

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(Fifth Semester)

Branch – MATHEMATICS

PYTHON PROGRAMMING

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	Python is an _____ language. a) individual b) indexed c) interpreted d) invite	K1	CO1
	2	There are _____ different types of numbers in Python. a) one b) two c) four d) five	K2	CO1
2	3	_____ are defined by a pair of square brackets. a) Tuple b) Lists c) Dictionary d) Integer	K1	CO2
	4	A _____ is also collection of Python objects. a) Tuple b) Lists c) Dictionary d) Integer	K2	CO2
3	5	A _____ is statement or block of statements that is executed repeatedly. a) if b) Lists c) switch d) loop	K1	CO3
	6	_____ draws a vertical line from the top to the bottom of the plot at x=0. a) axvline() b) xvline() c) xyline() d) line()	K2	CO3
4	7	Arguments whose default values are specified while function definition is called _____ arguments. a) positional b) variable c) keyword d) int	K1	CO4
	8	$\ln P = \ln ______ + \alpha \ln S$. a) P1 b) S c) P d) P0	K2	CO4
5	9	The eigen value problem, which in matrix form is written as $A ______ = \lambda x$. a) B b) x c) E d) T	K1	CO5
	10	In read_csv() syntax sep is _____ field. a) space b) separator c) string d) setup	K2	CO5

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.	Enumerate Python modules.	K2	CO1
		(OR)		
	11.b.	Name any 7 NumPy functions.		
2	12.a.	Construct differentiation of lists and tuples.	K3	CO2
		(OR)		
	12.b.	Interview on how to read data from text file.		

Cont...

3	13.a.	Identify conditional statement in Python.	K3	CO3
	(OR)			
	13.b.	Build logarithmic plots in Python.		
4	14.a.	Inference on Passing data to and from functions.	K4	CO4
	(OR)			
	14.b.	Analyze Linear regression for fitting a power-law function.		
5	15.a.	Inspect Numerical intergration.	K4	CO5
	(OR)			
	15.b.	Survey on how to get data from web.		

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	Point out the uses of Python in Science.	K4	CO1
2	17	Analyse the different ways of creating NumPy arrays.	K4	CO2
3	18	Classify looping in Python.	K4	CO3
4	19	Appraise classification of user defined function arguments.	K5	CO4
5	20	Interpret grouping and aggregate functions on dataframe.	K5	CO5

Z-Z-Z

END