LJ Institute of Engineering and Technology, Ahmedabad.

Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
1	1	Which character is used in Python to make a single line comment?	D	1		/	//	!	#
2	1	What will be the output of print(type(2**5)) in python?	A	1		<class 'int'>	<class 'float'>	<class 'double'>	<class 'integer'>
3	1	What will be the output of print(type("LJU")) in python?	C	1		<class 'int'>	<class 'float'>	<class 'str'>	<class 'char'>
4	1	What will be the output of print(type(3*5/5)) in python?	B	1		<class 'int'>	<class 'float'>	<class 'double'>	<class 'integer'>
5	1	If x=3.123, then int(x) will give ?	B	1		1	3	4	3.12
6	1	Which one of the following is correct way of declaring and initialising a variable, x with value 5?	C	1		int x x=5	int x=5	x=5	declare x=5
7	1	Which of the following is an invalid statement?	B	1		abc = 1,000,000	a b c = 1000 2000 3000	a,b,c = 1000, 2000, 3000	a_b_c = 1,000,000
8	1	Which of the following is invalid?	D	1		_x = 1	__x = 1	__x__ = 1	None of the mentioned
9	1	Which of the following cannot be a variable?	B	1		__in__	in	it	__it__
10	1	Which of the following is an invalid variable?	B	1		char_1	1st_char	oopec	_
11	1	What happens when '2' == 2 is executed?	B	1		True	False	ValueError	TypeError
12	1	What will be the output of this program? _ = '1 2 3 4 5 6' print(_)	D	1		SyntaxError: EOL while scanning string literal	SyntaxError: invalid syntax	NameError: name '_' is not defined	1 2 3 4 5 6
13	1	What will be the output of the following program on execution? print(print(print("python")))	B	1		None None python	python None None	python	Error
14	1	Which is the correct operator for power(Xy)?	B	1		X^y	X**y	X^^y	None of the mentioned
15	1	What is the answer to this expression, 34 % 3 is?	B	1		7	1	0	5
16	1	What will be the output of the following program on execution? a=0 b=6 x=(a or b) or ((a and a) or (a and b)) print(x)	B	1		0	6	True	False
17	1	What will be the output of the following program on execution? a=0 b=6 x=(a or b) or ((a and a) or (a and b)) y=not(x) print(y)	D	1		0	6	True	False
18	1	What will be the output of this program? print(True ** False / True)	B	1		True ** False / True	1.0	0	Error
19	1	Which of the following error occurs when you execute the following Python code? apple = mango	C	1		Type Error	Value Error	Name Error	Syntax Error
20	1	What is the output of this expression, 3*1**3?	B	1		1	3	9	27
21	1	Select option that will print: hello-how-are-you	A	1		print('hello-' + 'how-are-you')	print('hello', 'how', 'are', 'you')	print('hello', 'how', 'are', 'you' + '-' * 4)	print('hello' + '-' + 'how' + '-' + 'are' + 'you')
22	1	Which of the following is not a comparison operator in Python?	C	1		>=	<=	=	!=
23	1	What will be the output of the following program on execution? a=4 b=6 c=3 print(a+b*c/a-b)	C	1		1.5	2	2.5	3
24	1	What will be the value of the following Python expression? 8 + 2 % 3	A	1		10	8	9	7
25	1	What will be the value of x in the following Python expression? x = int(63.55+8/3)	B	1		65	66	23	24
26	1	What are the values of the following Python expressions? 2**(3**2) (2**3)**2 2**3**2	D	1		64, 512, 64	64, 64, 64	512, 512, 512	512, 64, 512
27	1	What will be the output of this program? print((7*5**2)/True*False)	D	1	LJU 2024	175.0	70.0	0	0.0
28	1	What will be the output of this program? print(6 + 5 - 4 * 3 / 2 % 1)	C	1		15.0	7.0	11.0	10.0
29	1	What will be the output of this program? print(int(6 == 6.0) * 3 + 4 % 5)	C	1		Error	22	7	18
30	1	What will be the value of X in the following Python expression? X = 2+9*((3*12)-8)/10	D	0.5		30.0	30.8	28.4	27.2

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
31	1	What will be the output of the following Python code? new= (1 and "True") and ('False' or Train) str= 'This statement is '+ new print("This is False" if "False" in new else "This is True")	C	1		This is True	NameError – Train not defined	This is False	Syntax Error – invalid syntax
32	1	What will be the value of the following Python expression? 8 + 1 % 3	B	0.5		8	9	10	11
33	1	What should be the output of the following python code snippet: x=0.0 y=48>0 z=11<7 print(not(float(x or y or z)))	B	1		True	False	Error	No output
34	1	What will be the output of the following program on execution? x=Str("Python is a very\b simple\bsubject") print(x)	C	0.5		Python is a verysimpleubject	Python is a versimplsubject	Name Error	None of mentioned
35	1	What is the output of the following assignment operator a=10 b=a-=2 print(b)	D	0.5		12	8	9	Syntax Error
36	1	What will be the output of the following program on execution? a=4 b=6 c=3 d=2 print(a+d**b*c/a-b)	B	0.5		64.0	46.0	52.0	192.0
37	1	What will be the output of this program? print(int("6" == 6.0) * 3 + 4 % 5)	A	0.5		4	6	22	Error
38	1	What will be the output of the following program on execution? a=0 b=6 c=9 d=10 x=(a or b) and ((a or c) or (b and d)) print(x)	C	0.5		0	6	9	10
39	1	What will be the value of X in the following Python expression? X = 2+9*((3*12)-8)/10 print(bool(X))	A	0.5		True	0	30	30.8
40	1	What will be the datatype of the var in the below code snippet? var = 10 print(type(var)) var = "Hello" print(type(var))	B	0.5		int	int,str	str	str,str
41	1	What will be the output of this program? print(True * False / True)	B	0.5		0	0.0	1.0	Error
42	1	What is the output of the following python code: x=125 y=13 x//=y print(x)	C	0.5		125/13	10	9	9.62
43	1	What is the output of following python code: print(bool(0), bool(3.14159), bool(-3), bool(False))	A	0.5		False True True False	True True True False	False False True False	False True False False
44	1	a=5 b=10 c=1 print(a**c, b//a, c%a)	B	0.5		5 2 2	5 2 1	5 2 5	5 10 5
45	1	Which of the following is invalid?	A	0.5		1x=1	x1=1	__x__=1	_x=1
46	1	What is the output of this expression, 3**1**3/True?	C	0.5		1	3	3.0	27
47	1	What will be the output of the following program on execution? a=0 b=5 a or b ==5 or True + 7 -4 * 3	A	0.5		True	1	0	False
48	1	What will be the output of the following program on execution? a=50 b=60 print((a and b)/False)	D	0.5		0	60	50	Error
49	1	Write a Python program to add 2 Numbers with user input.		4					
50	1	Write a Python program to find the area of Circle.		4					
51	1	Write a Python program to find the area of Triangle.		4					
52	1	Write a Python program to calculate the area of a trapezoid.		4					
53	1	Write a Python program to calculate surface volume and area of a cylinder.		4					
54	1	Write a Python program to convert Fahrenheit to Celsius and vice versa.		7					
55	1	Write a python code to demonstrate calculator functionality.		7					
56	1	Write a python program to convert Days into Years, Months and Days. (Ex: if input of Days = 370 then output will be, years=1, months=0 and days = 5).		7					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
57	1	Write a Python program to convert hours into minutes and seconds (Ex : input of hours = 6 then output will be, minutes = 360 and seconds = 21600).		7					
58	1	Write a Python program to find an integer exponent x such that a^x = n. Input: a = 2 : n = 1024 Output: 10 Input: a = 3 : n = 81 Output: 4		4					

59	2	What does the following code print?
		if 4 + 5 == 10:
		print("TRUE")
		else:
		print("FALSE")
		print("TRUE")
			C	1		TRUE	TRUE
							FALSE
								FALSE
								TRUE
									TRUE
									FALSE
									TRUE

60	2	What does the following code print? x = -10 if x < 0: print("The negative number ", x, " is not valid here.") print("This is always printed")	B	1		This is always printed	The negative number -10 is not valid here. This is always printed	The negative number -10 is not valid here	It will cause an error because every if statement must have an else statement.

61	2	Which of the following is true about the code below?
		
		x = 3
		if (x > 2):
		x = x * 2;
		if (x > 4):
		x = 0;
		print(x)
			C	1		x will always equal 0 after this code executes for any value of x	if x is greater than 2, the value in x will be doubled after this code executes	if x is greater than 2, x will equal 0 after this code executes	None of mentioned

62	2	Which one of the following is a valid Python if statement?	A	1		if a>=2 :	if (a >= 2)	if (a => 22)	if a >= 22
63	2	What keyword would you use to add an alternative condition to an if statement?	C	1		else if	elseif	elif	None of the above
64	2	Which of the following will evaluate to true? I. True and False II. False or True III. False and (True or False)	B	1		I	II	I and II	II and III
65	2	Given two variables, num1 and num2, which of the following would mean that both num1 and num2 are positive integers?	D	1		(num1 == num2)	(num1 == num2) or (num1 > 0)	(num1 == num2) and (num1 < 0)	(num1 == num2) and (num1 > 0)
66	2	What is the output from the following code? a = 3 b = (a != 3) print(b)	B	1		True	False	0	3
67	2	Which of the following evaluates to True when a is equal to b or when a is equal to 5?	C	1		a == b == 5	a = b or a = 5	a == b or a == 5	a = b and a = 5
68	2	Which statement will check if a is equal to b?	B	1		if a = b:	if a == b:	if a === c:	if a == b

69	2	Given the nested if-else structure below, what will be the value of x after code execution completes
		x = 0
		a = 0
		b = -5
		if a > 0:
		if b < 0:
		x = x + 5
		elif a > 5:
		x = x + 4
		else:
		x = x + 3
		else:
		x = x + 4
		print(x)
			D	1		2	0	3	4

70	2	Given the nested if-else below, what will be the value x when the code executed successfully
		x = 2
		a = 5
		b = 5
		if a > 0:
		if b < 0:
		x = x + 5
		elif a > 5:
		x = x + 4
		else:
		x = x + 3
		else:
		x = x + 2
		print(x)
			B	1		0	5	2	3

71	2	What is the output of the following if statement
		a, b = 12, 5
		if a + b:
		print('True')
		else:
		print('False')
			B	1		False	True	Can't predict	None of these

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72	2	Which of the following is not used as loop in Python?	C	1		for loop	while loop	do-while loop	None of the above
73	2	A loop becomes infinite loop if a condition never becomes _____.	B	1		True	False	Null	Both A and C
74	2	If the else statement is used with a while loop, the else statement is executed when the condition becomes _____.	B	1		True	False	Infinite	Null
75	2	Python programming language allows to use one loop inside another loop known as?	C	1		switch	foreach	nested	forall

76	2	What will be the output of given Python code?
		n=7
		c=0
		while(n):
		  if(n>5):
		  c=c+n-1
		  n=n-1
		  else:
		  break
		print(n)
		print(c)
			B	1		4
						16
							5
							11
								6
								7
									5
									10

77	2	How many times will the loop run? i=2 while(i>0): i=i-1	A	1		2	3	1	0
78	2	How many times will the condition will be checked? i=2 while(i>0): i=i-1	B	1		2	3	1	0

79	2	What is the value of the var after the for loop completes its execution
		var = 10
		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)
			B	1		20	21	10	30

80	2	What will be the output of the following Python code? for i in range(0,2,-1): print("Hello")	C	1		Hello	Hello Hello	No Output	Error
81	2	Which of the following is a valid for loop in Python?	B	1		for(i=0; i < n; i++)	for i in range(0,5):	for i in range(0,5)	for i in range(5)
82	2	Which of the following sequences would be generated by the given line of code? range (5, 0, -2)	C	1		5 4 3 2 1 0 -1	5 4 3 2 1 0	5 3 1	None of the above
83	2	What is the output of the following for loop and range() function for num in range(-2,-5,-1): print(num, end=", ")	D	1		-2, -1, -3, -4	-2, -1, 0, 1, 2, 3,	-2, -1, 0	-2, -3, -4,
84	2	What will be the output of the following code? x = 12 for i in x: print(i)	C	1		12	1 2	Error	None of the above

85	2	What is the value of x after the following nested for loop completes its execution
		x = 0
		for i in range(10):
		  for j in range(-1, -10, -1):
		  x += 1
		  print(x)
			B	1		99	90	100	101

86	2	What is the output of the following range() function for num in range(2,-5,-1): print(num, end=", ")	C	1		2, 1, 0,	2, 1, 0, -1, -2, -3, -4, -5,	2, 1, 0, -1, -2, -3, -4,	None of these
87	2	What is the value of x x = 0 while (x < 100): x+=2 print(x)	D	1		101	99	None of the above, this is an infinite loop	100

88	2	What is the output of the following nested loop
		for num in range(10, 14):
		  for i in range(2, num):
		  if num%i == 1:
		  print(num)
		  break
			B	1		11
						12
						13
						14
							10
							11
							12
							13
								9
								10
								11
								12
									12
									13
									14
									15

89	2	What will be the output of the following Python code?
		i = 1
		while True:
		  if i%3 == 0:
		  break
		  print(i)
		  i += 1
			A	1		1
						2
							1
							2
							3
								Error	None of these

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90	2	What will be the output of the following Python code?
		i = 1
		while True:
		  if i%2 == 0:
		  break
		  print(i)
		  i += 2
			D	1		1	1
							2
								1
								2
								3
								4
								5
								6...
									1
									3
									5
									7
									9
									11 ...

91	2	What will be the output of the following Python code?
		i = 2
		while True:
		  if i%3 == 0:
		  break
		  print(i)
		  i += 2
			B	1		2
						4
						6
						8
						10..
							2
							4
								2
								3
									Error

92	2	What will be the output of the following Python code?
		i = 1
		while False:
		  if i%2 == 0:
		  break
		  print(i)
		  i += 2
			D	1		1	1
							3
							5
							7..
								1
								2
								3
								4..
									None of these

93	2	What will be the output of the following Python code?
		True = False
		while True:
		  print(True)
		  break
			D	1		True	False	None	Error

94	2	What will be the output of the following Python code? for i in range(0): print(i)	B	1		0	No output	Error	None of mentioned
95	2	What will be the output of the following Python code? for i in range(2.0): print(i)	C	1		0.0 1.0	0 1	Error	None of mentioned
96	2	What will be the output of the following Python code? for i in range(int(2.0)): print(i)	B	1		0.0 1.0	0 1	Error	None of mentioned
97	2	What will be the output of the following Python code? for i in range(float('inf')): print (i)	D	1		0.0 0.1 0.2 0.3 ...	0 1 2 3 ...	0.0 1.0 2.0 3.0 ...	None of mentioned

98	2	What will be the output of the following Python code?
		for i in range(5):
		  if i == 5:
		  break
		  else:
		  print(i)
		else:
		  print("Here")
			A	1		0
						1
						2
						3
						4
						Here
							0
							1
							2
							3
							4
							5
							Here
								0
								1
								2
								3
								4
									1
									2
									3
									4
									5

99	2	What will be the output of the following Python code?
		for i in range(10):
		  if i == 5:
		  break
		  else:
		  print(i)
		else:
		  print("Here")
			C	1		0
						1
						2
						3
						4
						Here
							0
							1
							2
							3
							4
							5
							Here
								0
								1
								2
								3
								4
									1
									2
									3
									4
									5

100	2	What will be the output of the following Python code snippet?
		
		x = 2
		for i in range(x):
		  x -= 2
		  print (x)
			B	1		0
						1
						2
						3
						4
							0
							-2
								0	Error

101	2	What will be the output of the following Python code snippet?
		x = 2
		for i in range(x):
		  x += 1
		  print (x)
			C	1		0
						1
						2
						3
						4..
							0
							1
								3
								4
									0
									1
									2
									3

102	2	What will be the output of the following Python code?
		
		i = 0
		while i < 5:
		  print(i)
		  i += 1
		  if i == 3:
		  break
		else:
		  print(0)
			A	1		0
						1
						2
							0
							1
							2
							0
								Error	None of these

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103	2	What will be the output of the following Python code?
		
		i = 0
		while i < 3:
		  print(i)
		  i += 1
		else:
		  print(0)
			C	1		0
						1
						2
							0
							1
							2
							3
							0
								0
								1
								2
								0
									Error

104	2	What will be the output of the following Python code?
		
		x = 2
		for i in range(x):
		  x -= 2
		  print (x)
			B	1		0
						1
						2
						3
						4 ...
							0
							-2
								0	error

105	2	The continue statement can be used in?	D	1		while loop	for loop	do-while	Both A and B

106	2	What is the output of following python code?
		
		int("Enter value of x:")
		for in range[0, 10]:
		  print("They are equal")
		else:
		  print("They are unequal")
			D	1		They are unequal	They are equal	0,1,2,3,4,5,6,7,8,9	SyntaxError

107	2	What is the output of following python code? a = 5 b = 5.0 print('yes') if (a == b) else 'no'	A	1		yes	no	ZeroError	SyntaxError

108	2	What is the output of following python code?
		
		a = b = 0
		if (a = b):
		  print(0)
		else:
		  print('otherwise')
			D	1		yes	0	ZeroError	SyntaxError

109	2	What is the output of following python code?
		
		Step = 3
		for e in range(0, step):
		  if e%2==0:
		  print('hello')
		  else:
		  print('goodbye')
			B	1		3	NameError	ZeroError	SyntaxError

110	2	What will be the output of the following Python code? x = 123 for i in x: print(i)	C	0.5		1 2 3	123	TypeError	KeyError
111	2	What is the output of the following snippet? theSum = 0 for count in range(2, 11, 2): theSum += count print(theSum)	C	1		25	20	30	23

112	2	What will be the output of the following snippet?
		a = True
		b = False
		c = False
		
		if not a or b:
		  print (1)
		elif not a or not b and c:
		  print (2)
		elif not a or b or not b and a:
		  print (3)
		else:
		  print (4)
			C	1		1	2	3	4

113	2	What will be the output of the following Python code?
		var = 10
		for i in range(5):
		  for j in range(2, 3, 1):
		  if var%2 == 0:
		  break
		  var += 1
		  var+=1
		else:
		  var+=1
		print(var)
			B	1		19	20	21	14

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114	2	What will be output of following code?
		A=70
		if A>90:
		  print('Grade A')
		elif A>70 and A<90:
		  print('Grade B')
		elif A>50 and A<70:
		  print('Grade C')
		elif A>35 and A<50:
		  print('Grade D')
		else:
		  print('Fail')
			D	1		Grade A	Grade B	Grade C	Fail

115	2	What will be output of following code?
		seconds=3650
		if seconds>=3600:
		  hour=seconds//3600
		  seconds %= 3600
		  print(hour,"hours",end=" ")
		if seconds>=60:
		  minute=seconds//60
		  seconds %= 60
		  print(minute,"minutes",end=" ")
		if seconds>0:
		  print(seconds,"seconds")
			A	1		1 hours 50 seconds	1 hours 0 minutes 50 seconds	1 hours 50 minutes	0 hours 0 minutes 3650 seconds

116	2	What will be output of following code?
		A=0
		for i in range(4):
		  if i%2==0:
		  pass
		  else:
		  continue
		  break
		  A+=1
		print(A)
			C	1		4	3	2	0

117	2	What will be the output of the following code snippet?
		count = 0
		while(True):
		  if count % 3 == 0:
		  print(count, end = " ")
		  if(count > 15):
		  break;
		  count += 1
			A	1		0 3 6 9 12 15	0 1 2 3	0 3 6 9	0 3 6 9 12

118	2	What is the output of the following code?
		a = True
		b = False
		c = True
		
		if not a or b:
		  print ("a")
		elif not a or not b and c:
		  print ("b")
		elif not a or b or not b and a:
		  print ("c")
		else:
		  print ("d")
			B	1		a	b	c	d

119	2	What does the following code print?
		if 5 + 5 == 10:
		  print("TRUE")
		else:
		  print("FALSE")
		print("TRUE")
			D	0.5		TRUE	FALSE	TRUE
								FALSE
									TRUE
									TRUE

120	2	What is the output of the following nested loop
		for num in range(26, 30):
		  for i in range(2, num):
		  if num%i == 1:
		  print(num, end=',')
		  break
			C	0.5		26,27,28	26,27,28,29	26,27,28,29,	27,29

