	19	Explain how to create modules and packages?	K5	CO4
5	20	Recommend a Python application that reads multiple CSV files using Pandas and generates summarized analytical reports.	K6	CO5

Z-Z-Z

END