

Rajarshi Shahu Maharaj Polytechnic, Nashik

Udoji Maratha Boarding Campus, Near Pumping Station, Gangapur Road, Nashik-13.

RSM POLY Affiliated to MSBTE Mumbai, Approved by AICTE New Delhi, DTE Mumbai & Govt. of Maharashtra, Mumbai.



SYLLABUS

RSM POLY Affiliated to MSBTE Mumbai, Approved by AICTE New Delhi, DTE Mumbai & Govt. of Maharashtra, Mumbai.

Chapter No.	Name of chapter	Marks With Option
1	Introduction and Syntax of Python Program	14
2	Python Operators and Control Flow Statements	16
3	Data Structures in Python	20
4	Python Functions, Modules and Packages	20
5	Object Oriented Programming in Python	18
6	File I/O Handling and Exception Handling	18
	Total Marks	106

KSW PULY

BOARD THEORY PAPER PATTERN FOR PWP (22616)

Q.1		Attempt any FIVE 5*2=10
	a)	Introduction and Syntax of Python Program
	b)	Introduction and Syntax of Python Program
	c)	Python Operators and Control Flow Statements
	d)	Python Operators and Control Flow Statements
	e)	Data Structures in Python
	f)	Object Oriented Programming in Python
	g)	File I/O Handling and Exception Handling
Q.2	1	Attempt any THREE 3*4=12
	a)	Introduction and Syntax of Python Program
	b)	Python Operators and Control Flow Statements
	c)	Data Structures in Python
	d)	Object Oriented Programming in Python
Q.3		Attempt any THREE 3*4=12
	a)	Python Operators and Control Flow Statements
	b)	Data Structures in Python
	c)	Object Oriented Programming in Python
	d)	File I/O Handling and Exception Handling
Q.4		Attempt any THREE 3*4=12
	a)	Python Operators and Control Flow Statements
	b)	Data Structures in Python
	c)	Python Functions, Modules and Packages



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	d)	Object Oriented Programming in Python
	e)	File I/O Handling and Exception Handling
Q.5		Attempt any TWO 2*6=12
	a)	Introduction and Syntax of Python Program
	b)	Python Operators and Control Flow Statements
	c)	Data Structures in Python
Q.6		Attempt any TWO 2*6=12
	a)	Python Functions, Modules and Packages
	b)	Object Oriented Programming in Python
	c)	File I/O Handling and Exception Handling



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CLASS TEST - I PAPER PATTERN

Syllabus

Unit	Name of the Unit	Course Outcome
No.		(CO)
1	Introduction and Syntax of Python Program	CO-616.01
2	Python Operators and Control Flow Statements	CO-616.02
3	Data Structures in Python	CO-616.03

		Course Outcome
Q.1	Attempt any FOUR 4*2=8Marks	(CO)
a)	Introduction and Syntax of Python Program	CO-616.01
b)	Python Operators and Control Flow Statements	CO-616.02
c)	Introduction and Syntax of Python Program	CO-616.01
d)	Data Structures in Python	CO-616.03
e)	Data Structures in Python	CO-616.03
f)	Python Operators and Control Flow Statements	CO-616.02
g)	Python Operators and Control Flow Statements	CO-616.02
Q.2	Attempt any THREE 3*4= 12Marks	
a)	Introduction and Syntax of Python Program	CO-616.01
b)	Introduction and Syntax of Python Program	CO-616.01
c)	Python Operators and Control Flow Statements	CO-616.02
d)	Data Structures in Python	CO-616.03
e)	Python Operators and Control Flow Statements	CO-616.02
f)	Data Structures in Python	CO-616.03
g)	Data Structures in Python	CO-616.03

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CLASS TEST - II PAPER PATTERN

Syllabus

		Course Outcome
Unit	Name of the Unit	(CO)
No.	F//SATRO	7
4	Python Functions, Modules and Packages	CO-616.04
5	Object Oriented Programming in Python	CO-616.05
6	File I/O Handling and Exception Handling	CO-616.06

		Course Outcome
Q.1	Attempt any FOUR 4*2= 8Marks	(CO)
a)	Python Functions, Modules and Packages	CO-616.04
b)	Object Oriented Programming in Python	CO-616.05
c)	File I/O Handling and Exception Handling	CO-616.06
d)	Python Functions, Modules and Packages	CO-616.04
e)	Object Oriented Programming in Python	CO-616.05
f)	File I/O Handling and Exception Handling	CO-616.06
Q.2	Attempt any THREE 3*4= 12Marks	
a)	Python Functions, Modules and Packages	CO-616.04
b)	Object Oriented Programming in Python	CO-616.05
c)	File I/O Handling and Exception Handling	CO-616.06
d)	Python Functions, Modules and Packages	CO-616.04
e)	Object Oriented Programming in Python	CO-616.05
f)	File I/O Handling and Exception Handling	CO-616.06

COURSE OUTCOME (CO)