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

121	2	What is the value of the var after the for loop completes its execution:
		var = 10
		for i in range(10):
		  for j in range(2, 10, 1):
		  if var % 2 == 0:
		  var += 1
		  continue
		  var+=1
		else:
		  var+=1
		print(var)
			D	1		20	21	30	31

122	2	What should be the output of the following python code snippet:
		a=5
		b=7
		c=2
		
		if a>b:
		  a,b = b,a
		if a>c:
		  a,c = c,a
		if b>c:
		  b,c = c,b
		
		print(a,b,c,end=",")
			C	1		2,5,7	7,5,2	2 5 7,	7 5 2,

123	2	What is the value of x after the following nested for loop completes its execution
		x = 0
		for i in range(1,10):
		  for j in range(-1, -10, -1):
		  x += 1
		  print(x)
			A	0.5		81	90	80	99

124	2	What is the value of x x = 0 while (x < 100): x+=3 print(x)	D	0.5		98	99	100	102

125	2	What will be the output of the following program.
		
		if (9 < 0) and (0 < -9):
		  print("hello")
		elif (9 > 0) or False:
		  print("good")
		else:
		print("bad")
			A	0.5		IndentationError	hello	good	bad

126	2	What is the output of the following code?
		c=1
		s=0
		while c<=8:
		  c=c-1
		  s=s+c
		  c=c+2
		print(s)
			A	1		28	30	21	35

127	2	What will be the output of the following program on execution?
		x=0
		while x<10:
		  if x%3==0:
		  x+=5
		  continue
		  if x%2==0:
		  x+=14
		  else:
		  x+=1
		else:
		  x+=1
		print(x)
			C	1	LJU 2024	10	11	12	0

128	2	What is the output of the following code?
		val = 154
		while(not(val)):
		  val**=2
		else:
		  val//=2
		print(val)
			A	0.5		77	11	154	11858

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

129	2	What is the output of the following code?
		n=10
		i=1
		while(i<=n):
		  k=0
		  if(n%i==0):
		  j=1
		  while(j<=i):
		  if(i%j==0):
		  k=k+1
		  j=j+1
		  if(k==2):
		  print(i,end=" ")
		  i=i+1
			A	1		2 5	10	100	20

130	2	What will be the output of Python code?
		
		i,j=1,4
		while True:
		  if(i%7==0 or j%9==0):
		  break
		  i+=1
		  j+=1
		print(i,j)
			C	1		5 9	6 7	6 9	7 9

131	2	What will be the output of given Python code?
		n=5
		c=0
		while(n):
		  if(n>5):
		  c=c+n-1
		  n=n-1
		  else:
		  c=c+n-1
		  break
		print(n, c)
			A	1		5 4	5 0	5 11	4 0

132	2	What will be the output of the following program on execution?
		for x in range(0,15):
		  if(x%3==0):
		  continue
		  if(x%5==0):
		  continue
		  if(x%7==0):
		  break
		  print(x,end=" ")
			A	0.5		1 2 4	0 1 2 4	0 1 2 3 4 5 6	1 2 3 4 5 6

133	2	What will be the output of the following program on execution?
		for i in range (1,11):
		  sum=0
		  sum+=i
		print(sum)
			A	0.5		10	11	55	0

134	2	What will be the output of the following program on execution?
		n=6
		for i in range(4,n,1):
		  if i==5:
		  break
		else:
		  print(n)
			A	0.5		no output	4	5	n

135	2	What will be the output of the following program on execution?
		n=1
		for i in range(1,n,1):
		  print("hello")
		else:
		  print("hi")
			A	0.5		hi	hello	no output	value errror

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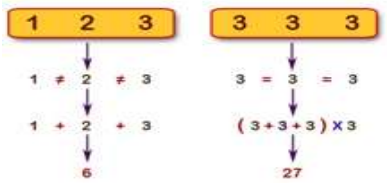
Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)									
Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.									
Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

136	2	What will be the output of the following program on execution?
		for i in range(1,11):
		  x=0
		  x+=i
		  while(x<15):
		  if i%2==0:
		  x+=1
		  else:
		  x+=2
		print(x)
			A	1		15	17	16	14

137	2	What will be the output of the following program on execution?
		x=10
		if x<15:
		  print("h",end=" ")
		elif x>12:
		  print("i",end=" ")
		else:
		  print("student",end=" ")
		if x<9:
		  print("name",end=" ")
		else:
		  print("Name",end="")
			A	1		h Name	H name	hi	hi name

138	2	What will be the output of the following program on execution?
		x=0
		count=0
		while x<15:
		  if x%2==0:
		  x+=1
		  continue
		  if x%3==0:
		  x+=1
		  continue
		  if count==5:
		  break
		  count+=1
		print(x,count)
			A	1		1 5	15 5	0 5	0 0

139	2	What will be the output of the following program on execution?
		x=0
		count=0
		for x in range(10):
		  while x<15:
		  if x<0:
		  pass
		  elif x%2==0:
		  x+=1
		  continue
		  elif x%3==0:
		  x+=1
		  continue
		  elif count==5:
		  break
		  count+=1
		print(x,count)
			A	1		11 5	10 5	16 5	14 5

140	2	Write a program to determine a given number is 'odd' or 'even' and print the following message "Number is ODD" or "Number is Even".		3					
141	2	Write a program to check if the input number is positive, negative or zero.		3					
142	2	Write a program to find the maximum number among the three input numbers.		7					
143	2	Write a Python Program to calculate the sum of three given numbers, if the values are equal then return thrice their sum. Example: 		3	LJU 2024				

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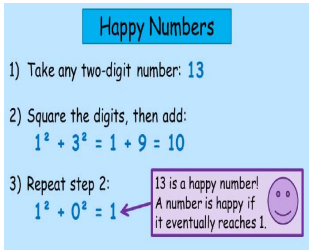
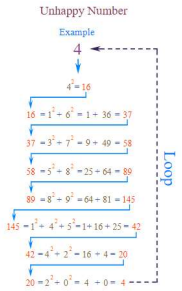
Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
144	2	Write a Python Program to print all Happy Numbers between the given range entered by user. (Include both Start and End Range Number). Logic for Happy & Unhappy Number:   Output: Enter start range:1 Enter end range:20 1 7 10 13 19		6	LJU 2024				
145	2	Write a Python Program to Compute the product of the odd digits in a given number, 0 if there are not any odd digits in a given number. Example: (1) Input: 123456789 Output: 945 (2) Input: 2468 Output: 0 (3) Input: 123547 Output: 105		3	LJU 2024				
146	2	Write a program to check if year is a leap year or not (Nested If).		7					
147	2	Write a program to find sum of first N natural numbers given by user.		4					
148	2	Write a program to find average of first N natural numbers given by user.		4					
149	2	Write a python program to read three numbers (a,b,c) and check how many numbers between ‘a’ and ‘b’ are divisible by ‘c’.		4					
150	2	Write a Python program that prints all the numbers from 0 to 6 except 3 and 6.		4					
151	2	Write a Python program to print the multiplication table of given number by user.		4					
152	2	Write a program to find the factorial of a number provided by the user.		4					
153	2	Write a python program to display the Fibonacci sequence up to n-th term.		4					
154	2	Write a program to take 10 values from keyboard using loop and print their average on the screen		4					
155	2	Write a program to reverse a number.		7					
156	2	Write a program to check whether a number is Armstrong number or not.		7					
157	2	Write a program to check if a number is prime or not.		7					
158	2	Write a program to print prime numbers between given interval from user		7					

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
159	2	Draw a pattern using a python program: * * * * * * * * * *		7					

160	2	Draw a pattern:
		* * * *
		  * * *
		  * *
		  *
				7					

161	2	Draw a pattern using a python program:
		  *
		  * *
		  * * *
		* * * *
				7					

162	2	Draw a pattern: * * * * * * * * * *		7					
163	2	Draw a pattern using a python program: 1 2 3 4 5 1 2 3 4 1 2 3 1 2 1		7					
164	2	Draw a pattern using a python program: 1 1 2 1 2 3 1 2 3 4		3					
165	2	Draw a pattern using a python program: 1 2 2 3 3 3 4 4 4 4		3					
166	2	Draw a pattern using a python program: * # # * * * # # # #		4					
167	2	Draw a pattern using a python program: 1 0 1 1 0 1 0 1 0 1		4					

168	2	Draw a pattern using a python program:
		  1
		  1 2
		  1 2 3
		1 2 3 4
				4					

169	2	Draw a pattern using a python program:
		  1
		  2 2
		  3 3 3
		4 4 4 4
				4					

170	2	Draw a pattern using a python program:
		  *
		  # #
		  * * *
		# # # #
				4					

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

<table>
<tr><th>Sr. No.</th><th>unit_number</th><th>question_text</th><th>MCQ Answer</th><th>marks</th><th>Previous Year</th><th>option A</th><th>option B</th><th>option C</th><th>option D</th></tr>
<tr><td>171</td><td>2</td><td>Gross Pay, Annual Income and Income Tax Calculator
Write a Python Program to make the gross pay, annual income and income tax calculator using following data.
The gross pay consists of Basic Pay, House Rent Allowance (hra), Dearness Allowance (dra), other allowances and professional tax and provident fund.
Gross Pay= Basic Pay+ House Rent Allowance (hra) + Dearness Allowance (dra) +other allowances +Transport Allowance (TA)– Professional tax –Employees' Provident fund (EPF)
Basic Pay for different grade levels are indicated in table given.
The Professional tax remains constant and that is equal to 200 Rs. for each grade levels and each month.
House Rent Allowance (hra) varies as per the city- For Class 1 Cities it is 0.3 times of Basic Pay of each grade levels, for Class 2 Cities it is 0.2 times of Basic Pay of each grade levels, for Class 3 Cities it is 0.1 times of Basic Pay of each grade levels,
Dearness Allowance (dra)= 0.5 times of Basic Pay of each grade levels, Other allowances are given in table which varies according to different grade levels, Provident Fund= 0.11 times of Basic Pay for each grade levels, Transport Allowance remains constant as 900 Rs. for each levels.
For different grade pays:
<table><tr><th>Grade Levels</th><th>Basic Pay (in Rs.)</th><th>Other Allowances (in Rs.)</th></tr><tr><td>A (Considered as highest grade pay)</td><td>60000</td><td>8000</td></tr><tr><td>B</td><td>50000</td><td>7000</td></tr><tr><td>C</td><td>40000</td><td>6000</td></tr><tr><td>D</td><td>30000</td><td>5000</td></tr><tr><td>E</td><td>20000</td><td>4000</td></tr><tr><td>F</td><td>10000</td><td>3000</td></tr></table>The gross pay calculated is only for one month.
After calculating Gross Pay of each employee calculate the annual pay for employee by multiplying gross pay calculated, by 12.
So, Annual Pay of an employee=Gross Pay of an employee*12
From Annual Pay of an Employee Calculate the income tax as per the slabs of India Income Tax 2022-23 given below.
Tax Slabs for AY 2022-23
<table><tr><th>Amount in Rs.</th><th>Income Tax Rate</th></tr><tr><td>Up to Rs. 2,50,000</td><td>0%</td></tr><tr><td>Rs. 2,50,001 to Rs.5,00,000</td><td>5% above Rs. 2,50,000</td></tr><tr><td>Rs. 5,00,001 to Rs. 7,50,000</td><td>10% above Rs. 5,00,000 + Rs. 12,500</td></tr><tr><td>Rs. 7,50,001 to Rs. 10,00,000</td><td>15% above Rs. 7,50,000 + Rs. 37,500</td></tr><tr><td>Rs. 10,00,001 to Rs. 12,50,000</td><td>20% above Rs. 10,00,000 + Rs. 75,000</td></tr><tr><td>Rs. 12,50,001 to Rs. 15,00,000</td><td>25% above Rs. 12,50,000 + Rs. 1,25,000</td></tr><tr><td>Above Rs. 15,00,001</td><td>30% above Rs. 15,00,000 + Rs. 1,87,500</td></tr></table>Input & Output:
Enter the grade_level (A,B,C,D,E or F:)A
city 1 is a tier 1 (metro), city 2 is tier 2 and city 3 is tier 3
Enter the city (1,2 or 3)1
Gross Pay of an Employee is: 110100.0
Annual income of an employee is: 1321200.0
Income Tax to be paid by an employee is: 142800.0</td><td></td><td>9</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>172</td><td>2</td><td>Write a python program to print all numbers between 1 and 100 (including 1 and 100) that are both, Disarium and Harshad numbers.

A number is said to be a Disarium number when the sum of its digit raised to the power of their respective positions becomes equal to the number itself.
For example, 175 is a Disarium number as follows:
11+ 72 + 53 = 1+ 49 + 125 = 175

A harshad number is a number that is divisible by the sum of its digits. E.g., the number 18 is a harshad number, because the sum of the digits 1 and 8 is 9 (1 + 8 = 9), and 18 is divisible by 9.

Grading scheme:
2 marks for writing correct code for checking Disarium number
2 marks for writing correct code for checking Harshad number
1 mark for writing correct code for only printing those numbers that are both, Disarium and Harshad numbers.</td><td></td><td>5</td><td>LJU 2022</td><td></td><td></td><td></td><td></td></tr>
</table>

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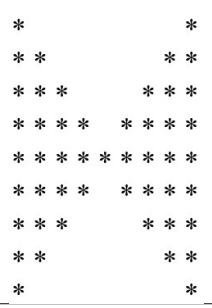
Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
173	2	**Ask the user to enter 10 test scores. Write a program to do the following:** **a)If user enters score greater than 100, then give warning to user that entered score is more than 100 and take that input again from user. b)Print out the highest and lowest scores.** **c)Print out the average of the scores. d)Print out the second largest score.** **e)Drop the two lowest scores and print out the average of the rest of them.** Note: Use of Python Data structures like string, list, tuple etc. and their inbuilt function is not allowed. For Ex. If Input is like following: Enter Test Score: 80 Enter Test Score: 65 Enter Test Score: 98 Enter Test Score: 70 Enter Test Score: 93 Enter Test Score: 130 Entered score is more than hundred, so enter again Enter Test Score: 95 Enter Test Score: 50 Enter Test Score: 40 Enter Test Score: 75 Enter Test Score: 72 **Output should be:** Highest Score is: 98 Lowest Score is: 40 Average Test Score is: 73.8 Second Largest Score is: 95 Average after dropping the two lowest scores: 81.0		6					
174	2	Write a program to encode a number by changing the digits in the given positive integer by user. The rule for changing the digits in number will be: If the digit in number is between 0 to 8 than replace the number with 1 to 9 respectively. (incrementing each digit by +1). If the digit is 9, then replace it with 0. To encode a number, replace digits in following manner: For example: Input: 31590218 Output: The number after encoding is: 42601329 For example: Input: 9259 Output: The number after encoding is: 360 For example: Input: 65217001 Output: The number after encoding is: 76328112 Original Digit in Number New Digit after Encoding 0 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 0 Note: Use of Python Data structures like string, list, tuple etc. and their inbuilt function is not allowed.		5					
175	2	Write a python program to swap first and last digits of a number using loop. (for example: input = 123456 then output=623451)		5					
176	2	Print the following pattern using loop 		4					

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
177	2	Write a program to implement the calculator for the date of Easter. The following algorithm computes the date for Easter Sunday for any year between 1900 to 2099. Ask the user to enter a year. Compute the following: 1.a = year % 19 2.b = year % 4 3.c = year % 7 4.d = (19 * a + 24) % 30 5.e = (2 * b + 4 * c + 6 * d + 5) % 7 6.dateofeaster = 22 + d + e Special note: The algorithm can give a date in April. You will know that the date is in April if the calculation gives you an answer greater than 31. (You'll need to adjust) Also, if the year is one of four special years (1954, 1981, 2049, or 2076) then subtract 7 from the date. Eg: Input: Year : 2022 Expected Outcome: 2022-04-17 (i.e. 17th April 2022)		6					
178	2	Write a Python program to compute the greatest common divisor (GCD) of two positive integers. The greatest common divisor (GCD) of two nonzero integers a and b is the greatest positive integer d such that d is a divisor of both a and b; that is, there are integers e and f such that a = de and b = df, and d is the largest such integer. The GCD of a and b is generally denoted gcd(a, b). For example, the greatest common factor of 15 and 10 is 5, since both the numbers can be divided by 5.		4					
179	2	Write a python program that prompts the user to enter numbers and stops only when the use enter "QUIT" . After this print sum and average of the numbers, minimum and maximum number from given numbers entered by user. Note: you are not allowed to use any built in structures like, list ,tuple etc. or any builtin function like min, max etc. For Example: Input: 4,1,5,"QUIT" Output: Sum=10 Average=3.333 Minimum number=1 Maximum number=5		4					
180	2	A hotel offers **two types of rooms: studio and apartment**. Write a program that calculates **the price of the whole stay for a studio and an apartment**. **Prices** depend on the **month** of the stay: **January-April** | **May-August** | **September-December** Studio-50 $/Night | Studio-70 $/Night | Studio-80 $/Night Apartment-60 $/Night | Apartment-80 $/Night | Apartment-90 $/Night **Following Discounts are offered** For a **studio**, in the case of **more than 3** nights stayed in **January -April: 20% discount**. | For a **studio**, in the case of **more than 3** nights stayed in **May-August: 10% discount**. | For a **studio**, in the case of **more than 3** nights stayed in **September-December: 5% discount**. For a **studio**, in the case of **more than 7** nights stayed in **January-April: 30% discount**. | For a **studio**, in the case of **more than 7** nights stayed in **May-August: 20% discount**. | For a **studio**, in the case of **more than 7** nights stayed in **September-December: 10% discount**. For an **apartment**, in the case of **more than 7 nights stayed**, **no limitation regarding the month: 10% discount**. **Input Data:** Input Data to be read from User - Month of Stay - Number of Nights they want to stay (Upto 30 Days) **Output Data:** - Studio Rent based on No. of Nights Stay after Discount for entered month - Apartment Rent based on No. of Nights Stay after Discount for entered month **Example:** **Input:** Enter Month: May Enter Nights: 5 **Output:** Studio Rent for 5 Nights is $ 315 Apartment Rent for 5 Nights is $ 400		6					

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Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
181	2	Write a program that enters a single digit integer number and produces all possible 6-digit numbers for which the product of their digits is equal to the entered number. Example: "number" → 2 •111112 → 1 * 1 * 1 * 1 * 1 * 2 = 2 •111121 → 1 * 1 * 1 * 1 * 2 * 1 = 2 •111211 → 1 * 1 * 1 * 2 * 1 * 1 = 2 •112111 → 1 * 1 * 2 * 1 * 1 * 1 = 2 •121111 → 1 * 2 * 1 * 1 * 1 * 1 = 2 •211111 → 2 * 1 * 1 * 1 * 1 * 1 = 2		4					
182	2	Write a Python program that prompts the user to enter numbers and stops only when the user enters “stop”. After this, print the minimum even, maximum even, average of even number, minimum odd, maximum odd, average of odd number from among all the numbers entered by the user. Note: You are not allowed to use any built-in structures like lists, tuples, etc. or any built-in functions like max, min, sum Example: input and output enter number or q for'stop:'-1 enter number or q for'stop:'-5 enter number or q for'stop:'9 enter number or q for'stop:'2 enter number or q for'stop:'4 enter number or q for'stop:'6 enter number or q for'stop:'stop Output: for even 6 2 4.0 (max, min, avg) for odd 9 -5 1.0 (max, min, avg)		5					
183	3	What is the output of the following function call? def fun1(name, age=20): print(name, age) fun1('Emma', 25)	A	1		Emma 25	Emma 20	Emma, 25	Emma, 20

184	3	What will be the output of the following Python code?
		a=10
		b=20
		def change():
		  global b
		  a=45
		  b=56
		change()
		print(a)
		print(b)
			A	1		10
						56
							45
							56
								10
								20
									Syntax Error

185	3	What will be the output of the following Python code?
		def display(b, n):
		  while n > 0:
		  print(b,end="")
		  n=n-1
		display('z',3)
			A	1		zzz	zz	An exception is executed	Infinite Loop

186	3	What will be the output of the following Python code? def fun(x,y,z): return x + y + z print(fun(2,30,400))	A	1		432	24000	430	No output

187	3	What will be the output of the following Python code?
		def func():
		  global value
		  value = "Local"
		value = "Global"
		func()
		print(value)
			A	1		Local	Global	None	Error

