

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2026
(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 ____ source software. a) close b) open c) read d) write	K1	CO1
	2	IPython features a number of commands called _____. a) internal b) magic c) interpreter d) execute	K2	CO1
2	3	_____ are lists of characters. a) Strings b) Char c) Float d) Integer	K1	CO2
	4	The _____ array is the real workhorse of data structures. a) Ipy b) NumPy c) IronPy d) SciPy	K2	CO2
3	5	The ____ statement is used to define conditional in Python. a) for b) while c) if d) switch	K1	CO3
	6	The ____ keyword argument specifies the location of the legend. a) label b) loc c) local d) xlabel	K2	CO3
4	7	The syntax of where (__, output if True, output if False). a) connection b) condition c) expression d) test	K1	CO4
	8	$\ln P = \ln P_0 + \alpha \ln$ _____. a) P1 b) S c) P d) P2	K2	CO4
5	9	The ____ package for linear algebra is called scipy.linalg. a) Ipy b) NumPy c) IronPy d) SciPy	K1	CO5
	10	The syntax of date in python date (__, __, dd) a) month, year b) year, month c) YYYY, MM d) MM, YYYY	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.	Elucidate Python as interactive calculator.	K3	CO1
		(OR)		
	11.b.	How to import modules in Python?		
2	12.a.	Apply string operations.	K3	CO2
		(OR)		
	12.b.	How to read data from CSV file?		
3	13.a.	Analyze if statement with example.	K4	CO3
		(OR)		
	13.b.	Describe basic plotting.		
4	14.a.	Analyse Positional and keyword arguments.	K4	CO4
		(OR)		
	14.b.	Analyze Linear regression for fitting an exponential function.		
5	15.a.	Explain how to solve Nonlinear Equations.	K5	CO5
		(OR)		
	15.b.	Criticize how to use dates and times in Pandas.		

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	Demonstrate magic functions in IPython.	K4	CO1
2	17	Analyse mathematical operations on NumPy arrays.	K4	CO2
3	18	Influence loop statements in Python.	K5	CO3
4	19	Criticize Anonymous functions with lambda expressions.	K5	CO4
5	20	Determine how to solve ODEs.	K6	CO5

Z-Z-Z END