

Enrollment No.....



Faculty of Science / Engineering

End Sem Examination Dec-2023

CA3EL06 Python Programming

 Programme: BCA / BCA-
 MCA (Integrated)
 Branch/Specialisation: Computer
 Application
Duration: 3 Hrs.**Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. What is the output of this expression, $3*1*2**2**3$? **1**
 (a) 192 (b) 768 (c) Syntax error (d) 46656
- ii. Which operator is used for comparing the id of object? **1**
 (a) in (b) is (c) id (d) ==
- iii. What is the output of the following code? **1**
`l = ["A", "B", "C"]`
`print("-".join(l))`
 (a) -ABC (b) -ABC- (c) -A-B-C- (d) A-B-C
- iv. What is the output of the following? **1**
`l = [None] * 10`
`print(len(l))`
 (a) 0 (b) None (c) 10 (d) Error
- v. What is the value of the var after the for loop completes its execution? **1**
`var = 1`
`for i in range(10):`
`for j in range(2, 10, 1):`
`if var % 2 == 0:`
`continue`
`var += 1`
`var+=1`
`else:`
`var+=1`
`print(var)`
 (a) 12 (b) 21 (c) 1 (d) 11

- vi. What is the output of the following for loop and range() function? **1**
 for num in range(-2, 5, 1):
 print(num, end=" ", "
 (a) Error (b) -2, -1, 0, 1, 2, 3, 4, 5,
 (c) -2, -1, 0, 1, 2, 3, 4, (d) None of these
- vii. What is the output of the following function call? **1**
 def fun1(name, age=20):
 print(name, age)
 fun1('Rohit', 26)
 (a) Rohit 20 (b) Rohit (c) Invalid parameter (d) Rohit 26
- viii. What is the output of the following displayPerson() function call? **1**
 def displayPerson(*args):
 for i in args:
 print(i, end="")
 displayPerson("rohit", "26")
 (a) rohit, 26 (b) rohit 26
 (c) rohit26 (d) Invalid arguments
- ix. Which of the following commands can be used to read “n” number of **1**
 characters from a file, using <file> object?
 (a) file.read(n) (b) n = file.read()
 (c) file.readline(n) (d) file.readlines()
- x. _____ returned by readlines() method. **1**
 (a) str (b) a list of lines
 (c) list of single characters (d) list of integers
- Q.2 i. Write the applications of Python. **2**
 ii. Describe the structure of python program with example. Write a **8**
 program to demonstrate fundamental data type of python.
- OR iii. Write short note on the following: **8**
 (a) Bitwise operator (b) Logical operator
 (c) Membership operator (d) Address operator
- Q.3 i. What is the difference between mutable and immutable? Which **3**
 datatype of Python is mutable datatype, and which is immutable?
 ii. Write a program to traverse in a list and copy the elements into other **7**
 list which are divisible by 3 and 5.
- OR iii. What is string? How we can access the substring from string? Describe **7**
 any 5 functions of string.

- Q.4 i. Describe the range function with example. **3**
 ii. Explain for loop. Write a python program to print the following pattern **7**
 using nested for loop
 AAAAA
 BBBB
 CCC
 DD
 E
- OR iii. Write a program to demonstrate break and continue statement with **7**
 example.
- Q.5 i. What is function? Describe different type of arguments used in **3**
 function.
 ii. Describe recursion with example. Write a program of Fibonacci series **7**
 using recursion.
- OR iii. Explain module. Write a program to create your own module with **7**
 1 variable and 1 function and use that module and their members in
 your program
- Q.6 Attempt any two:
 i. Write a program to read the first three lines of the file and write these **5**
 lines in another file.
 ii. Write short note on following: **5**
 read(), readline(), readlines(), write(), writelines()
 iii. Explain exception handling. Write a program to create your own **5**
 exception.