188	3	What will be the output of the following Python code? def say(message, times = 1): print(message * times) say('Hello') say('World', 5)	A	1		Hello WorldWorldWorldWorldWorld	Hello World 5	Hello World,World,World,World,World	Hello HelloHelloHelloHelloHello
189	3	What will be the output of the following Python code? def sub(a,b): print(a-b) sub(100,200) sub(200,100)	A	1		-100 100	100 100	100 -100	-100 -100

190	3	What will be the output of the following Python code?
		x = 50
		def func(x):
		  print('x is', x)
		  x = 2
		  print('Changed local x to', x)
		func(x)
		print('x is now', x)
			A	1		x is 50
						Changed local x to 2
						x is now 50
							x is 50
							Changed local x to 2
							x is now 2
								x is 50
								Changed local x to 2
								x is now 100
									None of the mentioned

191	3	What will be the output of the following Python code? def C2F(c): return c * 9/5 + 32 print(C2F(100)) print(C2F(0))	B	1		212 32	212.0 32.0	567 98	None of the mentioned

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
192	3	What will be the output of the following Python code? def function1(var1=5, var2=7): var2=9 var1=3 print (var1, " ", var2) function1(10,12)	B	1		5 7	3 9	10 12	Error

193	3	What will be the output of the following Python code?
		def maximum(x, y):
		if x > y:
		return x
		elif x == y:
		return 'The numbers are equal'
		else:
		return y
		print(maximum(2, 3))
			B	1		2	3	The numbers are equal	None of the mentioned

194	3	What will be the output of the following Python code?
		def power(x, y=2):
		r = 1
		for i in range(y):
		r = r * x
		return r
		print(power(3))
		print(power(3,3))
			B	1		212
						32
							9
							27
								567
								98
									None of the mentioned

195	3	What will be the output of the following Python code? x = 50 def func(): global x print('x is', x) x = 2 print('Changed global x to', x) func() print('Value of x is', x)	B	1		x is 50 Changed global x to 2 Value of x is 50	x is 50 Changed global x to 2 Value of x is 2	x is 50 Changed global x to 50 Value of x is 50	None of the mentioned
196	3	What is the output of the add() function call? def add(a, b): return a+5, b+5 result = add(3, 2) print(result)	C	1		15	8	(8,7)	Syntax Error
197	3	What will be the output of the following Python code? def change(i = 1, j = 2): i = i + j j = j + 1 print(i, j) change(j = 1, i = 2)	C	1		1 2	3 3	3 2	An exception is thrown because of conflicting values
198	3	What will be the output of the following Python code? def cube(x): return x*x*x x = cube(3) print(x)	C	1		9	3	27	30
199	3	What will be the output of the following Python code? def func(a, b=5, c=10): print('a is', a, 'and b is', b, 'and c is', c) func(3, 7) func(25, c = 24) func(c = 50, a = 100)	C	1		a is 7 and b is 3 and c is 10 a is 25 and b is 5 and c is 24 a is 5 and b is 100 and c is 50	a is 3 and b is 7 and c is 10 a is 5 and b is 25 and c is 24 a is 50 and b is 100 and c is 5	a is 3 and b is 7 and c is 10 a is 25 and b is 5 and c is 24 a is 100 and b is 5 and c is 50	None of the mentioned
200	3	What will be the output of the following Python code? def function1(var1,var2=5): var1=2 var3=var1*var2 return var3 var1=3 print(function1(var1,var2))	C	1		10	15	Error as var2 is not defined while calling the function	Does not give any error as var2 is a default argument

201	3	What will be the output of the following Python code?
		def printMax(a, b):
		if a > b:
		print(a, 'is maximum')
		elif a == b:
		print(a, 'is equal to', b)
		else:
		print(b, 'is maximum')
		printMax(3, 4)
			C	1		3	4	4 is maximum	None of the mentioned

202	3	What will be the output of the following Python code? i=0 def change(i): i=i+1 return i change(1) print(i)	C	1		1	Nothing is displayed	0	An exception is thrown
203	3	What is the output of the following function call? def fun1(num): return num + 25 fun1(5) print(num)	D	1		25	5	30	NameError

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

204	3	What will be the last line of the output of the following Python code if test_fib(6) is called?
		def fib(x):
		  global num_fib_calls
		  num_fib_calls += 1
		  if x == 0 or x == 1:
		  return 1
		  else:
		  return fib(x-1) + fib(x-2)
		
		def test_fib(n):
		  for i in range(n+1):
		  global num_fib_calls
		  num_fib_calls = 0
		  print('fib of', i, '=', fib(i))
		  print('fib called', num_fib_calls, 'times.')
			D	1		fib called 5 times	fib called 10 times	fib called 20 times	fib called 25 times

205	3	What will be the output of the following Python code?
		def f(p, q, r):
		  global s
		  p = 10
		  q = 20
		  r = 30
		  s = 40
		  print(p,q,r,s)
		p,q,r,s = 1,2,3,4
		f(5,10,15)
			A	1		10 20 30 40	10 20 30 4	1 2 3 40	1 2 3 4

206	3	If number of arguments in function definition and function call does not match, then which type of error is returned?	D	1		NameError	ImportError	funError	TypeError

207	3	What will be the output of the following Python code?
		def power(x, y=3):
		  r = 1
		  for i in range(y):
		  r = r * x
		  return r
		print(power(3),end=" ")
		print(power(3,3))
			C	0.5		3 3	9 9	27 27	9 27

208	3	What will be the output of the following Python code?
		def function1(var1=7,var2=5):
		  var1=2
		  var3=var1*var2
		  return var3
		var2=6
		var1=3
		print(function1(var1,var2))
			A	0.5	LJU 2022	12	10	18	25

209	3	What will be the output of the following Python code? def fun(a=5,b=10,c): print(a**2,b//a,c**1) fun(20,c=30)	D	0.5	LJU 2022	400 1 5	25 2 5	400 2 30	Error

210	3	What will be the output of the following python code?
		car=20
		bike=10
		cycle=30
		def new_Pur():
		  global bike,cycle
		  car=30
		  bike=20
		  cycle=50
		new_Pur()
		print(car+10," ",bike+5," ",cycle+5)
			B	0.5	LJU 2022	30 15 35	30 25 55	30 25 35	20 25 55

211	3	What will be the output of the following Python code?
		def f():
		  print(x,end=" ")
		  return y
		def f():
		  print(y,end=" ")
		  return
		x=5
		y=4
		print(f())
			A	1		4 None	5 4	4 5	5

212	3	Create a pair of functions to convert Fahrenheit to Celsius temperature values and vice versa. Where C = (F - 32) * (5 / 9)		3					
213	3	Write a Python function to calculate the factorial of a given number.		3					
214	3	Write a Python function to check whether a number is in a given range.		3					
215	3	Write a Python function to display the Fibonacci sequence till the given user input n.		4					
216	3	Write a Python function to find the Max of TWO numbers.		3					
217	3	Write a Python program to accept two numbers and check it for odd or even number		3					
218	3	Write a Python program to check whether the given no is Armstrong or not using user defined function.		3					
219	3	Write a python program to demonstarte a function to print the number 1 to 5.		3					
220	3	Write a Python Program to demonstarte a Simple Calculator using python functions		3					
221	3	Write a Python program to demonstrate the function of finding sum and average of first n natural numbers.		3					
222	3	Write a Python program to demonstrate the function of finding multiplication of first n natural numbers.		3					
223	3	Write a Python program to find reverse of given number using user defined function.		3					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
224	3	Write your own python program for computing square roots that implements Newton's Method. Use of inbuilt function, math library or x**0.5 is not allowed. Newton Method is a category of guess-and-check approach. You first guess what the square root might be and then see how close your guess is. You can use this information to make another guess and continue guessing until you have found the square root (or a close approximation to it). Suppose x is the number we want the root of and guess is the current guessed answer. The guess can be improved by using (guess+ x/guess)/2 as the next guess. The program should - 1.Prompt the user for the value to find the square root of (x) and the number of times to improve the guess. 2.Starting with a guess value of x/2, your program should loop the specified number of times applying Newton's method and report the final value of guess.		5					
225	4	What arithmetic operators cannot be used with strings?	A	1		-	+	*	All of the mentioned
226	4	Name the function which is used to find length of string.	B	1		length( )	len( )	slen( )	strlen( )
227	4	What will be the output of above Python code? str1="6/4" print("str1")	C	1		1	6/4	str1	1.5
228	4	What will be the output of below Python code? str1="Programming" print(str1[3:8])	B	1		ogram	gramm	rammin	ogramming
229	4	What will the below Python code will return? str1="save paper,save trees" str1.find("save")	B	1		It returns the first index position of the last occurance of "save" in the given string str1.	It returns the first index position of the first occurance of "save" in the given string str1.	It returns the last index position of the last occurance of "save" in the given string str1.	It returns the last index position of the first occurance of "save" in the given string str1.
230	4	Which of the following will give "Aryan" as output? str1="Vishv,Aryan,Devarsh"	D	1		print(str1[-9:-12])	print(str1[-12:-7])	print(str1[-13:-6])	print(str1[-13:-8])
231	4	What will following Python code return? str1="LJ University" print(len(str1))	A	1		13	12	11	14
232	4	What will be the output of the following Python statement? "abcdef"[2:8]	B	1		cde	cdef	bcdef	def
233	4	What will be the output of the following Python statement? print('new' 'line')	D	1		Error	Output equivalent to print 'new\nline'	new line	newline
234	4	What will be the output of the following Python code? str1="hello world" str1[::-1]	C	1		hello	world	dlrow olleh	hello world
235	4	What will be the output of the following Python code? x = ['ab', 'cd'] for i in x: i.upper() print(x)	A	1		['ab', 'cd']	['AB', 'CD']	[None, None]	none of the mentioned
236	4	What will be the output of the following Python code? x = 'abcd' for i in range(len(x)): i.upper() print (x)	C	1		a b c d	0 1 2 3	error	None of mentioned
237	4	What will be the output of the following Python code? print('abcd1234'.isalnum())	A	1		True	False	None	Error
238	4	Select the correct output of the following String operations. str1 = "my isname isisis jameis isis bond" sub = "is" print(str1.count(sub, 5))	C	1		5	7	6	4
239	4	What is the output of the following string comparison. print("John" > "Jhon") print("Emma" < "Emm")	B	1		True True	True False	False True	False False
240	4	Select the correct output of the following String operations. str1 = 'Welcome' print (str1[:6] + 'LJIET')	D	1		WelcoLJIET	Welcome LJIET	WelcomeLJIET	WelcomLJIET
241	4	Guess the correct output of the following code? str1 = "LJIET" print(str1[1:4], str1[:5], str1[4:], str1[0:-1], str1[:-1])	A	1		JIE LJIET T LJIE LJIE	JIE LJIET T LJI LJI	JIE LJIET T LJIET LJIET	JIE LJIET T LJIE LJI
242	4	Which of the following is a Python tuple?	B	1		[1, 2, 3]	(1, 2, 3)	{1, 2, 3}	{}
243	4	Which of the following creates a tuple?	B	1		tuple1=(5)*2	tuple1=("a","b")	tuple1[2]=("a","b")	None of the above
244	4	What type will be printed when the following code executes? aTuple = ("Orange") print (type(aTuple))	D	1	LJU-2024	list	tuple	array	str

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
245	4	What will the following code return? def practice(tup): a, b, c = tup return b aTuple = "Orange", 30, "White" practice(aTuple)	B	1		Orange	30	White	("Orange", 30, "White")
246	4	Suppose t = (1, 2, 4, 3), which of the following is incorrect?	B	1		print(t[3])	t[3] = 45	print(max(t))	print(len(t))
247	4	What will be the output of the following Python code? t=(1,2,4,3) t[1:3]	C	1		(1, 2)	(1, 2, 4)	(2, 4)	(2, 4, 3)
248	4	What will be the output of the following Python code? t=(1,2,4,3) t[1:-1]	C	1		(1, 2)	(1, 2, 4)	(2, 4)	(2, 4, 3)
249	4	What will be the output of the following Python code? t1 = (1, 2, 4, 3) t2 = (1, 2, 3, 4) t1 < t2	B	1		True	False	Error	None
250	4	What will be the output of the following Python code? my_tuple = (1, 2, 3, 4) my_tuple.append((1,2,3)) print len(my_tuple)	D	1		1	2	5	Error
251	4	What is the data type of (1)?	B	1		Tuple	Integer	List	Both tuple and integer
252	4	If a=(1,2,3,4), a[1:-1] is _____	D	1		Error, tuple slicing doesn't exist	[2,3]	(2,3,4)	(2,3)
253	4	What will be the output of the following Python code? a=(1,2,(4,5)) b=(1,2,(3,4)) a<b	A	1		False	True	Error, < operator is not valid for tuples	Error, < operator is valid for tuples but not if there are sub-tuples
254	4	Is the following Python code valid? a=(1,2,3,4) del a	C	1		No because tuple is immutable	Yes, first element in the tuple is deleted	Yes, the entire tuple is deleted	No, invalid syntax for del method
255	4	What will be the output of the following Python code? a=(0,1,2,3,4) b=slice(0,2) a[b]	C	1		Invalid syntax for slicing	[0,2]	(0,1)	(0,2)
256	4	Choose the correct option for Tuple.	C	1		In Python, a tuple can contain only integers as its elements.	In Python, a tuple can contain only strings as its elements.	In Python, a tuple can contain both integers and strings as its elements.	In Python, a tuple can contain either string or integer but not both at a time.
257	4	What will be the output of below Python code? tupl=("annie","hena","sid") print(tupl[-3:0])	B	1		("annie")	()	None	Error as slicing is not possible in tuple.
258	4	Which of the following options will not result in an error when performed on tuples in Python where tupl=(5,2,7,0,3)?	C	1		tupl[1]=2	tupl.append(2)	tupl1=tupl+tupl	tupl.sort()
259	4	Which of the following options will result in an error when performed on tuples in Python where tupl=(1, 21 , 17, 50, 33)?	D	1	LJU-2023	tupl.append(2)	tupl.pop(1)	tupl.remove(21)	All of the mentioned
260	4	What will be the output of below Python code? tupl=([2,3],"abc",0,9) tupl[0][1]=1 print(tupl)	C	1		([2,3],"abc",0,9)	([1,3],"abc",0,9)	([2,1],"abc",0,9)	Error
261	4	Which of the following two Python codes will give same output? (i) print(tupl[:-1]) (ii) print(tupl[0:5]) (iii) print(tupl[0:4]) (iv) print(tupl[-4:]) If tupl=(5,3,1,9,0)	D	1		i, ii	ii, iv	i, iv	i, iii
262	4	Which of the following would complete val = to set val to 20 by slicing aTuple. aTuple = ("Orange", (10, 20, 30), (5, 15, 25)) val =	A	1		val = aTuple[1][1]	val = aTuple[1:2](1)	val = aTuple[2][1]	val = aTuple[1:2][1]
263	4	What is the output of the following. aTuple = (10, 20, 30, 40, 50, 60, 70, 80) print(aTuple[2:5], aTuple[:4], aTuple[3:])	C	1		(30, 40, 50) (10, 20, 30, 40) (40, 50, 60, 70)	(30, 40, 50) (10, 20, 30) (40, 50, 60)	(30, 40, 50) (10, 20, 30, 40) (40, 50, 60, 70, 80)	None of the these
264	4	What will be the output of the following Python code? t = (1, 2, 4, 3, 8, 9) for i in range(0, len(t), 2): print(t[i],end=" ")	D	1		1 4 9	2 3 9	1 2 4	1 4 8
265	4	Find the output of the given Python program t1 = (1,2) t2 = (2,1) x = (t1 == t2) print(x)	A	1		False	True	Error	None

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
266	4	What will be the output of the following python code? str1="Hello World! Hello Hello" str1.count("Hello",12,25)	B	1		1	2	3	4
267	4	What is the output of the following code? a="Hello Welcome to the Python" print(a.find("z")) print(a.index("z"))	B	1		Value Error -1	-1 Value Error	1 Syntax Error	Syntax Error 1
268	4	S = "1234567890" S = S[-3] + S[2:4] + S[-2:-5] + S[: -4:-2] + S[1: :2] print(S[: : 3] * 2)	A	1	LJU-2023	80408040	86068606	14701470	None
269	4	What will be the output of the following code? t1=(1,2,3,4,5,6,7) print(t1[t1[1]+t1[-4]])	C	1		1	2	7	4

270	4	What will be the output of the following piece of code?
		def check(s):
		  if len(s) <= 1:
		  return True
		  else:
		  return s[0] == s[-1] and check(s[1:-1])
		print(check('saippuakivkauppias'))
			B	1		True	False	s	k

271	4	What will be the output of the following Python code? s="Th*is is$ nothi&&ng b#ut excerc(is)e" change=str.maketrans("(",",","@#$%^&*_-)") s.translate(change) print(s)	A	1		Th*is is$ nothi&&ng b#ut excerc(is)e	This is nothing but excerc,ise	This is nothing but exercise	NameError: name 'str' not defined
272	4	Which of the following will give "Simon" as output? str1="John,Simon,Aryan"	A	1		print(str1[-11:-6])	print(str1[-7:-12])	print(str1[-11:-7])	print(str1[-11:-5])
273	4	What will be the output of the following program? s = "ball" r = "" for i in s: r = i.upper() + r print(r)	D	1		LLB	BALL	Error	LLAB
274	4	What will be the output of the following program? s = 'I love my INDIA' print(s[-1]+s[3:4]+s[7:9]+s[-3:-1]+s[-1:-3:-1]+s[5:9]+s[10:])	A	1		AomyDIAIe myINDIA	AomyDIIe myINDIA	AomyDIAIe myINDI	AomyDAIe myINDIA
275	4	When using find(), If str is not present in string then what is returned?	C	1		0	1	-1	NameError
276	4	What is the output for following code: s="blog" for i in range(-1,-len(s),-1): print(s[i],end="$")	C	1		goI$b	goIb	goI$	glob
277	4	What is the output for following code: print("A#B#C#D#E".split("#",2))	B	1		['A', 'B', 'C', 'D', 'E']	['A', 'B', 'C#D#E']	['A#', 'B#', 'C#', 'D#', 'E']	Error
278	4	What is the output for following code: for i in range (len("python"),12,2): print("python"[i-6],end="")	B	1		python	pto	yhn	pyth
279	4	What will be the output of the following Python code? x = 'abcd' for i in x: i.isupper() print (x)	A	0.5	LJU 2022	abcd	0 1 2 3	ABCD	Error
280	4	What will be the output of the following Python code? t=(1,2,4,3,6,8,4) t[1:-1:-1]	C	0.5	LJU 2022, LJU-2024	(2,4,3,6,8)	(2,1)	()	(4,8)
281	4	What will be the output of the following Python code? my_tuple = (1, 2, 3, 4) my_tuple.append((1,2,3)) print (len(my_tuple))	D	0.5	LJU 2022	4	7	5	Error

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

282	4	What will be the output of the following Python code?
		
		def enc(st):
		  encoded=""
		  c=1
		  ld=st[0]
		  for i in range (1,len(st)):
		  if ld==st[i]:
		  c=c+1
		  else:
		  encoded=encoded+str(c)+ld
		  c=0
		  ld=st[i]
		  c=c+1
		  encoded=encoded+str(c)+ld
		  return encoded
		st="AAABBACCAA"
		print(enc(st))
			B	1	LJU 2022	A3B2A1C2A2	3A2B1A2C2A	10	Error

