

Hall Ticket Number:

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Code No. : 12214 N

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. II-Semester Main &amp; Backlog Examinations, September-2022

Python Programming

(Common to CSE, AIML)

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	What is the difference between Immediate mode and script mode?	2	1	1	1
2.	What is the output of the given Snippet: If X=00011101 then X<<4?	2	3	1	1,2
3.	Write a Numpy program to create a 3x3 matrix with values ranging from 2 to 10.	2	3	2	1,2,3
4.	Write a program to calculate the sum of values in a list using reduce() function.	2	2	2	1,2,3
5.	How a tuple is iterated? Explain with an example.	2	2	3	1,2
6.	What are mutable and immutable types?	2	1	3	1
7.	What is JSON? Write Python code to create and open a JSON File.	2	2	4	1,2,3
8.	What are the different types of Errors in Python? How is an Exception handled in Python?	2	2	4	1
9.	How is Text written with Python Turtle? Give example.	2	2	5	1,2,3
10.	Write Python script to print current date and time.	2	2	5	1,2,3
<b>Part-B (5×8 = 40 Marks)</b>					
11. a)	Explain the conditional branching statements supported by python with an appropriate example.	4	1	1	1,2
b)	Write a Python function that computes the harmonic sum of n. Harmonic Sum = $(1/2) + (1/4) + (1/8) + (1/16) + \dots + (1/2^n)$	4	3	1	1,2,3
12. a)	Write any five built in string methods and functions with an example.	4	2	2	1,2
b)	What is a list in Python? How to create nested lists? Demonstrate how to create and print a 3-dimensional matrix with lists.	4	2	2	1,2,3
13. a)	What are Sets in python? Explain Set operations with an example.	4	1	3	1,2

Contd... 2

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b)	<p>Write a Python program to get the top three items in a shop using dictionary.</p> <p>Sample data: {'item1': 45.50, 'item2':35, 'item3': 41.30, 'item4':55, 'item5': 24}</p> <p>Expected Output: item4 55 item1 45.5 item3 41.3</p>	4	3	3	1,2,3
14. a)	<p>What are different access modes in which you can open a file?</p>	4	2	4	1,2
b)	<p>Write a number game Python program based on the following conditions.</p> <p>The user is asked to enter a number. If the number is greater than number to be guessed, raise a ValueError exception. If the value is smaller than the number to be guessed then, raise a ValueError exception and prompt the user to enter again. Quit the program only when the users enters the correct number.</p>	4	3	4	1,2,3
15. a)	<p>What are different types of inheritance supported by Python? Explain with example programs.</p>	4	2	5	1,2
b)	<p>Write a program that has a class store which keeps a record of code and price of each product. Display a menu of all products to the user and prompt him to enter the quantity of each item required. Generate a bill and display the total amount.</p>	4	3	5	1,2,3
16. a)	<p>Write a Python program to print the following pattern</p> <pre>1 1 2 1 1 2 3 2 1 1 2 3 4 3 2 1</pre>	4	3	1	1,2,3
b)	<p>Write a recursive Python function that recursively computes sum of elements in a list of lists.</p> <p>Sample Input: [1, 2, [3,4], [5,6]]</p> <p>Expected Result: 21</p>	4	3	2	1,2,3
17.	<p>Answer <b>any</b> two of the following:</p>				
a)	<p>What is a Tuple? Explain the basic Tuple Operations with an example.</p>	4	1	3	1,2
b)	<p>Write a Python program to copy the contents of a file to another file?</p>	4	2	4	1,2,3
c)	<p>Define a Python class Account and include the functions deposit(), withdraw() and check_balance(). Write a Python program to store account information namely account_no, account_name and balance_amount for two users and determine which user has maximum balance_amount.</p>	4	3	5	1,2,3

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	40%
iii)	Blooms Taxonomy Level – 3 & 4	40%

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