25CMU206/25CTU206/25NMU206

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(Second Semester)

Common to Branches – **COMPUTER SCIENCE/ COMPUTER TECHNOLOGY/ NETWORKING AND MOBILE APPLICATIONS**

OBJECT ORIENTED PROGRAMMING USING 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	Select the Numpy() used to create an array. (i) list (ii) array (iii) create (iv) tuple	K1	CO1
	2	Relate operator that is used to concatenate strings in Python. (i) + (ii) & (iii) * (iv) %	K2	CO1
2	3	Creating a list using the range() in Python produces (i) A string of numbers (ii) A sequence of numbers (iii) A list of numbers (iv) A tuple of numbers	K1	CO2
	4	Find the expression that returns true if x is in list L (i) x in L (ii) L.contains(x) (iii) x is not in L (iv) L.find(x)	K2	CO2
3	5	Choose the correct statement about Polymorphism in Python. (i) Only one class in a program (ii) Encapsulation of variables (iii) Type conversion (iv) Multiple functions with the same name but different functionalities	K1	CO3
	6	Relate the correct difference between a class method and static method. (i) Class method uses cls and Static method does not (ii) Static method uses cls and Class method does not (iii) Both are identical (iv) Both cannot access class variables	K2	CO3
4	7	Which method is used to call the constructor from super class to subclass? (i) parent (ii) this (iii) base (iv) super	K1	CO4
	8	Name the module used to create Abstract Base Classes in Python. (i) abc (ii) abstract (iii) abcbase (iv) abclass	K2	CO4
5	9	Name the keyword used to explicitly generate an exception in Python. (i) throw (ii) raise (iii) except (iv) error	K1	CO5
	10	Select the two-dimensional labeled data structure in Pandas. (i) list (ii) series (iii) dataframe (iv) dictionary	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 the variants of if statements with an example.	K2	CO1
		(OR)		
	11.b.	Explain the different types of arguments in Python functions with examples.		
2	12.a.	Identify and explain the different operations on lists in Python with an example.	K3	CO2
		(OR)		
	12.b.	Build a tuple in python and access its elements using indexing with an example.		
3	13.a.	Outline operator overloading and function overloading in Python with an example.	K2	CO3
		(OR)		
	13.b.	Explain class method and static methods in Python with example.		
4	14.a.	Analyse the role of constructors in Python.	K4	CO4
		(OR)		
	14.b.	Distinguish between abstract classes and interface.		
5	15.a.	Develop code to implement built-in exception handling in Python with try-except with an example.	K3	CO5
		(OR)		
	15.b.	Develop code to demonstrate data visualization using Pandas with examples.		

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	Apply Input/ Output statements in python to demonstrate their working principle with an example.	K3	CO1
2	17	Construct a dictionary from a list, modify and delete an element, and sort by its key.	K3	CO2
3	18	Explain the attributes of a class with -init() and default values for – init() method with an example.	K2	CO3
4	19	Develop a python code to implement different types of inheritance.	K3	CO4
5	20	Explain the creation of a data frame and perform various operations using pandas.	K5	CO5

Z-Z-Z END