283	4	What will be the output of the following Python code? s="aa" s.strip("a") print(s)	A			aa	a	error	True
284	4	What will be the output of the following Python code? s="1234ABCvhghbbv" v=s.maketrans("abc","vvv") print(s.translate(v))	D			vvv	1234vhghvvv	1234vhg	1234ABCvhghvvv
285	4	What is returned by the following function? shift=1 n=12345 s=str(n) x=s[shift:]+s[:shift] print(x)	B	1		12345	23451	34512	54321
286	4	What will following Python code return? str1="LJ'University" print(len(str1))	A	0.5		13	12	15	2
287	4	What will be the output of below Python code? tupl=() tupl1=tupl*2 print(len(tupl1))	A	0.5		0	2	1	10
288	4	What will be the output of the following program on execution? A=(5,3,2) B=(5,3,2) print(len(A+B*3))	C	1		6	9	12	3
289	4	Select the correct output of the following String operations. str1 = "my isname isisis jameis isis bond" sub = "is" print(str1.find(sub,4,11))	D	1	LJU-2024	10	11	1	None of the mentioned
290	4	What will be the output of the following Python code? S = "1234567890" S = S[-3] + S[2:4] + S[-5:-2] + S[-4:-2] + S[1:2] print(S[::3] * 2)	B	1	LJU-2024	8674086740	867867	860860	840840
291	4	Write a Python program to check if a string is palindrome or not.		3					
292	4	Write a Python program to Find length of a string in python.		3					
293	4	Write a Python function to find length of a string in python without using len function.		3					
294	4	Write a Python function that accepts a string and calculate the number of uppercase letters and lowercase letters.		3					
295	4	Write a Python program to demonstrate the negative index in a Tuple		3					
296	4	Write a program to remove I'th character from string in python.		3					
297	4	Write a program to create a string made of first,middle and last character.		3					
298	4	Write a program to find all occuences of a sub string in a given string by ignoring the case.		3					
299	4	Write a program to calculate the sum and average of the digits present in a string.		3					
300	4	Write a program to reverse a given string		3					
301	4	Write a Python program to print even length words in a string.		3					
302	4	Write a Python program to Uppercase Half String from the given string.		3					
303	4	Write a Python program to capitalize the first and last character of each word in a string		3					
304	4	Write a program to Create a string made of the middle three characters		3					
305	4	Write a program to check if two strings are balanced. For example, strings s1 and s2 are balanced if all the characters in the s1 are present in s2. The character's position doesn't matter.		3					
306	4	Write a program to Split a string on hyphens		3					
307	4	Write a program to print maximum and minimum elements in given Tuple.		3					
308	4	Write a Program to print even numbers from given Tuple.		3					
309	4	Write a program to print sum of even numbers and sum of odd numbers from elements given in tuple.		4					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
310	4	Write a Python program using function to shift the decimal digits n places to the left, wrapping the extra digits around. If shift > the number of digits of n, then reverse the string. Note: Function will take two parameters: 1. The number 2. How much shift user want Example: Input: n=12345 shift=1 Output: Result=23451 Input: n=12345 shift=3 Output: Result=45123 Input: n=12345 shift=5 Output: Result=12345 Input: n=12345 shift=6 Output: Result=54321		3	LJU 2022, LJU-2024				
311	4	Write a Python programme that accepts a string and calculate the number of uppercase letters, lowercase letters and number of digits. For example, Input: Hello Pyth@n is 100% easy Output: Uppercase letters : 2 Lowercase letters : 14 Digits : 3		3	LJU 2022				
312	4	Write a python program to check the validity of a Password. Primary conditions for password validation: 1. Minimum 8 characters. 2. The alphabet must be between [a-z] 3. At least one alphabet should be of Upper Case [A-Z] 4. At least 1 number or digit between [0-9] 5. At least 1 character from [_ or @ or $] Examples: Input: Ram@_f1234 Output: Valid Password Input: Rama_fo$ab Output: Invalid Password Explanation: Number is missing Input: Rama#fo9c Output: Invalid Password Explanation: Must consist from _ or @ or $		3	LJU-2023				
313	4	Write a Python program to return another string similar to the input string, but with its case inverted. For example, input of “Mr. Ed” will result in “mR. eD” as the output string. Note: Use of built in swapcase function is prohibited.		3					
314	4	Write a Python program to create a Caesar encryption. Note: In cryptography, a Caesar cipher, also known as Caesar's cipher, the shift cipher, Caesar's code or Caesar shift, is one of the simplest and most widely known encryption techniques. It is a type of substitution cipher in which each letter in the plaintext is replaced by a letter some fixed number of positions down the alphabet. For example, with a right shift of 3, A would be replaced by D, E would become H, and so on. The method is named after Julius Caesar, who used it in his private correspondence. For Example: Input Text : LJIET ENG Shift : 3 Cipher: OMLHW HQJ		3	LJU-2023				
315	4	Write a program to check if two strings are balanced. For example, strings s1 and s2 are balanced if all the characters in the s1 are present in s2 and length of s1 & s2 should be same. The character’s position doesn’t matter. Example : s1 = hello s2 = olleh Balanced		4					
316	5	Which of the following commands will create a list?	D	1		list1 = list()	list1 = []	list1 = list([1, 2, 3])	All of the mentioned
317	5	What is the output when we execute list(“hello”)?	A	1		[‘h’, ‘e’, ‘l’, ‘l’, ‘o’]	[‘hello’]	[‘llo’]	[‘olleh’]
318	5	Suppose listExample is [‘h’,’e’,’l’,’l’,’o’], what is len(listExample)?	A	1		5	4	None	Error

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
319	5	Suppose list1 is [1, 3, 2], What is list1 * 2?	C	1		[2, 6, 4]	[1, 3, 2, 1, 3]	[1, 3, 2, 1, 3, 2]	[1, 3, 2, 3, 2, 1]

320	5	What will be the output of the following Python code?
		names1 = ['Amir', 'Bala', 'Chales']
		if 'amir' in names1:
		  print(1)
		else:
		  print(2)
			C	1		1	Error	2	None of the mentioned

321	5	What will be the output of the following Python code? list1 = [1, 2, 3, 4] list2 = [5, 6, 7, 8] print(len(list1 + list2))	D	1		2	4	5	8
322	5	Which of the following would give an error?	D	1		. list1=[]	list1=[]*3	list1=[2,8,7]	None of the above
323	5	Suppose list1 is [4, 2, 2, 4, 5, 2, 1, 0], Which of the following is correct syntax for slicing operation?	D	1		print(list1[0])	print(list1[:2])	print(list1[:-2])	All of the mentioned
324	5	Suppose list1 is [2, 33, 222, 14, 25], What is list1[-1]?	C	1		Error	None	25	2
325	5	Suppose list1 is [2, 33, 222, 14, 25], What is list1[:-1]?	A	1		[2, 33, 222, 14]	Error	25	[25, 14, 222, 33, 2]
326	5	What will be the output of the following Python code? names = ['Amir', 'Bear', 'Charlton', 'Daman'] print(names[-1][-1])	D	1		A	Daman	Error	n
327	5	Which of the following Python code will give different output from the others?	C	1		for i in range(0,5): print(i)	for j in [0,1,2,3,4]: print(j)	for k in [0,1,2,3,4,5]: print(k)	for l in range(0,5,1): print(l)

328	5	What will be the output of the following Python code?
		names1 = ['Amir', 'Bear', 'Charlton', 'Daman']
		names2 = names1
		names3 = names1[:]
		names2[0] = 'Alice'
		names3[1] = 'Bob'
		sum = 0
		for ls in (names1, names2, names3):
		  if ls[0] == 'Alice':
		  sum += 1
		  if ls[1] == 'Bob':
		  sum += 10
		print(sum)
			B	1	LJU-2023	11	12	21	22

329	5	What will be the output of the following Python code?
		names1 = ['Amir', 'Bear', 'Charlton', 'Daman']
		names2 = names1
		names3 = names1
		names2[0] = 'Alice'
		names3[1] = 'Bob'
		sum = 0
		for ls in (names1, names2, names3):
		  if ls[0] == 'Alice':
		  sum += 1
		  if ls[1] == 'Bob':
		  sum += 10
		print(sum)
			B	1	LJU 2022	12	33	32	20

330	5	What will be the output of the following Python code? lst=[3,4,6,1,2] lst[1:2]=[7,8] print(lst)	A	1		[3, 7, 8, 6, 1, 2]	Syntax error	[3,[7,8],6,1,2]	[3,4,6,7,8]
331	5	What will be the output of below Python code? list1=[8,0,9,5] print(list1[::-1])	A	1		[5,9,0,8]	[8,0,9]	[8,0,9,5]	[0,9,5]
332	5	Suppose list1 = [0.5 * x for x in range (0, 4)], list1 is:	C	1		[0, 1, 2, 3]	[0, 1, 2, 3, 4]	[0.0, 0.5, 1.0, 1.5]	[0.0, 0.5, 1.0, 1.5, 2.0]
333	5	To add a new element to a list we use which command?	B	1		list1.add(5)	list1.append(5)	list1.addLast(5)	list1.addEnd(5)
334	5	What will be the output of the following Python code? numbers = [1, 2, 3, 4] numbers.append([5,6,7,8]) print(len(numbers))	B	1		4	5	8	12
335	5	What will be the output of the following Python code? a=[1,2,3] b=a.append(4) print(a) print(b)	B	1		[1,2,3,4] [1,2,3,4]	[1, 2, 3, 4] None	Syntax error	[1,2,3] [1,2,3,4]

336	5	What is returned by the following function?
		def list_transformation():
		  alist = [4, 2, 8, 6, 5]
		  blist = [ ]
		  for item in alist:
		  blist.append(item+5)
		  return blist
			C	1	LJU-2024	[4, 2, 8, 6, 5]	[4, 2, 8, 6, 5, 5]	[9, 7, 13, 11, 10]	Error, you cannot concatenate inside an append.

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

337	5	What will the following code print?
		def mystery(num_list):
		out = []
		for num in num_list:
		if num > 10:
		out.append(num)
		return out
		print(mystery([5, 10, 15, 20]))
			C	1		[10, 15, 20]	[20, 15]	[15, 20]	[20, 15, 10]

338	5	Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1.count(5)?	D	1		0	4	1	2
339	5	What will be the output of the following Python code? x = [1, 2, 3] y = [7, 8, 9] x.extend(y) print(x)	A	1		[1, 2, 3, 7, 8, 9]	[1, 2, 3, 7, 9]	[7, 8, 9]	[1, 2, 3]
340	5	What will be the output of the following Python code? x = [1, 2, 3] y = "789" x.extend(y) print(x)	D	1		[1, 2, 3, 7, 8, 9]	[1, 2, 3]	['7', '8', '9']	[1, 2, 3, '7', '8', '9']
341	5	What will be the value of 'result' in following Python program? list1 = [1,2,3,4] list2 = [2,4,5,6] list3 = [2,6,7,8] result = list() result.extend(i for i in list1 if i not in (list2+list3) and i not in result) result.extend(i for i in list2 if i not in (list1+list3) and i not in result) result.extend(i for i in list3 if i not in (list1+list2) and i not in result)	A	1		[1, 3, 5, 7, 8]	[1, 7, 8]	[1, 2, 4, 7, 8]	error
342	5	Suppose list1 is [3, 4, 5, 20, 5], what is list1.index(5)?	D	1		0	1	4	2
343	5	To insert 5 to the third position in list1, we use which command?	B	1		list1.insert(3, 5)	list1.insert(2, 5)	list1.add(3, 5)	list1.append(3, 5)
344	5	What will be the output of the following Python code? veggies = ['carrot', 'broccoli', 'potato', 'asparagus'] veggies.insert(veggies.index('broccoli'), 'celery') print(veggies)	A	1		['carrot', 'celery', 'broccoli', 'potato', 'asparagus']	['carrot', 'celery', 'potato', 'asparagus']	['carrot', 'broccoli', 'celery', 'potato', 'asparagus']	['celery', 'carrot', 'broccoli', 'potato', 'asparagus']
345	5	What will be the result after the execution of above Python code? list1=[3,2,5,7,3,6] list1.pop(3) print(list1)	A	1		[3,2,5,3,6]	[2,5,7,3,6]	[2,5,7,6]	[3,2,5,7,3,6]
346	5	To remove string "hello" from list1, we use which command?	A	1		list1.remove("hello")	list1.remove(hello)	list1.removeAll("hello")	list1.removeOne("hello")
347	5	Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.reverse()?	D	1		[3, 4, 5, 20, 5, 25, 1, 3]	[1, 3, 3, 4, 5, 5, 20, 25]	[25, 20, 5, 5, 4, 3, 3, 1]	[3, 1, 25, 5, 20, 5, 4, 3]
348	5	What will be the output of below Python code? numbers = [1, 3, 4, 2] numbers.sort() print(numbers)	A	1		[1, 2, 3, 4]	[1, 3, 4]	[1, 2, 3]	[2, 3, 4]
349	5	What will be the output of below Python code? decimalnumber = [2.01, 2.00, 3.67, 3.28, 1.68] decimalnumber.sort() print(decimalnumber)	D	1		[1.68, 2, 2.01, 3.28, 3.67]	[1.68, 2.0, 2.01, 3, 3]	[1, 2, 2, 3, 3]	[1.68, 2.0, 2.01, 3.28, 3.67]
350	5	What will be the output of below Python code? words = ["Geeks", "For", "Geeks"] words.sort() print(words)	C	1		['Geeks','For', 'Geeks']	['For', 'Geeks']	['For', 'Geeks', 'Geeks']	[For, Geeks, Geeks]
351	5	Tup=[2,3,4,[]] Tup[-1].extend(range(5,35,5)) Tup[-1].append([10,20]) Tup[-1][-1].append([100,200]) print(len(Tup)+len(Tup[3])+len(Tup[-1][-1])+Tup[-1][-2])	B	1	LJU-2023	22	44	61	71
352	5	What will be the output of the following Python code snippet? d = {"john":40, "peter":45} "john" in d	A	1		TRUE	FALSE	NONE	ERROR
353	5	What will be the output of the following Python code snippet? d1 = {"john":40, "peter":45} d2 = {"john":466, "peter":45} d1 == d2	B	1		TRUE	FALSE	NONE	ERROR
354	5	What will be the output of the following Python code snippet? d = {"john":40, "peter":45} d["john"]	A	1		40	45	"john"	"peter"
355	5	What will be the output of the following Python code? d = {0: 'a', 1: 'b', 2: 'c'} for i in d: print(i)	A	1		0 1 2	a b c	0 a 1 b 2 c	none of the mentioned
356	5	Suppose d = {"john":40, "peter":45}. To obtain the number of entries in dictionary which command do we use?	B	1		d.size()	len(d)	size(d)	d.len()
357	5	What will be the output of the following Python code snippet? d = {"john":40, "peter":45} print(list(d.keys()))	A	1		["john", "peter"]	["john":40, "peter":45]	("john", "peter")	("john":40, "peter":45)

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
358	5	Which of the following is not a declaration of the dictionary?	C	1		{1: 'A', 2: 'B'}	dict([[1,"A"],[2,"B"]])	{1,"A",2"B"}	{ }
359	5	What will be the output of the following Python code? a=dict() a[1]	A	1		An exception is thrown since the dictionary is empty	' '	1	0
360	5	What will be the output of the following Python code? a={ } a[2]=1 a[1]=[2,3,4] print(a[1][1])	B	1		[2,3,4]	3	2	An exception is thrown
361	5	What will be the output of the following Python code snippet? numbers = {} letters = {} comb = {} numbers[1] = 56 numbers[3] = 7 letters[4] = 'B' comb['Numbers'] = numbers comb['Letters'] = letters print(comb)	D	1	LJU-2023	Error, dictionary in a dictionary can't exist	'Numbers': {1: 56, 3: 7}	{'Numbers': {1: 56}, 'Letters': {4: 'B'}}	{'Numbers': {1: 56, 3: 7}, 'Letters': {4: 'B'}}
362	5	Which of the following statements create a dictionary?	D	1		d = {}	d = {"john":40, "peter":45}	d = {40:"john", 45:"peter"}	All of the mentioned
363	5	What will be the output of the following Python code? a={1:"A",2:"B",3:"C"} for i in a: print(i,end=" ")	A	1		1 2 3	'A' 'B' 'C'	1 'A' 2 'B' 3 'C'	Error, it should be: for i in a.items():
364	5	What will be the output of the following Python code? text = {1: "geeks", 2: "for"} text.clear() print(text)	B	1		{1: "geeks", 2: "for"}	{}	[1: "geeks", 2: "for"]	[]
365	5	What will be the output of the following Python code? a={1:"A",2:"B",3:"C"} b=a.copy() b[2]="D" print(a)	B	1		Error, copy() method doesn't exist for dictionaries	{1: 'A', 2: 'B', 3: 'C'}	{1: 'A', 2: 'D', 3: 'C'}	"None" is printed
366	5	What is the output of the following piece of code? a={1:"A",2:"B",3:"C"} print(a.get(1,4))	B	1		1	A	4	Invalid syntax for get method
367	5	What is the output of the following piece of code? a={1:"A",2:"B",3:"C"} print(a.get(5,4))	C	1		A	5	4	Invalid syntax for get method
368	5	What will be the output of the following Python code snippet? a={1:"A",2:"B",3:"C"} for i,j in a.items(): print(i,j,end=" ")	A	1	LJU 2023	1 A 2 B 3 C	1 2 3	A B C	1:"A" 2:"B" 3:"C"
369	5	What will be the output of the following Python code? a={1:"A",2:"B",3:"C"} a.items()	D	1		Syntax error	dict_items([('A', 'B'), ('C')])	dict_items([(1,2,3)])	dict_items([(1, 'A'), (2, 'B'), (3, 'C')])
370	5	What will be the output of the following Python code? Dictionary1 = {'A': 'Geeks', 'B': 'For', 'C': 'Geeks'} print(Dictionary1.keys())	D	1		keys(['A', 'B', 'C'])	(['A', 'B', 'C'])	dict_keys([A, B, C])	dict_keys(['A', 'B', 'C'])
371	5	What will be the output of the following Python code? a={1:"A",2:"B",3:"C"} b={4:"D",5:"E"} a.update(b) print(a)	C	1		{1: 'A', 2: 'B', 3: 'C'}	Method update() doesn't exist for dictionaries	{1: 'A', 2: 'B', 3: 'C', 4: 'D', 5: 'E'}	{4: 'D', 5: 'E'}
372	5	What will be the output of the following Python code? dictionary = {"raj": 2, "striver": 3, "vikram": 4} print(dictionary.values())	C	1		values([2, 3, 4])	([2, 3, 4])	dict_values([2, 3, 4])	dict([2, 3, 4])
373	5	Which of the following is not the correct syntax for creating a set?	A	1		set([[1,2],[3,4]])	set([1,2,2,3,4])	set((1,2,3,4))	{1,2,3,4}
374	5	Which of the following statements is used to create an empty set?	B	1		{ }	set()	[ ]	( )
375	5	What will be the output of the following Python code? s={5,6} s*3	A	1		Error as unsupported operand type for set data type	{5,6,5,6,5,6}	{5,6}	Error as multiplication creates duplicate elements which isn't allowed
376	5	What will be the output of the following Python code? a={4,5,6} b={2,8,6} a+b	C	1		{4,5,6,2,8}	{4,5,6,2,8,6}	Error as unsupported operand type for sets	Error as the duplicate item 6 is present in both sets
377	5	What will be the output of the following Python code? a={4,5,6} b={2,8,6} a-b	A	1		{4,5}	{6}	Error as unsupported operand type for set data type	Error as the duplicate item 6 is present in both sets
378	5	What will be the output of the following Python code, if s1= {1, 2, 3}? s1.issubset(s1)	A	1		TRUE	Error	No output	FALSE

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
379	5	If we have two sets, s1 and s2, and we want to check if all the elements of s1 are present in s2 or not, we can use the function:	B	1		s2.issubset(s1)	s2.issuperset(s1)	s1.issuperset(s2)	s1.isset(s2)
380	5	What will be the output of the following Python code? x = {"apple", "banana", "cherry"} y = {"google", "microsoft", "apple"} z = x.union(y) print(z)	C	1		{ 'microsoft', 'google', 'apple', 'cherry'}	{'banana', 'microsoft', 'google', 'apple'}	{'banana', 'microsoft', 'google', 'apple', 'cherry'}	{'banana', 'microsoft', 'google', 'apple'}
381	5	What will be the output of the following Python code? s1 = {1, 2, 3} s2 = {2, 3} print(s1.intersection(s2))	C	1		{2}	{1, 2, 3}	{2, 3}	{3}
382	5	What will be the output of the following Python code? x = {"apple", "banana", "cherry"} y = {"google", "microsoft", "apple"} z = x.difference(y) print(z)	D	1		{"apple", "banana", "cherry"}	{"google", "microsoft", "apple"}	{"google", "microsoft",}	{'banana', 'cherry'}
383	5	What will be the output of the following Python code? x = {"apple", "banana", "cherry"} y = {"google", "microsoft", "apple"} z = x.symmetric_difference(y) print(z)	B	1		{"apple", "banana", "cherry"}	{'google', 'banana', 'microsoft', 'cherry'}	{"google", "microsoft",}	{'banana', 'cherry'}
384	5	What will be the output of the following Python code? fruits = {"apple", "banana", "cherry"} x = fruits.copy() print(x)	C	1		{'google', 'banana', 'microsoft', 'cherry'}	{'banana', 'cherry'}	{'banana', 'apple', 'cherry'}	{"google", "microsoft", "apple"}
385	5	What will be the output of the following Python code? s="Python Programming" print(len(set(s)))	C	1	LJU-2023, LJU-2024	17	18	12	14
386	5	What will be the output of the following Python code? y = 6 z = lambda x: x * y print(z(8))	A	1		48	14	64	None of the mentioned
387	5	What will be the output of the following Python code? lamb = lambda x: x ** 3 print(lamb(5))	C	1		15	555	125	None of the mentioned