Python Programming (T) - CA3EL06 (T)

Q.1	i)	What is the output of this expression, $3*1*2**2**3$?	1
		b) 768	
	ii)	Which operator is used for comparing the id of object?	1
		b) is	
	iii)	What is the output of the following code	1
		<code>l = ["A", "B", "C"]</code>	
		<code>print("-".join(l))</code>	
		d) A-B-C	
	iv)	What is the output of the following:	1
		<code>l = [None] * 10</code>	
		<code>print(len(l))</code>	
		c) 10	
	v)	What is the value of the var after the for loop completes its execution	1
		<code>var = 1</code>	
		<code>for i in range(10):</code>	
		<code>for j in range(2, 10, 1):</code>	
		<code>if var % 2 == 0:</code>	
		<code>continue</code>	
		<code>var += 1</code>	
		<code>var+=1</code>	
		<code>else:</code>	
		<code>var+=1</code>	
		<code>print(var)</code>	
		a) 12	
	vi)	What is the output of the following for loop and range() function	1
		<code>for num in range(-2, 5, 1):</code>	
		<code>print(num, end=", ")</code>	
		c) -2, -1, 0, 1, 2, 3, 4,	
	vii)	What is the output of the following function call	1
		<code>def fun1(name, age=20):</code>	
		<code>print(name, age)</code>	
		<code>fun1('Rohit', 26)</code>	
		d) Rohit 26	
	viii)	What is the output of the following displayPerson() function call	1
		<code>def displayPerson(*args):</code>	

	ix)	Which of the following commands can be used to read “n” number of characters from a file, using <file> object? a) file.read(n)	1
	x)	_____ returned by readlines() method? b) a list of lines	1
Q.2	i.	Write the applications of Python. Any four application 0.5 marks for each (0.5*4=2)	2
	ii.	Describe the structure of python program with example. Write a program to demonstrate fundamental data type of python. 2 marks for program structure 2 marks for example 4 marks for demonstration of fundamental data type	8
OR	iii.	Write short note on: Bitwise Operator, Logical Operator, Membership Operator, Address Operator 2 marks for each operator (2*4=8)	8
Q.3	i.	What is difference between mutable and immutable? Which datatype of python is mutable and which is immutable. 2 marks for differences between mutable and immutable (atleast four differences) 1 mark for their names	3
	ii.	Write a program to traverse in a list and copy the elements into other list which are divisible by 3 and 5. 2 marks for proper creation of list 3 marks for proper logic 2 marks for proper output	7
OR	iii.	What is string? How we can access the substring from string? Describe any 5 functions of string. 1 mark for string definition 1 mark for access substring from string 5 marks for each function with their syntax	7
Q.4	i.	Describe the range function with example. 2 marks for description 1 mark for example	3

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|-----|------|--|---|--|------|---|---|
| | ii. | Explain for loop. Write a python program to print the following pattern using nested for loop
AAAAA
BBBB
CCC
DD
E
2 marks for loop description
2 marks for proper nested loop
2 marks for proper logic
1 mark for output | 7 | | i. | Write a program to read the first three lines of the file and write these lines in another file.
2 marks for proper input
2 marks for logic
1 marks for output | 5 |
| OR | iii. | Write a program to demonstrate break and continue with example.
program of break
1 marks for proper input
2 marks for logic
0.5 mark for output
program of continue
1 marks for proper input
2 marks for logic
0.5 mark for output | 7 | | ii. | Write short note on following:
read(), readline(), readlines(), write(), writelines()
1 mark for each with syntax and example (1 *5=5) | 5 |
| | | | | | iii. | Explain exception handling. Write a program to create your own exception.
2 marks for Definition
3 marks for program(1 input+ 1 logic+ 1 output) | 5 |
| | | | | | | ***** | |
| Q.5 | i. | What is function? Describe different type of arguments used in function.
1 mark for definition
2 marks for defining all the types of argument(0.5 for each) | 3 | | | | |
| | ii. | Describe recursion with example. Write a program of Fibonacci series using recursion.
2 marks for definition
1 mark for example
4 marks for program(1 input+ 2 logic+ 1 output) | 7 | | | | |
| OR | iii. | Explain module. Write a program to create your own module with 1 variable and 1 function and use that module and their members in your program.
2 marks for definition
2 marks for proper creation of new module
1 marks for proper importing of module
2 marks for proper calling of variable and functions | 7 | | | | |
| Q.6 | | Attempt any two: | | | | | |