COURSE: Programming With Python (22616)

PROGRAMME: Computer Technology

CO.NO	Course Outcome
5	
CO-616.a	Display message on screen using Python IDE.
CO-616.b	Develop Python program to demonstrate use of Operators.
CO-616.c	Perform operations on data structures in Python.
CO-616.d	Develop functions for given problem.
CO-616.e	Design classes for given problem.
CO-616.f	Handle exceptions.
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UNIT I [08 Marks]

Introduction and Syntax of Python Program

- 1) List the features of python and explain any two.
- 2) What do you mean by variable? Does python allow explicit declaration of variables? Justify your answer.
- 3) What is comment? How to apply comments in python?
- 4) Explain numeric data-types in python.
- 5) Explain the use of strings in python. Also explain '+' and '*' w. r. t. string.

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UNIT II [10 Marks]

Python Operators and Control Flow Statements

- 1) Explain arithmetic operators in python with an example.
- 2) Explain bitwise operators in python with an example.
- 3) Explain membership operator and identity operators in python with examples.
- 4) Explain if-else statement with example.
- 5) Show the use of keyword elif in python with example.
- 6) How to use short-hand if-else statement in python. Explain with example.
- 7) Explain for-loop in python with example.
- 8) Can we use keyword else with any loop? Justify your answer.
- 9) State the use of keyword pass.
- 10) Explain the use of keywords break and continue in python.

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UNIT III [14 Marks]

Data Structures in Python

- 1. How to declare the list? Can we change or update the list elements? Justify your answer.
- 2. Write a short note on slicing list.
- 3. Explain the following function w.r.t list
 - a) append() b) insert()
- 4. Can we delete the list element?
- 5. Explain the use of keywords del w.r.t list.
- 6. How to declare the tuple? Can we change or update the tuple? Justify your answer.
- 7. How to declare the set? Can we change iterate through set by using while loop? Justify your answer.
- 8. Can we iterate through set by using for loop? Justify your answer.
- 9. Can we add new elements in set? Justify your answer with example
- 10. Explain the following set operations
 - a) Set union b) Set intersection c) Set symmetric difference
- 11. How to declare the dictionary in python?
- 12. Explain use of update() function w.r.t dictionary.
- 13. Explain how to access dictionary element using index/key with example.
- 14. Explain different ways and function to remove key:value pair from dictionary

UNIT IV [14 Marks]

Python Functions, Modules and Packages

- 1. Define function.
- 2. How to create user-defined function in python.
- 3. Explain the concept of parameter passing to python function.
- 4. Can python function return the value? Justify your answer with example.
- 5. Define and explain local variables and global variables with suitable examples.
- 6. Write a short note on: Functions with default arguments.
- 7. What is kwargs in python? Explain its use.
- 8. Does the python allow the nested function definitions? Justify your answer.
- 9. Write a python program to demonstrate variable length arguments. Also explain that program.
- 10. Explain the following built in functions.
 - a) all() b) hasattr() c) oct() d) eval() e) issubclass ()
- 11. Explain any four data conversions functions in python.
- 12. Explain input() and print() functions in python.
- 13. How to create the module in python?
- 14. Explain from.....import statement.
- 15. Explain python built-in module: random
- 16. Explain use of lambda expression with example.
- 17. Explain the use map function with example.
- 18. Write a program to create bar chart using matplotlib.

UNIT V [12 Marks] Object Oriented Programming in Python

- 1. What is class? How to declare class in python?
- 2. State the use of parameter 'self' in python class.
- 3. Explain constructor function in python class with example.
- 4. Can we overload constructor function in python? Justify your answer.
- 5. Can we call constructor and destructor function manually in python? Justify your answer.
- 6. Write a program to demonstrate parameterized constructor in base class and derived class.
- 7. How to create abstract method in python? Explain with example.
- 8. Python dose not allowed method overloading. Then explain alternate ways of achieving the similar effect of overloading.
- 9. Write a short note on method overriding in python.
- 10. Explain the use _str_() and _repr()function in Python.



UNIT VI [12 Marks]

File I/O Handling and Exception Handling

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- 1. Explain print() function with its arguments.
- 2. Explain following file related operations:
 - a) Opening a file b) writing into a file using write() function
 - c) reading from a file using readline() function
- 3. Explain any four file modes in python.
- 4. Explain seek() and tell() function for file pointer manipulation.
- 5. Explain following python function w.r.t Dictionary.
 - a) getcwd() b) mkdir() I c) chdir() d) listdir() e) exist()
- 6. Explain rename() and remove() function w.r.t Dictionary.
- 7. Explain use of try:except block with example.
- 8. Write a program to demonstrate try with multiple exception.
- 9. Explain except: block without any exception name to it.
- 10. Can a single except: block handle multiple exception.
- 11. How to manually raise an exception? Explain with example.
- 12. How to create user defined exception and raise it manually? Explain with a complete example.