388	5	What will be the output of the following Python code?
		def writer():
		  title = 'Sir'
		  name = (lambda x: title + ' ' + x)
		  return name
		who = writer()
		print(who('Arthur'))
			B	1		Arthur Sir	Sir Arthur	Arthur	None of the mentioned

389	5	What will be the output of the following Python code? min = (lambda x, y: x if x < y else y) print(min(101*99, 102*98))	C	1	LJU-2023	9997	9999	9996	None of the mentioned

390	5	What will be the output of the following Python code?
		
		def current_date(**kwargs):
		  for i in kwargs:
		  print(i)
		current_date(date=2-1-2023)
			C	0.5	LJU 2022	date:2-1-2023	date=2-1-2023	date	02-01-2023

391	5	What will be the output of the following Python code?
		def f1(*m):
		  sum1=len(m)
		  for i in m:
		  sum1+=i
		  return sum1
		x=f1(1,2,3,(4,)==(4,),(5,)==(5))
		print(x)
			A	1	LJU-2023	12	11	13	15

392	5	What will be the output of the following Python code? lamb = lambda x: x ** 3 print(lamb('5'))	D	1	LJU-2024	555	15	125	Error
393	5	What will be the value of 'result' after executing following Python program? list1 = [1,2,3,4] list2 = [2,4,5,6] list3 = [2,6,7,8] result = list() result.extend(i for i in list1 if i in (list2+list3) and i not in result) result.extend(i for i in list2 if i in (list1+list3) and i not in result) result.extend(i for i in list3 if i in (list1+list2) and i not in result)	A	1	LJU-2024	[2, 4, 6]	[1, 3, 5, 7, 8]	[2, 4, 6, 8]	[1, 7, 8]

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

394	5	What will be the output of the following Python code?
		def F(B,A=3,*C,**D):
		  sum=A+B
		  for i in C:
		  sum=sum+i
		  for i in D.values():
		  sum=sum+i
		  return sum
		print(F(1,5,7,4,3,e=1,f=2))
			C	1	LJU-2024	10	20	23	21

395	5	Given a list L of size N, You need to count the number of special elements in the given list. An element is special if removal of that element makes the list balanced. The list will be balanced if sum of even index elements is equal to the sum of odd index elements. Example Input Input 1: A = [2,1,6,4] Input 2: A=[5,5,2,5,8] Example Output Output 1: 1 Output 2: 2 Explanation 1 : After deleting 1 from list : [2,6,4] (2+4) = (6) Hence 1 is the only special element, so count is 1. Explanation 2 : If we delete A[0] or A[1], list will be balanced (5+5)=(2+8) So A[0] and A[1] are special elements, so count is 2.		9					
396	5	The Syracuse (also called Collatz or Hailstone) sequence is generated by starting with a natural number and repeatedly applying the following function until reaching 1: syr(x) = 1/2 if x is even; and syr(x) = 3x + 1 if x is odd For example, the Syracuse sequence starting with 5 is: 5, 16, 8, 4, 2, 1. Use of inbuilt function or math library is not allowed. This sequence will always go to 1 for every possible starting value. Write a program that 1.Gets a starting value from the user 2.Prints the Syracuse sequence for that starting value.		5					
397	5	What will be the output of the following Python code? numberGames = {} numberGames[(1,2,4)] = 8 numberGames[(4,2,1)] = 10 numberGames[(1,2)] = 12 sum = 0 for k in numberGames: sum += numberGames[k] print (len(numberGames) + sum)	C	1		30	24	33	31
398	5	What is the output of the following code? L=['Physics',101],['Chemistry',202],['Maths',303],45,6,'j'] print(len(L))	C	1		3	5	6	4

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

399	5	What will the below Python code do?
		
		set1={2,3}
		
		set2={3,2}
		
		set3={2,1}
		
		if(set1==set2):
		
		print("yes")
		else:
		
		print("no")
		
		if(set1==set3):
		
		print("yes")
		
		else:
		
		print("no")
			A	1		yes
						no
							no,yes	no,no	yes,yes

400	5	What is the output of the following code? D={1:"Amit",2:"Suman",3:"Ravi",4:"Anuj"} print(max(D.values()))	B	1		Amit	Suman	Ravi	Anuj
401	5	What will be the output of the following Python code? L = ['Arnold', 'Bootboggler', 'Christi', 'Dickinson'] print(L[-1][-1])	A	1		n	a	Dickinson	Arnold
402	5	What will be the output of the following Python code? D = {1 : 1, 2 : '2', '1' : 2, '2' : 3} D['1'] = 2 print(D [D [D [str(D[1])]]])	D	1		Key Error	1	Syntax Error	3
403	5	What will be the output of the following Python code? L1 = [ ] L1.append([1, [2, 3], 4]) L1.extend([7, 8, 9]) print(L1[0][1][1] + L1[2])	B	1		12	11	[11]	[12]

404	5	What will be the output of the following Python code?
		L1 = [1, 1.33, 'LJU', 0, 'N', True, 'Y', 1]
		val1= 0
		val2= ""
		for x in L1:
		if(type(x) == int or type(x) == float):
		val1 += x
		elif(type(x) == str):
		val2 += x
		else:
		break
		continue
		print(val1, val2)
			A	1	LJU-2023	2.33 LJUN	3.33 LJUNTrueY	3.33 LJU	2.33 LJUNY

405	5	What will be the output of the following Python code?
		def sum_list(l):
		sum=0
		for i in range(len(l)):
		if l[i]==13 or l[i-1]==13:
		continue
		else:
		sum+=l[i]
		return sum
		l= [1,2,13,2,9,13]
		print(sum_list(l))
			D	1		40	27	9	11

406	5	What will be the output of the following Python code? L1= [1,1,2,4,5,6,2,3,1,3,5] L2= [8,2,1,3,8,3,7,2,0] L=L1+L2 S=list(set(list(L))) S.sort() S.reverse() S.sort() L.reverse() print(S)	A	1		[0, 1, 2, 3, 4, 5, 6, 7, 8]	[1, 1, 2, 4, 5, 6, 2, 3, 1, 3, 5, 8, 2, 1, 3, 8, 3, 7, 2, 0]	[8, 7, 6, 5, 4, 3, 2, 1, 0]	[0, 1, 1, 1, 1, 2, 2, 2, 2, 3, 3, 3, 3, 4, 5, 5, 6, 7, 8, 8]
407	5	What will be the output of the following program? tuple = {} tuple[(1,2,4)] = 8 tuple[(4,2,1)] = 10 tuple[(1,2)] = 12 _sum = 0 for k in tuple: _sum += tuple[k] print(len(tuple) + _sum)	C	1		22	30	33	31

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
408	5	What is the output of the following program? L = list('123456') L[0] = L[5] = 0 L[3] = L[-2] L[5]=1 L[-2]=4 L[2]=L[-1] L[4]=L[3] L[-1]=L[3] print(L)	A	1		[0, '2', 1, '5', '5', '5']	[0, '2', 1, '5', '5', '1']	[1, '2', 1, '5', '5', '5']	[0, '2', 4, '5', '5', '5']

409	5	What will be the output of the following Python code?
		l1 = ['A', 'B', 'C', 'D','E']
		l2 = l1.copy()
		l3 = l1[: :-1]
		l2[4] = 'G'
		l3[3] = 'H'
		l1[4] = l2[4]
		l1[3] = l3[3]
		sum = 0
		for i in (l1, l2, l3):
		  if i[4] == 'G':
		  sum += 7
		  if i[3] == 'H':
		  sum += 22
		  if i[2] == 'C' :
		  sum += 30
		print(sum)
			B	1		150	148	59	118

410	5	What is the output of following python code – dict = {1: 2, 3:4, 4:11, 5:61, 7:81} print(dict[dict[3]])	A	1		11	12	13	14
411	5	What is the output for following code: list1=[1,2,3,4] list2=[5,6,7,8] print(len(list1+list2-list1+list2))	D	1		4	8	6	TypeError

412	5	What will be the output of the following Python code?
		def writer():
		  title = 'Sir'
		  name = (lambda x: title + ' ' * 2x)
		  return name
		who = writer()
		print(who('Arthur'))
			A	0.5	LJU 2022	Error	Sir Arthur Sir Arthur	ArthurSir	ArthurSirArthurSir

413	5	Following Lambda function series can be used to find _____. from functools import * Series = lambda n: reduce(lambda x, _: x + [x[-1] + x[-2]], range (n-2) , [0,1])	B	1	LJU 2022	sum of first two numbers in a list	Fibonacci Series	The geometric series	Syntax error

414	5	What will be the output of the following Python code?
		names1 = ['A', 'B', 'C', 'D']
		names2 = names1
		names3 = names1[:]
		names2[0] = 'Aa'
		names3[1] = 'BB'
		sum = 0
		for s in (names1, names2, names3):
		  if s[0] == 'Aa':
		  sum += 2
		  if s[1] == 'BB':
		  sum += 20
		print(sum)
			A	1		24	11	12	13

415	5	What will be the output of the following Python code? l=[["hello","0hel"],"bh"],"nm"] print(l[0])	B	1		['hello', '0hel']	[['hello', '0hel'], bh']	[['hello']	index error
416	5	What will be the output of the following Python code? nums = [3, 5, 16, 27] some_nums = list(filter(lambda num: 5 <= num < 27, nums)) print(some_nums)	D	1		[5,16,27]	[3,5,16]	[3,5,27]	[5,16]
417	5	What will be the output of the following Python code? x={1,2,3,4,5} y={3,4,5,6,7} z={1,3,5,7,9} print((x|y) & (x|z))	B	1		{1, 2, 3, 4, 5, 6, 7}	{1, 2, 3, 4, 5, 7}	{1, 3, 5, 7, 9}	{1, 2, 3, 5, 6, 7, 9}
418	5	What will be the output of the following Python code? l=[1,2,3,5,7,8,9,10] m=max(l) print(l.index(m))	A	0.5		7	8	10	5
419	5	What will be the output of the following Python code? x = ['ab', 'cd'] for i in x: i.upper() print(x)	A	0.5		['ab', 'cd']	['AB', 'CD']	[None, None]	ERROR

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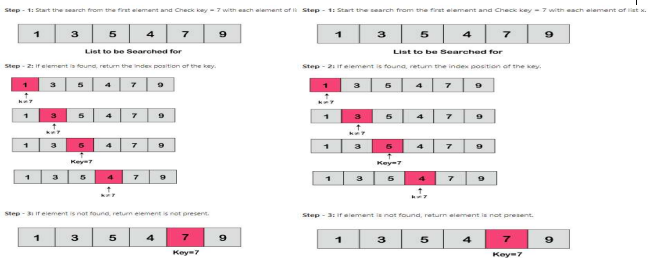
Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

420	5	What will be the output of the following Python code?
		def f(l):
		  l.append([1,2,3])
		  return
		l=[1,2,3]
		print(l,end=" ")
		f(l)
		print(l)
			A	1		[1,2,3] [1,2,3,[1,2,3]]	[1,3,2] [1,3,2]	[1,2,3] [1,2,3,1,2,3]	ERROR

421	5	What will be the output of the following Python code? d={1:"welcome",[1]:{1:2}} print(d[[1]])	A	1		ERROR	1	2	[1]
422	5	What will be the output of the following Python code? l=[1,2,[[1,2,[1,2],1,2]]] print(l[2][0])	A	1		[1, 2, [1, 2], 1, 2]	[1,2]	[1,2,1,2]	2
423	5	What will be the output of the following Python code? l=[1,"m",["a",{1:[1,2,3]}]] t={(1,2,3):(5)} s=(l[2][1][1],t[(1,2,3)]) print(s)	A	1		([1, 2, 3], 5)	a5	10	7
424	5	What will be the output of the following Python code? l=[1,2,(5)] l[2]=7 print(l)	A	1		[1,2,7]	[1,2,5]	[1,2,(5)]	TYPE ERROR

425	5	What will be the output of the following program on execution?
		def f(*l):
		  for i in l[0]:
		  sum=0
		  sum+=i
		  print(sum)
		f([1,2,3])
			A	1		3	error	2	6

426	5	Write a Python program to print the even numbers from a given list.		4					
427	5	Write a Python Program to print the largest even number in a list.		4					
428	5	Write a Python Program to print the largest odd number in a list.		4					
429	5	Write a Python program to swap first and last element of the list.		4					
430	5	Write a Python program to find the sum of all the elements in the list.		4					
431	5	Write a Python function to sum all the numbers in a list		4					
432	5	Write a Python program of Reversing a List.		3					
433	5	Write a Python program to Merging two Dictionaries		4					
434	5	Write a Python program to calculate the sum of the positive and negative numbers of a given list of numbers using lambda function.		4					
435	5	Write a Python program to rearrange positive and negative numbers in a given array using Lambda.		4					
436	5	Write a Python program to find numbers divisible by nineteen or thirteen from a list of numbers using Lambda.		4					
437	5	Given a list of elements, write a python program to perform grouping of similar elements, as different key-value list in dictionary. Print the dictionary sorted in descending order of frequency of the elements. Note: To perform the sorting, use the sorted function by converting the dictionary into a list of tuples. After sorting, convert the list of tuples back into a dictionary and print it. Input : test_list = [4, 6, 6, 4, 2, 2, 4, 8, 5, 8] Output : {4: [4, 4, 4], 6: [6, 6], 2: [2, 2], 8: [8, 8], 5: [5]} Explanation : Similar items grouped together on occurrences. Input : test_list = [7, 7, 7, 7] Output : {7 : [7, 7, 7, 7]} Explanation : Similar items grouped together on occurrences. 		3					
		A digital image in a computer is represented by a pixels matrix. Each image processing operation in a computer may be observed as an operation on the image matrix. Suppose you are given an N x N 2D matrix A (in the form of a list) representing an image. Write a Python program to rotate this image by 90 degrees (clockwise) by rotating the matrix 90 degree clockwise. Write proper code to take input of N from the user and then to take input of an N x N matrix from the user. Rotate the matrix by 90 degree clockwise and then print the rotated matrix. Note: You are not allowed to use an extra iterable like list, tuple, etc. to do this. You need to make changes in the given list A itself. Your program should be able to handle any N x N matrix from N = 1 to N = 20.							

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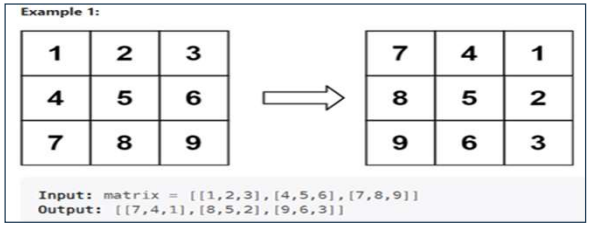
Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
438	5	Example 1:  Input: matrix = [[1,2,3],[4,5,6],[7,8,9]] Output: [[7,4,1],[8,5,2],[9,6,3]]		9	LJU 2022				
439	5	Write a Program to Print Longest Common Prefix from a given list of strings. The longest common prefix for list of strings is the common prefix (starting of string) between all strings. For example, in the given list [“apple”, “ape”, “zebra”], there is no common prefix because the 2 most dissimilar strings of the list “ape” and “zebra” do not share any starting characters. If there is no common prefix between all strings in the list than return -1. For example, Input list: ["lessonplan", "lesson","lees", "length"] The longest Common Prefix is: le Input list: ["python","pythonprogramming","pythonlist"] The longest Common Prefix is: python Input list: ["lessonplan", "lesson","ees", "length"] The longest Common Prefix is: -1		4	LJU-2024				
		One of the ways to encrypt a string is by rearranging its characters by certain rules, they are broken up by threes, fours or something larger. For instance, in the case of threes, the string ‘secret message’ would be broken into three groups. The first group is sr sg, the characters at indices 0, 3, 6, 9 and 12. The second group is eemse, the characters at indices 1, 4, 7, 10, and 13. The last group is ctea, the characters at indices 2, 5, 8, and 11. The encrypted message is sr sgeemsectea. If the string ‘secret message’ would be broken into four groups. The first group is seeg, the characters at indices 0, 4, 8 and 12. The second group is etse, the characters at indices 1, 5, 9 and 13. The third group is c s, the characters at indices 2, 6 and 10. The fourth group is rma, the characters at indices 3, 7 and 11. The encrypted message is seegetsec srma. (A). Write a program that asks the user for a string, and an integer determining whether to break things up by threes, fours, or whatever user inputs. Encrypt the string using above method. For example, Input message: This is python, a programming language Input Key: 4 Output Encrypted Message: T poaomgnghiyn gm geist,prilus h ranaa Input message: This is python, a programming language Input Key: 7 Output Message: T ,ggahp r giyaalest ma hpmniorigsnonu (B). If you get a message which is encoded by the method above then, Write a decryption program for the general case. Taking input of any encrypted string from user with key number used while breaking message apart during encryption. For example, Input Encrypted message: Hloe gl o sogrilw g epntstfii o yotay hee nnh aoiortiimreegehrun nhnse ne Input Key used during encryption: 5 Output Decrypted Message: Hi hello how are you going to learn python in this semester of engineering Input Encrypted message: Ig ntot oopid ys lt dehaaao yrn Input Key used during encryption: 8 Output Decrypted Message: It is a good day to learn python							

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
440	5	<table><tr><td>INDEX</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr><tr><td>STRING Given by User</td><td>s</td><td>e</td><td>c</td><td>r</td><td>e</td><td>t</td><td></td><td>m</td><td>e</td><td>s</td><td>s</td><td>a</td><td>g</td><td>e</td></tr><tr><td>Key Given by User</td><td colspan="2">4</td><td colspan="13">Given String will be divided in 4 parts as given key is 4.</td></tr></table><table><tr><td></td><td>0</td><td>4</td><td>8</td><td>12</td><td rowspan="8">Encrypted String will be: First Part+Second Part+Third Part+Fourth Part which is seegetsec srma</td></tr><tr><td>First Part</td><td>s</td><td>e</td><td>e</td><td>g</td></tr><tr><td></td><td>1</td><td>5</td><td>9</td><td>13</td></tr><tr><td>Second Part</td><td>e</td><td>t</td><td>s</td><td>e</td></tr><tr><td></td><td>2</td><td>6</td><td>10</td><td></td></tr><tr><td>Third Part</td><td>c</td><td></td><td>s</td><td></td></tr><tr><td></td><td>3</td><td>7</td><td>11</td><td></td></tr><tr><td>Fourth Part</td><td>r</td><td>m</td><td>a</td><td></td></tr></table>(C). From the output string (Output Decrypted Message) of above program (Part-B), create a Dictionary with Key as First Character and Value as list of words Starting with that Character from above string. And print that dictionary by sorting it based on the number of elements in a list of values in descending order. Note: Consider capital and lower first character of words as same character in this program. For ex. 'Hi' and 'hello' both will be considered starting from 'h'. For example, Enter Decrypted Message: Hi hello how are you going to learn python in this semester of engineering Output: {'h': ['Hi', 'hello', 'how'], 't': ['to', 'this'], 'a': ['are'], 'y': ['you'], 'g': ['going'], 'l': ['learn'], 'p': ['python'], 'i': ['in'], 's': ['semester'], 'o': ['of'], 'e': ['engineering']} Enter Decrypted Message: It is a good day to learn python Output: {'i': ['It', 'is'], 'a': ['a'], 'g': ['good'], 'd': ['day'], 't': ['to'], 'l': ['learn'], 'p': ['python']} Enter Decrypted Message: it is not the time to play games! Output: {'t': ['the', 'time', 'to'], 'i': ['it', 'is'], 'n': ['not'], 'p': ['play'], 'g': ['games!']}		9					
441	5	Write a python program to print all possible combinations from the three Digits and also count unique values inside a list and also find list product excluding duplicates and also find sum of list's elements excluding duplicates. Examples: To print all possible combinations Input: [1, 2, 3] Output: 1 2 3 1 3 2 2 1 3 2 3 1 3 1 2 3 2 1 Count unique values inside a list input = [1, 2, 3] No of unique items are: 3 input = [1, 2, 2] No of unique items are: 2 input = [2, 2, 2] No of unique items are: 3 List product excluding duplicates Input: [2, 3, 5] Duplication removal list product: 30 Input: [2, 2, 3] Duplication removal list product: 6 Sum of list's elements excluding duplicates Input: [1, 3, 5] Output: 9 Input: [1, 2, 2] Output: 3		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
442	5	•Use appropriate comment lines to divide subprograms. •Also demonstrate the program with one example test case. (Example test input and output are given) PART - A Using map function, write a Python program to convert the given list into a tuple of strings. For the given input, the program must print the output as shown below - Input – [1,2,3,4] Output – ('1','2','3','4') PART - B Write a Python program that multiply each number of the given list with 10 using lambda function. For the given input, the program must print the output as shown below - Input – [1,2,3,4] Output – [10,20,30,40] PART - C Write a Python program that multiply all elements of the given list using reduce function and return the product. For the given input, the program must print the output as shown below - Input – [1,2,3,4] Output – 24 (which is 1*2*3*4) PART - D Write a Python program satisfying following conditions - Create a python function countchar() that count the character of a string in a given string without using inbuilt functions. For the given input, the program must print the output as shown below - Given input string – 'hello' countchar('l') Output : 2 Create a python function findchar() that find the index of first occurrence of a character in a given string without using inbuilt functions. It should return -1 if it does not find the character. For the given input, the program must print the output as shown below - Given input string – 'helloe' findchar('e') Output : 1 findchar('z') Output : -1		5					
443	5	Write a Python program to calculate the sum of the positive and negative numbers of the below given list of numbers using lambda function. Input : m = [2, 4, -6, -9, 11, -12, 14, -5, 17] Output : Sum of the positive numbers: -32 Sum of the negative numbers: 48		4					
444	5	Create a python program which takes password as input and a function which checks whether the given password is valid or not under following conditions without using the RegEx module in Python language. Conditions required for a valid password: 1.Password strength should be at least 8 characters long 2.Password should contain at least one uppercase and one lowercase character. 3.Password must have at least one number.		2					
445	5	Write a python program with user defined function that reads the words from paragraph and stores them as keys in a dictionary and count the frequency of it as a value . For Example: Input string: "Dog the quick brown fox jumps over the lazy dog" Output: {'the': 2, 'jumps': 1, 'brown': 1, 'lazy': 1, 'fox': 1, 'over': 1, 'quick': 1, 'dog': 2}		3					
446	5	Write a python Program to check entered password by user is correct or not. Entered password is correct if it has upper character, lower character , digits (but not more than 3 digits) ,special character and length is greater than or equal to eight and less than equal to fifteen. Get the digits from entered password and convert it in to number and then convert it in to English Word . Example: case 1 pw= R@m@3fa1tu9e$ Valid Password num= 319 three hundred and nineteen case 2 pw= S@m@6a1tue$ Valid Password num= 61 sixty-one case 3 pw= S@m@6a26u8$ Invalid Password		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
447	5	Write a Python Program using function to count number of strings where the string length is 3 or more and the first and last character are same from a given list of string. Example : Input: ['abc','xyz','aba','2112','123451','12345'] Output: 3		2					
448	5	Given a list L of size N. You need to count the number of special elements in the given list. An element is special if removal of that element makes the list balanced. The list will be balanced if sum of even index elements is equal to the sum of odd elements. Also print the updated lists after removal of special elements. Example 1: Input: L=[5, 5, 2, 5, 8] Output: Original List: [5, 5, 2, 5, 8] Index to be removed is: 0 List after removing index 0 : [5, 2, 5, 8] Original List: [5, 5, 2, 5, 8] Index to be removed is: 1 List after removing index 1 : [5, 2, 5, 8] Total number of special elements: 2 Explaination: If we delete L[0] or L[1], list will be balanced. [5, 2, 5, 8] (5+5) = (2+8) So L[0] and L[1] are special elements, So Count is 2. After removal of the special elements, list will be: [5, 2, 5, 8] Example 2: Input: L=[2,1,6,4] Output: Original List: [2, 1, 6, 4] Index to be removed is: 1 List after removing index 1 : [2, 6, 4] Total Number of Special elements: 1 Explaination: If we delete L[1] from list : [2,6,4] (2+4) = (6) Here only 1 special element. So Count is 1. After removal of special element, list will be : [2,6,4]		9					
449	5	Write Python Program to create a dictionary with the key as the first character and value as a list of words starting with that character. Example: Input: Don't wait for your feelings to change to take the action. Take the action and your feelings will change Output: {'D': ['Don't'], 'w': ['wait', 'will'], 'f': ['for', 'feelings', 'feelings'], 'y': ['your', 'your'], 't': ['to', 'to', 'take', 'the', 'the'], 'c': ['change', 'change'], 'a': ['action.', 'action', 'and'], 'T': ['Take']}		3					
450	5	d={"student0":'Student@0',"student1":'Student@11',"student2":'Student@121', "student3":'Student@052',"student4":'Student@01278',"student5":'Student@0125', Student6":'Student@042', "student7":'Student@07800',"student8":'Student@012'} Write a python program to update the password of any user given the above dictionary(d) which stores the username as the key of the dictionary and the username's password as the value of the dictionary. print the updated dictionary and print the username and password according to ascending order of password length of the updated dictionary. For the password updating of that username follow some instructions. Give the three chances to user enter the correct username and password. If the user does not enter the correct username and password then display "enter correct password and username". if the user does not enter the correct username and password in a given three chances then display "enter correct password and username" and "try after 24h" If the user enters the correct username and password in a given three chances. Give the three chances to user enter a new password to update the password of that username. If the user enters a new password not follow the below format, then display "follow the password format". if the user does not enter the password in a given format in a given three chances, then display "follow the password format" and "try after 24h" The check, of whether the new password format is correct or wrong makes the user define a function. That user define a function to return True or False for password valid or not. That user define function return value used in this program for new password validation. oNew password must have the below format: 1. at least 1 number between 0 and 9 2. at least 1 upper letter (between a and z) 3. at least 1 lower letter (between A and Z) 4. at least 1 special character out of @$_ 5. minimum length of the password is 8 and the maximum length is 15 6. Do not use space and other special characters. Only uses @$_ If the new password follows the format of the password in a given three chances. then print the updated dictionary and print the username and password according to ascending order of password length of an updated dictionary. If the dictionary is not updated then take the old dictionary		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
451	5	Write a Python code which will return the sum of the numbers of the list. Return 0 for an empty list. Except the number 13 is very unlucky, so it does not count and number that come immediately after 13 also do not count in sum. Example : [1, 2, 3, 4] = 10 [] = 0 [1, 2, 3, 4, 13] = 10 [13, 1, 2, 3, 13] = 5 [1, 13, 2, 3, 4] = 8		4	LJU-2023				
452	5	Write a Python program which takes a list and returns a list with the elements "shifted left by number of positions entered by user". Example: Input: List: [1, 2, 3, 4, 5] Shift: 2 Output: [3, 4, 5, 1, 2]		3	LJU-2023				
453	5	Write a Python program that accepts a list L of size N from the user and reorders its elements in the following pattern: [L[0], L[N-1], L[1], L[N-2], L[2], L[N-3], ...]. Note: You are not allowed to use any additional data structures like lists, strings, or dictionaries. The task must be accomplished by rearranging the elements of the original list in-place, without altering the values of the elements themselves. Example: Input list: [2, 4, 6, 8, 10] Output: [2, 10, 4, 8, 6] Input list: [10, 20, 30, 40] Output: [10, 40, 20, 30]		3	LJU-2024				
454	5	Given a string S containing just the characters '(', ')', '{', '}', '[' and ']', determine if the input string is valid. An input string is valid if: 1. Open brackets must be closed by the same type of brackets. 2. Open brackets must be closed in the correct order. 3. Every close bracket has a corresponding open bracket of the same type. Example 1: Input: s = "{[()]}" Output: Valid Example 2: Input: s = "()[]{}" Output: Valid Example 3: Input: s = "[(])" Output: Invalid Example 4: Input: s = "({[}])" Output: Invalid Example 5: Input: s = "({[]})" Output: Invalid		5	LJU-2024				
455	6	The contents of names.txt is listed here: Moana Cinderella Tiana Which of the following code blocks will print all of the names in names.txt? I. names = open("names.txt", "r") for line in names: print(names) II. names = open("names.txt", "r") for line in names: print(line) III. names = open("names.txt", "r") for line in names: print("line")	B	1	LJU 2023	I	II	III	I & III both
456	6	File is created if does not exist. If the file exists, file is truncated(past data is lost). Both reading and writing operation can take place. What is the text file mode?	C	1	LJU 2023	'r'	'w'	'w+'	'a+'
457	6	From following which statement reads some bytes from the file and returns it as a string?	B	1		readlines()	read()	readline()	readpara()
458	6	From following which statement reads all the lines from the file and returns in the form of list?	A	1		readlines()	read()	readline()	readpara()
459	6	From following which statement write a string in file?	A	1		write()	writeline()	writelines()	writepara()
460	6	From following which statement writes a list in a file?	C	1		write()	writeline()	writelines()	writepara()
461	6	What happens if no arguments are passed to the seek function?	D	1		file position is set to the start of file	file position is set to the end of file	file position remains unchanged	error

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
462	6	To read 5th line from text file, which of the following statement is true?	B	1		dt=f.readline(4) print(dt[4])	dt=f.readlines() print(dt[4])	dt=f.read(5) print(dt[3])	dt=f.read(4) print(dt[5])
463	6	What will be the output of the following code snippet? with open("hello.txt", "w") as f: f.write("Hello World how are you today") with open('hello.txt', 'r') as f: data = f.readlines() for line in data: words = line.split() print (words) f.close()	A	1		['Hello', 'World', 'how', 'are', 'you', 'today']	Hello World how are you today	Hello	Error
464	6	What is printed after executing this python code? f=open("abc.txt","w") x=[1,2,3] f.writelines(x) f.close()	D	1		"1,2,3"	1,2,3	1	Error
465	6	Write a function cust_data() to ask user to enter their names and age to store data in customer.txt file.		4					
466	6	Write a python program to create and read the city.txt file in one go and print the contents on the output screen.		4					
467	6	Write a function count_lines() to count and display the total number of lines from the file. Consider the following lines for the file – friends.txt. Friends are crazy, Friends are naughty ! Friends are honest, Friends are best ! Friends are like keygen, friends are like license key ! We are nothing without friends, Life is not possible without friends !		4					
468	6	Write a function display_oddLines() to display odd number lines from the text file. Consider the following lines for the file – friends.txt. Friends are crazy, Friends are naughty ! Friends are honest, Friends are best ! Friends are like keygen, friends are like license key ! We are nothing without friends, Life is not possible without friends !		4					
469	6	Write a Python program to read a text file and do following: 1. Print no. of words 2. Print no. statements		4					
470	6	Write a python program that reads a text file and changes the file by capitalizing each character of file.		3					
471	6	Write a Python program to copy the contents of a file to another file.		7					
472	6	Write a python program to read line by line from a given files file1 & file2 and write into file3.		4					
473	6	Write python program to count the number of lines in a file.		7					
474	6	Write a python program to search for a string in text files.		7					
475	6	Write a "pager" program. Your solution should prompt for a filename, and display the text file 25 lines at a time, pausing each time to ask the user to enter the word "continue", in order to show the next 25 lines or enter the word "stop" to close the file.		4	LJU 2023				
476	6	Write a Python program to reverse the content of a one file and store it in second file and also convert content of second file into uppercase and store it in third file and also count number of Vowels in third file and also print only 2nd line from the content of third file. Examples: If data file one contains the following data: Friends are crazy, Friends are naughty ! Friends are honest, Friends are best ! Output 1: ! tseb era sdneirF ,tsenoh era sdneirF ! ythguan era sdneirF ,yzarc era sdneirF Output 2: ! TSEB ERA SDNEIRF ,TSENOH ERA SDNEIRF ! YTHGUAN ERA SDNEIRF ,YZARC ERA SDNEIRF Output 3: Vowels = 22 Output 4: ! YTHGUAN ERA SDNEIRF ,YZARC ERA SDNEIRF		4					
477	6	Write a python program to extract a list of all four-letter words that start and end with the same letter from a given text file.		4					
478	6	Write a python program to read a text file "Story.txt" and print only word starting with 'I' in reverse order. Example: If value in text file is : 'INDIA IS MY COUNTRY' Output will be: 'AIDNI SI MY COUNTRY'		2					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
479	6	Write a Python program to count words, characters and spaces from text file. Input: Python is a Easy Subject OOPs is One of the most interesting Topic Output: No of space: 10 No of word: 13 No of character: 64		3					
480	6	File Filtering. write all lines of a file1, except those that start with a pound sign (#), the comment character for Python to file2. And display data of file2. Text file1 content: Friends are crazy, Friends are naughty ! #Friends are honest, Friends are best ! Friends are like keygen, #friends are like license key ! We are nothing without friends, Life is not possible without friends ! Text file2 shoud be: Friends are crazy, Friends are naughty ! Friends are like keygen, We are nothing without friends, Life is not possible without friends !		3	LJU 2023				
481	6	Write a python program to accept string/sentence from user till the user enters “END”. Each string/sentence entered by user should be a newline in file. Save all the lines in file and display only those lines which begin with capital letter. Example: Enter Something (for quit enter END):Hi Friends Enter Something (for quit enter END):how are you all Enter Something (for quit enter END):I am fine Enter Something (for quit enter END):hope you all are fine Enter Something (for quit enter END):END The Line started with Capital Letters: Hi Friends I am fine		4					
482	6	Write a program to compare two text files. If they are different, give the line and column numbers in the files where the first difference occurs. Example: File 1: python1.txt Friends are crazy, Friends are naughty ! Friends are honest, Friends are best ! Friends are like keygen, friends are like license key ! new We are nothing without friends, Life is not possible without friends ! File 2: python2.txt Friends are crazy, Friends are naughty ! Friends 6re honest, Friends are best ! Friends are like keygen, friends are like license key ! new We are nothing without friends, Life is not possible without friends ! Output: line number 2 colNo. 9		4					
483	6	Write a python program to read through the mbox-short.txt and figure out who has sent the greatest number of mail messages. The program looks for 'From ' lines and takes the second word of those lines as the person who sent the mail. The program creates a Python dictionary that maps the sender's mail address to a count of the number of times they appear in the file. After the dictionary is produced, the program reads through the dictionary to identify the sender with the maximum count (the most prolific sender). Expected Output: {'stephen.marquard@uct.ac.za': 2, 'louis@media.berkeley.edu': 3, 'zqian@umich.edu': 4, 'rjlowe@iupui.edu': 2, 'cwen@iupui.edu': 5, 'gsilver@umich.edu': 3, 'wagnermr@iupui.edu': 1, 'antranig@caret.cam.ac.uk': 1, 'gopal.ramasammycook@gmail.com': 1, 'david.horwitz@uct.ac.za': 4, 'ray@media.berkeley.edu': 1} cwen@iupui.edu 5		5	LJU-2024				
484	7	To use a module in another module, you must import it using an _____ statement	A	1		import	include	A AND B	NONE OF THESE
485	7	Which statement is correct to import all modules from the package	B	1		from package import all	from package import *	from package include all	from package include *
486	7	A Python module is a file with the _____ file extension that contains valid Python code.	D	1	LJU 2023	.pym	.pymodule	.module	.py
487	7	Which of the following returns a string that represents the present working directory?	A	1	LJU 2023	os.getcwd()	os.cwd()	os.getpwd()	os.pwd()
488	7	Which of the following can be used to create a directory?	A	1		os.mkdir()	os.creat_dir()	os.create_dir()	os.make_dir()
489	7	Which of the following can be used to remove a directory?	A	1	LJU 2023	os.rmdir()	os.rem_dir()	os.create_dir()	os.make_dir()
490	7	_____is used to get the list of all files and directories in the specified directory.	C	1		os.rmdir()	os.chdir()	os.listdir()	os.make_dir()
491	7	_____method in Python used to change the current working directory to specified path	B	1		os.rmdir()	os.chdir()	os.listdir()	os.make_dir()
492	7	How do you delete a file?	C	1		del(fp)	fp.delete()	os.remove(‘file’)	os.delete(‘file’)

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

493	7	if mymod.py file has this code
		A=100
		def add(a,b):
		print("The Sum:",a+b)
		def product(a,b):
		print("The Product:",a*b)
		and if we import that module as follow then what will be output?
		from mymod import *
		print(X)
		add(10,20)
		product(10,20)
			C	1		888
						The Sum: 30
							888
							The Sum: 30
							The Product: 200
								error	none

494	7	#mod1.py
		def change(a):
		b=[x*2 for x in a]
		print(b)
		
		#mod2.py
		def change(a):
		b=[x*x for x in a]
		print(b)
		
		from mod1 import change
		from mod2 import change
		#main
		s=[1,2,3]
		change(s)
			C	1	LJU 2023	[2,4,6]	[2,4,6] [1,4,9]	[1, 4, 9]	[1, 2, 3]

495	7	if calc.py file has this code
		def sum(a,b):
		print(a+b)
		def sub(a,b):
		print(a-b)
		def mul(a,b):
		print(a*b)
		def div(a,b):
		print(a/b)
		def power(a,b):
		print(a**b)
		and if we import that module as follow then what will be output?
		import calc
		calc.power(5,3)
		calc.sum(5,7)
			C	1		15
						12
							243
							12
								125
								12
									Error

496	7	Write a python program to make a module which contain all the basic functions related to string and import that module in another file and use that fuctions with string given by user.		5					
497	7	Write a python program to create a directory and subdirectory. It should print the current working directory path and list of names of files present in the given directory.		2					
498	7	Write a python program to make a module named cal.py which contain all the basic functions related to calculator like addition, subtraction, multiplication, and division import that module in another file and use that functions with number inputs given by user.		3					
499	7	Write a program to create a module 'first_word.py', which returns the first word of any string passed. Show the working of the module, by calling the module with any suitable example. Input: 'This is Python Programming' Output: 'This'		2					
500	8	Which is not a feature of OOP in general definitions?	D	1		Efficient Code	Code reusability	Modularity	Duplicate data
501	8	_____ represents an entity in the real world with its identity and behaviour.	B	1		A method	An object	A class	An operator

502	8	What will be the output of the following Python code?
		class test:
		def __init__(self,a="Hello World"):
		self.a=a
		
		def display(self):
		print(self.a)
		obj=test()
		obj.display()
			C	1		The program has an error because constructor can't have default arguments	Nothing is displayed	"Hello World" is displayed	The program has an error display function doesn't have parameters

503	8	What will be the output of the following Python code?
		class test:
		def __init__(self,a):
		self.a=a
		
		def display(self):
		print(self.a)
		obj=test()
		obj.display()
			C	1		Runs normally, doesn't display anything	Displays 0, which is the automatic default value	Error as one argument is required while creating the object	Error as display function requires additional argument

504	8	What is Instantiation in terms of OOP terminology?	D	1		Deleting an instance of class	Modifying an instance of class	Copying an instance of class	Creating an instance of class
505	8	Which of the following Python code creates an empty class?	B	1		class A: return	class A: pass	class A:	It is not possible to create an empty class

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

506	8	Which of the following is False with respect Python code?
		class Student:
		  def __init__(self,id,age):
		  self.id=id
		  self.age=age
		std=Student(1,20)
			C	1		"std" is the reference variable for object Student(1,20)	id and age are called the parameters	Every class must have a constructor	None of the above

507	8	What will be the output of below Python code?
		class Student:
		  def __init__(self,name,id):
		  self.name=name
		  self.id=id
		  print(self.id)
		std=Student("Simon",1)
		std.id=2
		print(std.id)
			B	1		1
						1
							1
							2
								2
								1
									2
									2

508	8	What will be the output of below Python code?
		class A():
		 def __init__(self,count=100):
		  self.count=count
		
		obj1=A()
		obj2=A(102)
		print(obj1.count)
		print(obj2.count)
			B	1		100
						100
							100
							102
								102
								102
									Error

509	8	Which of the following is correct?
		class A:
		  def __init__(self):
		  self.count=5
		  self.count=count+1
		a=A()
		print(a.count)
			D	1	LJU 2023	5	6	0	Error

510	8	What will be the output of below Python code?
		class A:
		  def __init__(self,num):
		  num=3
		  self.num=num
		  def change(self):
		  self.num=7
		a=A(5)
		print(a.num)
		a.change()
		print(a.num)
			D	1		5
						5
							5
							7
								3
								3
									3
									7

511	8	What will be the output of the following code?
		class Point:
		
		  def __init__(self):
		
		  self.x = 0
		  self.y = 0
		
		p = Point()
		q = Point()
		
		print("Nothing seems to have happened with the points")
			B	1		p
						q
						Nothing seems to have happened with the points
							Nothing seems to have happened with the points	<__main__.Point object>
								<__main__.Point object>
								Nothing seems to have happened with the points
									(0,0)
									(0,0)
									Nothing seems to have happened with the points

512	8	What will be the output of the following snippet?
		class Point:
		
		  def __init__(self):
		
		  self.x = 0
		  self.y = 0
		
		p = Point()
		q = Point()
		
		print(p)
		print(q)
		
		print(p is q)
			C	1		<__main__.Point object>
						<__main__.Point object>
						True
							FALSE	<__main__.Point object>
								<__main__.Point object>
								False
									(0,0)
									(0,0)
									False

513	8	Will this program will print last statement?
		try:
		  items = ['a', 'b']
		  third = items[1]
		  print("This won't print")
		except Exception:
		  print("got an error")
		
		print("continuing")
			C	1		This won't print
						got an error
						continuing
							got an error
							continuing
								This won't print
								continuing
									continuing

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
514	8	What will be the output of this following snippet? try: items = ['a', 'b'] third = items[2] print("This won't print") except Exception as e: print("got an error") print(e) print("continuing")	C	1		This won't print got an error continuing	got an error continuing	got an error list index out of range continuing	continuing

515	8	Sanjeev has written a program for the file which already exists to read the content from the file. Indicate the line number if error exists in the given below code:
		a=False #Line 1
		while not a: #Line 2
		try: #Line 3
		f_n = input("Enter file name") #Line 4
		i_f = open(f_n, 'r') #Line 5
		except: #Line 6
		print("Input file not found") #Line 7
			A	1		No error	Line 1	Line 2	Line 3

516	8	What will be output of the following code?
		A=25
		B=40
		try:
		L=[]
		for i in range(2):
		L.append(A)
		print(L[3])
		L.append(C)
		iff len(L)<5:
		print(L)
		C=34
		except IndexError:
		print("Not in range")
		except NameError:
		print("Not defined")
		except SyntaxError:
		print("Write properly")
			D	1		Write properly	Not in range	Both A&B	SyntaxError

517	8	When will the else part of try-except-else be executed?	C	1		always	when an exception occurs	when no exception occurs	when an exception occurs in to except block
518	8	When is the finally block executed?	D	1		when there is no exception	when there is an exception	only if some condition that has been specified is satisfied	always

519	8	What will be the output of the following Python code?
		def foo():
		try:
		return 1
		finally:
		return 2
		k = foo()
		print(k)
			B	1		1	2	3	Error, there is more than one return statement in a single try-finally block

520	8	What will be the output of the following Python code?
		def foo():
		try:
		print(1)
		finally:
		print(2)
		k = foo()
		print(k)
			A	1		1
						2
						None
							2
							2
								1	2

521	8	What will be the output of the following Python code?
		def getMonth(m):
		if m<1 or m>12:
		raise ValueError("Invalid")
		print(m)
		getMonth(6)
			C	1		ValueError	Invalid	6	ValueError(“Invalid”)

522	8	Which of the following blocks will be executed whether an exception is thrown or not?	C	1		except	else	finally	assert
523	8	What will be the output of below Python code? f=open("sample2.txt",'w') f.write("Hello World") f.close() try: m=5 f=open("sample2.txt") print(m) print(f.read()) L=[1,2,3] L[100] except FileNotFoundError: print("File not found") except NameError: print("Variable not found") except Exception: print("List index out of range")	C	1		5 Hello World File not found	5 hello world List out index of range	5 Hello World List out index of range	Hello World 5 List index out of range

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
524	8	What will be the output of the following code? try: a=5 print(a) print(b except: print("This is python")	A	1		SyntaxError: invalid syntax	NameError	This is python	AttributeError

525	8	What will be the output of the following Python code?
		class Employee:
		empcount=0
		def __init__(self,name):
		self.name=name
		Employee.empcount+=1
		def display_count_emp(self):
		print("There are",Employee.empcount,"employees")
		emp1=Employee("s1")
		emp2=Employee("h1")
		emp3=Employee("s1")
		emp2.display_count_emp()
			A	1	LJU -2024	There are 3 employees	There are 2 employees	There are 1 employees	There are 0 employees

526	8	What will be the output of the following Python code?
		def simple():
		for i in range(10):
		if(i%2==0):
		yield i
		for i in simple():
		print(i,end=",")
			B	1	LJU -2024	yield	0,2,4,6,8,	10	[0,2,4,6,8,]

527	8	Write a Python class named Student with two attributes student_name, marks. Modify the attribute values of the said class and print the original and modified values of the said attributes.		4					
528	8	Write a Python class named Rectangle constructed by a length and width and a method which will compute the area of a rectangle.		4					
529	8	Write a Python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle.		4					
530	8	Write a python program to demonstrate the use of try-except-else in Exception handling		3					
531	8	Write a python program to demonstrate the use of raise in Exception handling		3					
532	8	Write a python program to demonstrate the use of custom exceptions in Exception handling.		3					
533	8	Write a program to build a simple Student Management System using Object Oriented Programming in Python which can perform the following operations: accept-This method takes details from the user like name, roll number, and marks for two different subjects. display-This method displays the details of every student. search-This method searches for a particular student from the list of students. This method will ask the user for roll number and then search according to the roll number delete-This method deletes the record of a particular student with a matching roll number. update-This method updates the roll number of the student. This method will ask for the old roll number and new roll number. It will replace the old roll number with a new roll number. The following instructions need to be considered while making a program. 1.Give class name as Student 2.Include methods name as accept, display, search, delete and update. (1 mark for each correct method to be formed). 3.Also form constructor with __init__ () method (2 marks for forming constructor). 4.2 marks for correct object prepared like after deletion of one roll no of student it should update the list with new roll no. and should display it. The example is just for understanding but logic should be for any n number of students.For Example: List of Students Name : A RollNo : 1 Marks1 : 100 Marks2 : 100 Name : B RollNo : 2 Marks1 : 90 Marks2 : 90		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
		Name : C RollNo : 3 Marks1 : 80 Marks2 : 80 Student Found, Name : B RollNo : 2 Marks1 : 90 Marks2 : 90 List after deletion Name : A RollNo : 1 Marks1 : 100 Marks2 : 100 Name : C RollNo : 3 Marks1 : 80 Marks2 : 80 List after updation Name : A RollNo : 1 Marks1 : 100 Marks2 : 100 Name : C RollNo : 2 Marks1 : 80 Marks2 : 80							
534	8	You own a pizzeria named Olly's Pizzas and want to create a Python program to handle the customers and revenue. Create the following classes with the following methods: Class Pizza containing 1.init method: to initialize the size (small, medium, large), toppings (corn, tomato, onion, capsicum, mushroom, olives, broccoli), cheese (mozzarella, feta, cheddar). Note: One pizza can have only one size but many toppings and cheese. (1.5 marks) Throw custom exceptions if the selects toppings or cheese not available in lists given above. (1 mark) 2.price method: to calculate the prize of the pizza in the following way: small = 50, medium = 100, large = 200 Each topping costs 20 rupees extra, except broccoli, olives and mushroom, which are exotic and so cost 50 rupees each. Each type of cheese costs an extra 50 rupees. (1.5 marks) Class Order containing 1.init method: to initialize the name, customerid of the customer who placed the order (0.5 marks) 2.order method: to allow the customer to select pizzas with choice of toppings and cheese (1 mark) 3.bill method: to generate details about each pizza ordered by the customer and the total cost of the order. (2 marks) *Note: A customer can get multiple pizzas in one order. 1.5 marks for creating appropriate objects of these classes and writing correct output.		9					
535	8	Write a class called **WordPlay**. It should have a constructor that holds a list of words. The user of the class should pass the list of words through constructor, which user wants to use for the class. The class should have following methods: words_with_length(length) — returns a list of all the words of length length starts_with(char1) — returns a list of all the words that start with char1 ends_with(char2) — returns a list of all the words that end with char2 palindromes() — returns a list of all the palindromes in the list only(str1) — returns a list of the words that contain only those letters in str1 avoids(str2) — returns a list of the words that contain none of the letters in str2 Make Required object for WordPlay class and test all the methods. For Example: If input list entered by user is: ['apple', 'banana', 'find', 'dictionary', 'set', 'tuple', 'list', 'malayalam', 'nayan', 'grind', 'apricot'] words_with_length (5) should return ['apple', 'tuple', 'nayan', 'grind'] starts_with ('a') should return ['apple', 'apricot'] ends_with ('d') should return ['find', 'grind'] palindromes () should return ['malayalam', 'nayan'] only ('bna') should return ['banana'] avoids ('amkd') should return ['set', 'tuple', 'list']		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
536	8	Write a python program that has class store which keeps 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 total amount. Sample Output: enter no of items: 3 enter code of item: milk enter cost of item: 30 enter code of item: apple enter cost of item: 35 enter code of item: gems enter cost of item: 40 Item Code Price milk 30 apple 35 gems 40 Enter quantity of each item: Enter quantity of milk : 2 Enter quantity of apple : 3 Enter quantity of gems : 4 **********Bill********** ITEM PRICE QUANTITY SUBTOTAL milk 30 2 60 apple 35 3 105 gems 40 4 160 ********** Total= 325		9					
537	8	Write a python program that has a class Point with attributes as the x and y co-ordinates. 1.Add a method 'distance from origin' to class Point which returns the distance of the given point from origin. The equation is 2.Add a method 'translate' to class Point, which returns a new position of point after translation 3.Add a method 'reflect_x' to class Point, which returns a new point which is the reflection of the point about the x-axis. 4.Add a method 'distance' to return distance of the given point with respect to the other point. The formula for calculating distance between A(x1,y1) and B(x2,y2) is After creating class blueprint run the following test case - Test Case – Point (1,2) Distance from origin - 2.23 Translate method - point (1,2) translated by (1,1) increment will be at (2,3) now Reflect_x Method - Point (2,3) after given reflection will be at (2,-3) Distance Method - distance between point (2,-3) and (3,4) is 1.41		9					
538	8	A possible collection of classes which can be used to represent a music collection (for example, inside a music player), focusing on how they would be related by composition. You should include classes for songs, artists, albums and playlists. For simplicity you can assume that any song or album has a single "artist" value (which could represent more than one person), but you should include compilation albums (which contain songs by a selection of different artists). The "artist" of a compilation album can be a special value like "Various Artists". You can also assume that each song is associated with a single album, but that multiple copies of the same song (which are included in different albums) can exist. Write a simple implementation of this model which clearly shows how the different classes are composed. Write some example code to show how you would use your classes to create an album and add all its songs to a playlist. Class Album should have a method to add track, class Artist should have methods to add album and add song, class Playlist should also have a method to add song.		9					
539	8	Stacks and Queues. Write a class SQ that defines a data structure that can behave as both a queue (FIFO) or a stack (LIFO), There are five methods that should be implemented: 1.make a constructor with a valid parameter 2.shift() returns the first element and removes it from the list. Also, use the custom(raise) exception in this method. 3.unshift() "pushes" a new element to the front or head of the list 4.push() adds a new element to the end of a list 5.pop() returns the last element and removes it from the list 6.remove() returns the maximum element of the list and removes it from the list. 7.Create the object and call all methods of the SQ class.		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
540	8	You need to create a class called Atm. It should have methods to create the pin, to change the pin, to check balance, to withdraw money, to deposit money. Also, you need to create method called menu to choose from the above given operations which you want to perform. create_pin Method: Ask user to enter the pin to create a new pin. Also ask user to initialize the balance of your account. change_pin Method: Pin Validation is required before changing the pin. If Pin entered is wrong then message should be displayed “Enter correct pin”. if Pin is correct then update the Old Pin with New Pin. check_balance Method: Pin Validation is required for checking the balance. It should display the current balance of account. withdraw Method: Pin Validation is required before withdrawing money. It should ask user for amount to withdraw. It should also display the insufficient fund message if withdraw amount is higher than balance else balance should be updated after withdraw. deposit Method: Pin Validation is required before deposit of money. It should ask user for amount to deposit. balance should be updated after deposit. After completion of every method it should ask for choice(menu() method) to perform new operation. If you don’t want any operation to perform then you can choose choice of exit to come out from the program		9	LJU 2023				
541	8	Bank Account class: Create a Python class called BankAccount which represents a bank account, having as attributes: accountNumber (numeric type), name (name of the account owner as string type), balance. Create a constructor with parameters: accountNumber, name, balance. Create a Deposit() method which manages the deposit actions. Create a Withdrawal() method which manages withdrawals actions. Create a display() method to display account details. Give the complete code for the BankAccount class. Create the object and call all methods of the BankAccount class.		3	LJU -2024				

542	9	What will be the output of the following Python code?
		class Test:
		def __init__(self):
		self.x = 0
		class Derived_Test(Test):
		def __init__(self):
		self.y = 1
		def main():
		b = Derived_Test()
		print(b.x,b.y)
		main()
			C	1		0 1	1 0	Error because class B inherits A but variable x isn’t inherited	Error because when object is created, argument must be passed like Derived_Test(1)

543	9	What will be the output of the following Python code?
		class A():
		def disp(self):
		print("A disp()")
		class B(A):
		pass
		obj = B()
		obj.disp()
			D	1		Invalid syntax for inheritance	Error because when object is created, argument must be passed	Nothing is printed	A disp()

544	9	Suppose B is a subclass of A, to invoke the __init__ method in A from B, what is the line of code you should write?	A	1		A.__init__(self)	B.__init__(self)	A.__init__(B)	B.__init__(A)

545	9	What will be the output of the following Python code?
		class Test:
		def __init__(self):
		self.x = 0
		class Derived_Test(Test):
		def __init__(self):
		Test.__init__(self)
		self.y = 1
		def main():
		b = Derived_Test()
		print(b.x,b.y)
		main()
			C	1		Error because class B inherits A but variable x isn’t inherited	0 0	0 1	Error, the syntax of the invoking method is wrong

546	9	What will be the output of the following Python code?
		class A:
		def one(self):
		return self.two()
		
		def two(self):
		return 'A'
		
		class B(A):
		def two(self):
		return 'B'
		obj1=A()
		obj2=B()
		print(obj1.two(),obj2.two())
			B	1	LJU 2022	A A	A B	B B	B A

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

547	9	What type of inheritance is illustrated in the following Python code?
		class A():
		pass
		class B():
		pass
		class C(A,B):
		pass
			B	1		Multi-level inheritance	Multiple inheritance	Hierarchical inheritance	Single-level inheritance

548	9	What type of inheritance is illustrated in the following Python code?
		class A():
		pass
		class B(A):
		pass
		class C(B):
		pass
			A	1		Multi-level inheritance	Multiple inheritance	Hierarchical inheritance	Single-level inheritance

549	9	In which of the following does the CricketFan class correctly inherit from the PartyAnimal class?	B	1		from party import PartyAnimal	class CricketFan(PartyAnimal)	an = PartyAnimal()	CricketFan = PartyAnimal()
550	9	What does single-level inheritance mean?	C	1		A subclass derives from a class which in turn derives from another class	A single superclass inherits from multiple subclasses	A single subclass derives from a single superclass	Multiple base classes inherit a single derived class

551	9	What will be the output of the following Python code?
		class A:
		def __init__(self,x):
		self.x = x
		def count(self,x):
		self.x = self.x+1
		class B(A):
		def __init__(self, y=0):
		A.__init__(self, 3)
		self.y = y
		def count(self):
		self.y += 1
		def main():
		obj = B()
		obj.count()
		print(obj.x, obj.y)
		main()
			B	1		3 0	3 1	0 1	An exception in thrown

552	9	The child's __init__() function overrides the inheritance of the parent's __init__() function.	A	1		TRUE	FALSE	CAN BE TRUE OR FALSE	CAN NOT SAY

553	9	What will be the output of the following Python code?
		class A:
		def test1(self):
		print(" test of A called ")
		class B(A):
		def test(self):
		print(" test of B called ")
		class C(A):
		def test(self):
		print(" test of C called ")
		class D(B,C):
		def test2(self):
		print(" test of D called ")
		obj=D()
		obj.test()
			C	1	LJU 2022, LJU 2(	test of B called
						test of C called
							test of C called
							test of B called
								test of B called	Error, both the classes from which D derives has same method test()

554	9	What does the following code output?
		class People():
		
		def __init__(self, name):
		self.name = name
		
		def namePrint(self):
		print(self.name)
		
		person1 = People("Sally")
		person2 = People("Louise")
		person1.namePrint()
			A	1		Sally	Louise	Sally Louise	Person1

555	9	You cannot create object of which type of class	C	1		base	derived	abstract	intermediate
556	9	Which of the following best describes polymorphism?	D	1		Ability of a class to derive members of another class as a part of its own definition	Means of bundling instance variables and methods in order to restrict access to certain class members	Focuses on variables and passing of variables to functions	Allows for objects of different types and behaviour to be treated as the same general type

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

557	9	What will be the output of the following Python code?
		class Demo:
		def __init__(self):
		self.x = 1
		def change(self):
		self.x = 10
		class Demo_derived(Demo):
		def change(self):
		self.x=self.x+1
		return self.x
		def main():
		obj = Demo_derived()
		print(obj.change())
		
		main()
			B	1		11	2	1	10

558	9	What will be the output of the following Python code?
		class Demo:
		def check(self):
		return " Demo's check "
		def display(self):
		print(self.check())
		class Demo_Derived(Demo):
		def check(self):
		return " Derived's check "
		Demo().display()
		Demo_Derived().display()
			A	1		Demo's check Derived's check	Demo's check Demo's check	Derived's check Demo's check	Syntax error

559	9	What will be the output of the following Python code?
		class A:
		def one(self):
		return self.two()
		def two(self):
		return 'A'
		class B(A):
		def two(self):
		return 'B'
		obj2=B()
		print(obj2.two())
			D	1		A	An exception is thrown	A B	B

560	9	What will be output for the following code? import numpy as np a = np.array([1,2,3,5,8]) print (a.ndim)	B	1	LJU 2022, LJU 2(	0	1	2	3
561	9	What will be output for the following code? import numpy as np a=np.array([1,2,3,4,5,6]) print(a)	A	1		[1 2 3 4 5 6]	array([1, 2, 3, 4, 5])	(1 2 3 4 5 6)	(1,2,3,4,5,6)
562	9	What will be output for the following code? import numpy as np arr = np.array(42) print(arr)	A	1		42	[42]	([42])	int
563	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4]) print(arr[2])	C	1		1	2	3	4
564	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, -5, 4]) print(arr[-3])	A	1		2	1	-5	ERROR
565	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, -5, 4]) print(arr[-5])	D	1		2	1	-5	ERROR
566	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4]) print(arr[2] + arr[3])	C	1	LJU 2022	5	3	7	([3,4])
567	9	What will be output for the following code? import numpy as np arr = np.array([[1,2,3,4,5], [6,7,8,9,10]]) print(arr[0, 1])	B	1		6	2	4	10
568	9	What will be output for the following code? import numpy as np arr = np.array([[1,2,3,4,5], [6,7,8,9,10]]) print(arr[1, -3])	D	1	LJU 2023	4	2	3	8
569	9	What will be output for the following code? import numpy as np arr = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]]) print(arr[0, 1, 2])	C	1		12	3	6	9

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
570	9	What will be output for the following code? import numpy as np arr = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]]) print(arr[1, 1, 2])	C	1	LJU 2023	6	3	12	9
571	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7]) print(arr[1:5])	B	1		[1 2 3 4]	[2 3 4 5]	[1 2 3 4 5]	[1 5]
572	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7]) print(arr[1:-3])	A	1		[2 3 4]	[1 2 3]	[5 6 7]	[3 2 1]
573	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7]) print(arr[4:])	A	1		[5 6 7]	[1 2 3 4]	[1 2 3 4 5]	[1 5]
574	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7]) print(arr[:4])	B	1		[4 5 6 7]	[1 2 3 4]	[1 2 3 4 5]	[1 5]
575	9	What will be output for the following code? import numpy as np arr = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]]) print(arr[1,1,0:3])	A	1	LJU 2022	[10 11 12]	[4 5 6]	[[10 11 12]]	[[[10 11 12]]]
576	9	What will be output for the following code? import numpy as np arr = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]]) print(arr[1,0:3])	A	1		[[7 8 9] [10 11 12]]	[10 11 12]	[[4 5 6] [7 8 9] [10 11 12]]	[7 8 9] [10 11 12]
577	9	What will be output for the following code? import numpy as np arr = np.array([[1, 2, 3, 4], [5, 6, 7, 8]]) print(arr.shape)	C	1	LJU 2022	(2 4)	[2 4]	(2, 4)	2D
578	9	What will be output for the following code? import numpy as np arr = np.array([[[1, 2, 3, 4], [5, 6, 7, 8]]]) print(arr.shape)	B	1		(2,4)	(1, 2, 4)	3D	(0,2,4)
579	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]) newarr = arr.reshape(4, 3) print(newarr)	A	1		[[1 2 3] [4 5 6] [7 8 9] [10 11 12]]	[1 2 3] [4 5 6] [7 8 9] [10 11 12]	[[[1 2 3] [4 5 6] [7 8 9] [10 11 12]]]	ERROR
580	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]) newarr = arr.reshape(2, 3, 2) print(newarr)	A	1		[[[1 2] [3 4] [5 6]] [[7 8] [9 10]	[[1 2 3] [4 5 6] [7 8 9] [10 11 12]]	[[1 2] [3 4] [5 6]] [[7 8] [9 10]	[1 2] [3 4] [5 6] [7 8] [9 10] [11 12]
581	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7, 8]) newarr = arr.reshape(2, 2, -1) print(newarr)	A	1		[[[1 2] [3 4]] [[5 6] [7 8]]]	[[[1 2 3 4]] [[5 6 7 8]]]	[[1 2 3 4 5 6 7 8]]	[[[1 2 3 4] [5 6 7 8]]]
582	9	What will be output for the following code? import numpy as np arr = np.array([[1, 2, 3], [4, 5, 6]]) newarr = arr.reshape(-1) print(newarr)	A	1	LJU 2022	[1 2 3 4 5 6]	6	[4,5,6]	[3,6]
583	9	What will be output for the following code? import numpy as np arr1 = np.array([1, 2, 3]) arr2 = np.array([4, 5, 6]) arr = np.concatenate((arr1, arr2)) print(arr)	A	1		[1 2 3 4 5 6]	[5,7,9]	[4,10,18]	[6,15]
584	9	What will be output for the following code? import numpy as np arr1 = np.array([[1, 2], [3, 4]]) arr2 = np.array([[5, 6], [7, 8]]) arr = np.concatenate((arr1, arr2), axis=1) print(arr)	A	1		[[1 2 5 6] [3 4 7 8]]	[[1 2] [3 4] [5 6] [7 8]]	[[[1 2] [3 4]] [[5 6] [7 8]]]	ERROR
585	9	What will be output for the following code? import numpy as np arr1 = np.array([[1, 2], [3, 4]]) arr2 = np.array([[5, 6], [7, 8]]) arr = np.concatenate((arr1, arr2), axis=0) print(arr)	B	1		[[1 2 5 6] [3 4 7 8]]	[[1 2] [3 4] [5 6] [7 8]]	[[[1 2] [3 4]] [[5 6] [7 8]]]	ERROR

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
586	9	What will be output for the following code? import numpy as np arr1 = np.array([[[1, 2], [3, 4]]]) arr2 = np.array([[[5, 6], [7, 8]]]) arr = np.concatenate((arr1, arr2), axis=0) print(arr)	B	1		[[1 2] [3 4] [5 6] [7 8]]	[[[1 2] [3 4]] [[5 6] [7 8]]]	[[[1 2 5 6] [3 4 7 8]]]	[1 2 3 4 5 6 7 8]
587	9	What will be output for the following code? import numpy as np arr1 = np.array([[[1, 2], [3, 4]]]) arr2 = np.array([[[5, 6], [7, 8]]]) arr = np.concatenate((arr1, arr2), axis=1) print(arr)	A	1		[[[1 2] [3 4] [5 6] [7 8]]]	[[[1 2 5 6] [3 4 7 8]]]	[[[1 2] [3 4]] [[5 6] [7 8]]]	[[1 2] [3 4] [5 6] [7 8]]
588	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6]) newarr = np.array_split(arr, 3) print(newarr)	A	1		[array([1, 2]), array([3, 4]), array([5, 6])]	[([1, 2]),([3, 4]),([5, 6])]	(1,2) (3,4) (5,6)	[1,2] [3,4] [5,6]
589	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6]) newarr = np.array_split(arr, 4) print(newarr)	A	1		[array([1, 2]), array([3, 4]), array([5]), array([6])]	[([1, 2]),([3, 4]),([5]), ([6])]	[([1, 2]),([3, 4]),([5, 6])]	[array([1, 2]), array([3, 4]), array([5, 6])]
590	9	What will be output for the following code? import numpy as np arr = np.array([[1, 2], [3, 4], [5, 6], [7, 8], [9, 10], [11, 12]]) newarr = np.array_split(arr, 3) print(newarr)	B	1		[array([[1, 2]]), array([[3, 4]]), array([[5, 6]]), array([[7, 8]]), array([[9, 10]]), array([[11, 12]])]	[array([[1, 2], [3, 4]]), array([[5, 6], [7, 8]]), array([[9, 10], [11, 12]])]	[array([[1, 2], [3, 4], [5, 6], [7, 8], [9, 10], [11, 12]])]	[[1 2] [3 4] [5 6] [7 8] [9 10] [11 12]]
591	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6]) newarr = np.array_split(arr, 6) print(newarr)	A	1		[array([1]), array([2]), array([3]), array([4]), array([5]), array([6])]	[1 2 3 4 5 6]	[[1],[2],[3],[4],[5],[6]]	([1 2 3 4 5 6])
592	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 4, 4]) x = np.where(arr == 4) print(x)	A	1		(array([3, 5, 6], dtype=int64),)	(3,5,6)	[3,5,6]	[3]
593	9	What will be output for the following code? import numpy as np arr = np.array([[1, 2], [3, 4], [5, 4]]) x = np.where(arr == 4) print(x)	A	1		(array([1, 2], dtype=int64), array([1, 1], dtype=int64))	(array([3, 5, 6],)	[3,5,6]	(([1, 2]),([1, 1]))
594	9	import numpy as np arr = np.array([3, 2, 0, 1]) print(np.sort(arr))	A	1		[0 1 2 3]	[3 2 1 0]	0 1 2 3	3 2 1 0
595	9	What will be output for the following code? import numpy as np arr = np.array([[3, 2], [0, 1]]) print(np.sort(arr))	C	1	LJU 2023	[[0,1],[2,3]]	[[0,1,2,3]]	[[2 3] [0 1]]	[0,1] [2,3]
596	9	What will be output for the following code? import numpy as np arr = np.array(['banana', 'cherry', 'apple']) print(np.sort(arr))	A	1		['apple' 'banana' 'cherry']	'apple' 'banana' 'cherry'	['apple', 'banana', 'cherry']	ERROR
597	9	What will be output for the following code? import numpy as np arr = np.array([True, False, True]) print(np.sort(arr))	A	1		[False True True]	[0 1 1]	[1 0 1]	ERROR
598	9	What will be output for the following code? import numpy as np arr = np.array([True, False, True,0,1]) print(np.sort(arr))	B	1		[0 1 False True True]	[0 0 1 1 1]	[False True True 0 1]	[False False True True True]
599	9	What will be output for the following code? import numpy as np arr = np.array(k) print(arr)	D	1		k	"k"	[k]	ERROR

600	9	What will be the output of the following code?
		class A:
		  def rk(self):
		  print(" In class A")
		class B:
		  def rk(self):
		  print(" In class B")
		class C(A, B):
		  def rk(self):
		  pass
		r = C()
		print(C.__mro__)
			A	1	LJU 2022	(<class '__main__.C'>, <class '__main__.A'>, <class '__main__.B'>, <class 'object'>)	(<class '__main__.A'>, <class '__main__.C'>, <class '__main__.B'>, <class 'object'>)	(<class '__main__.B'>, <class '__main__.C'>, <class '__main__.A'>, <class 'object'>)	D.(<class '__main__.C'>, <class '__main__.B'>, <class '__main__.A'>, <class 'object'>)

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
601	9	What is the output of the following code? import numpy as np a=np.array([1,2,3,4]) print(a.shape)	A	1	LJU 2022	(4,)	-4	(1,0)	(1,4)
602	9	What is wrong with this program? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7, 8]) newarr = arr.reshape(3, 3) print(newarr)	A	1		cannot reshape array of size 8 into shape (3,3)	cannot reshape array of size 7 into shape (3,3)	there is no function called array	None of these
603	9	What will be output for the following code? import numpy as np A=np.array([[[1,2], [4,3]], [[3,5], [6,4]]]) x=np.where(A==4) print(x)	A	1		(array([0, 1], dtype=int64), array([1, 1], dtype=int64), array([0, 1], dtype=int64))	(array([1,2], dtype=int64), array([0, 1], dtype=int64), array([1, 1], dtype=int64))	(array([1, 1], dtype=int64), array([0, 1], dtype=int64))	Error

604	9	What will be the MRO for class P in program given below:
		class A:
		pass
		class B:
		pass
		class C:
		pass
		class X(A,B):
		pass
		class Y(C,A,B):
		pass
		class Z(A):
		pass
		class P(Z,Y,X):
		pass
			D	1	LJU 2023	P,Z,Y,X,A,B,C,Object	P,Z,A,Y,C,A,B,X,A,B,Object	P,Z,A,Y,C,B,X,Object	P,Z,Y,C,X,A,B,Object

605	9	What will be output for the following code?
		from abc import ABC,abstractmethod
		class Father(ABC):
		@abstractmethod
		def display(self):
		pass
		def play(self):
		print('Abstract class')
		class Son(Father):
		def play(self):
		print('Child class')
		A=Son()
		A.play()
			D	1		Child class	Abstract class	Child class
								Abstract class
									Error

606	9	What will be output for the following code? import numpy as np arr1=np.array ([[1,3], [14,20], [5,6]]) arr2=np.array ([[6], [9], [12]]) arr=np.concatenate((arr1,arr2),axis=1) print(arr)	B	1		[[1 3] [14 20] [5 6]]	[[1 3 6] [14 20 9] [5 6 12]]	[[6] [9] [12]]	[1 3 6 14 20 9 5 6 12]

607	9	What will be the output of the following Python code?
		
		class A():
		def disp(self):
		print("C disp()")
		class C():
		def disp(self):
		print("A disp()")
		class B(A,C):
		def dis(self):
		print("B disp()")
		obj = B()
		obj.disp()
			A	1		C disp()	A disp()	B disp()	A disp()
									C disp()

608	9	What will be the output of the following Python code?
		
		class A:
		def __init__(self,x=3):
		self._x = x
		class B(A):
		def __init__(self):
		super().__init__(5)
		def display(self):
		print(self._x)
		def main():
		obj = B()
		obj.display()
		main()
			B	1		3	5	53	35

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

609	9	What will be the output of the following code:
		class A:
		  def __init__(self,x):
		  self.x = x
		  def count(self,x):
		  self.x = self.x-2
		class B(A):
		  def __init__(self, y=0):
		  A.__init__(self, 3)
		  self.y = y
		  def count(self):
		  self.y -= 1
		def main():
		  obj = B()
		  obj.count()
		  print(obj.x, obj.y)
		main()
			C	1		3 0	3 1	3 -1	Error

610	9	What will be the output of the following code:
		class P:
		  pass
		class Q:
		  pass
		class R(P,Q):
		  pass
		class S(Q):
		  pass
		class T(S,R):
		  pass
		a=T()
		T.__mro__
			C	1		[__main__.T, __main__.S, __main__.R, __main__.P, __main__.Q]	(__main__.T, __main__.S, __main__.P, __main__.Q, __main__.R, object)	(__main__.T, __main__.S, __main__.R, __main__.P, __main__.Q, object)	(__main__.T, __main__.S, __main__.Q, __main__.R, __main__.P, object)

611	9	What will be the output of the following code:
		class Demo:
		  def __init__(self):
		  self.x = 1
		  def change(self):
		  self.x = 10
		  return self.x
		class Demo_derived(Demo):
		  def change(self):
		  self.x*=5
		  return self.x
		def main():
		  obj = Demo_derived()
		  print(obj.change())
		main()
			A	1	LJU 2023	5	10	1	2

612	9	What will be the output of the following code: import numpy as np arr = np.array([[[1, 2], [3, 4]], [[5, 6], [7, 8]], [[9, 10], [11, 12]]]) newarr = arr.reshape(4, 1, -1) print(newarr)	B	1		[[1 2 3] [4 5 6] [7 8 9] [10 11 12]]	[[[1 2 3]] [[4 5 6]] [[7 8 9]] [[10 11 12]]]	[[[1 2 3] [4 5 6]] [[7 8 9] [10 11 12]]]	Error
613	9	What will be output for the following code? import numpy as np arr=np.array([[[1,2,3],[4,5,6]],[[7,8,9],[10,11,12]]]) arr1=np.array([[[4,3,2],[7,10,15]],[[6,1,2],[8,7,9]]]) newarr=np.concatenate((arr,arr1),axis=1) x=newarr[:1:,:2:,:3:2] y=np.sort(x) print(y)	C	1		[[[4 2] [7 15]]]	Value Error	[[[1 3] [4 6]]]	[[[1 2 3] [4 5 6]]]
614	9	What will be output for the following code? import numpy as np arr = np.array([[1,2,3,4,5], [6,7,8,9,10]]) print(arr[0:, -3::-2])	A	1		[[3] [8]]	[[3 4 5] [8 9 10]]	[[3], [8]]	[[3 8]]
615	9	What will be output for the following code? import numpy as np arr=np.array([[[1,2,3],[4,5,6]],[[6,5,3],[4,2,1]]]) x=arr[0:2,::2,::2] print(x.shape)	A	1		(2,1,2)	(1,2,4)	(2,2,3)	(2,3,2)
616	9	What will be output for the following code? import numpy as np arr1 = np.array([[[1, 2], [3, 4]]]) arr2 = np.array([[[5, 6], [7, 8]]]) arr = np.concatenate((arr1, arr2), axis=1) print(arr.shape)	A	1		(1,4,2)	(1,2,4)	(2,2,2)	(4,2)

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

617	9	What will be the output of the following Python code?
		class P1:
		  def hi(self):
		  print("hi P1")
		class P2:
		  def hi(self):
		  print("hi P2")
		class C1(P1):
		  pass
		class C2(P1):
		  def hi(self):
		  print("hello C2")
		class GC(C1,C2):
		  pass
		gc=GC()
		gc.hi()
			D	1		hello C1	hi C1	hello GC	hello C2

618	9	What will be the output of the following Python code?
		class P1:
		  def hello(self):
		  print("hi P1")
		class P2:
		  def hi(self):
		  print("hi P2")
		class C1(P1):
		  pass
		class C2(P1):
		  def h(self):
		  print("hello C2")
		class GC(C1,C2):
		  pass
		gc=GC()
		gc.hello()
			A	1		hi P1	hi C1	hello GC	hello C2

619	9	What will be output for the following code? import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7, 8]) x = np.where(arr%2 == 1) print(x)	A	1		(array([0, 2, 4, 6], dtype=int64),)	arr([1, 3, 5, 7],)	[3]	All of these

620	9	What is the Output of the Following Code?
		
		class A:
		  def __init__(self, x=5):
		  self.x = x
		class der(A):
		  def __init__(self, y=3):
		  super().__init__()
		  self.y = y
		def main():
		  obj = der()
		  print(obj.x, obj.y)
		main()
			C	1		1 2	3 5	5 3	Error

621	9	What will be output for the following code? import numpy as np arr = np.array([[1,2,3,4,5], [6,7,8,9,10]]) print(arr[0,1],arr[1,1])	D	1		1 6	1 7	1 8	2 7
622	9	What will be output for the following code? import numpy as np arr = np.array([3, 2, 0, 1]) print(np.sort(arr)[::-1])	A	1		[3 2 1 0]	[1 2 3 0]	[0 1 2 3]	0 1 2 3

623	9	What will be output for the following code?
		
		arr1 = np.array([[1,2],[5,6]])
		arr2 = np.array([[3,4],[7,8]])
		arr=np.concatenate((arr1,arr2))
		for i in arr:
		  for j in i:
		  if(j%2==0):
		  newarr=j
		print(newarr)
			D	1		[7 8]	7	4	8

624	9	What is the output of following code? arr = np.array([1,2,3,4,5,6,7,8]) arr.reshape(2,4) print(arr.ndim)	A	1		1	2	3	(2,)
625	9	What will be output for the following code? import numpy as np a=np.array([[5],[7],[8]]) b=np.array([[5,7,8]]) print(b+a)	A	1		[[10 12 13] [12 14 15] [13 15 16]]	[[10 10 10] [14 14 14] [16 16 16]]	ValueError	TypeError

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

Note : This practice book is only for reference purpose. LJU Test question paper may not be completely set from this practice book.

Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D

626	9	What will be output for the following code?
		class A:
		def hello(self):
		print("1",end=",")
		def hello(self):
		print("2",end=",")
		class B(A):
		def __init__(self):
		self.hello()
		def hello(self):
		print("3",end=",")
		super().hello()
		b=B()
		b.hello()
			A	1		3,2,3,2,	3,2	2,3,2,3,	3,

627	9	What will be output for the following code?
		class A:
		money=5000
		def __init__(self):
		self.money+=A.money
		class B(A):
		def display(self):
		self.money+=2000
		print(self.money)
		obj=B()
		obj.display()
			A	1		12000	7000	5000	3000

628	9	What will be output for the following code?
		class A:
		a=20
		def __init__(self):
		self.a+=10
		class B(A):
		a=15
		def buy(self):
		pass
		class C(B,A):
		a=30
		def buy(self):
		print(self.a)
		obj=C()
		obj.buy()
			C	1	LJU 2023	30	20	40	10

629	9	What will be the output of the following code? import numpy as np arr = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]]) arr[0, 1, : :-2]	B	1	LJU 2024	array([4, 6])	array([6, 4])	array([5])	array([6, 5, 4])
630	9	What will be output for the following code? import numpy as np arr = np.array([[[1,2,3,4,5], [6,7,8,9,10]]]) print(arr[:,0, -3])	B	1	LJU 2024	array([2])	array([3])	array([8])	array([4])
631	9	What will be the output of the following code? import numpy as np arr1 = np.array([[[1, 2], [3, 4]]]) arr2 = np.array([[[5, 6], [7, 8]]]) arr = np.concatenate((arr1, arr2), axis=2) print(arr.shape)	B	1	LJU 2024	(2, 2, 2)	(1, 2, 4)	(1, 4, 2)	(1, 4, 2)
632	9	Implement the following hierarchy . The Book function has name, n (number of authors), authors (list of authors), publisher, ISBN, and year as its data members and the derived class has course as its data member. The derived class method overrides (extends) the methods of the base class.		6					
633	9	Implement the following hierarchy . The Staff function has name and salary as its data members, the derived class Teaching has subject as its data member and the class NonTeaching has department as its data member. The derived class method overrides (extends) the methods of the base class.		6					
634	9	Create a class called Student, having name and email as its data members and _init_(self, name, email) and putdata(self) as bound methods. The _init_ function should assign the values passed as parameters to the requisite variables. The putdata function should display the data of the student. Create another class called PhDguide having name, email, and students as its data members. Here, the students variable is the list of students under the guide. The PhDguide class should have four bound methods: _init_, putdata, add, and remove. The _init_ method should initialize the variables, the putdata should show the data of the guide, include the list of students, the add method should add a student to the list of students of the guide and the remove function should remove the student (if the student exists in the list of students of that guide) from the list of students.		6					
635	9	Program to demonstrate the issue of invoking __init__() in case of multiple inheritance		4					
636	9	Write program that has a class point. Define another class location which has two objects (Location and Destination) of class point. Also define function in Location that prints reflection of Destination on the x axis.		6					
637	9	Write a program that overload the + operator so that it can add two object of class fraction		4					
638	9	Write a program that overload the * operator so that it can add two object of class fraction		4					
639	9	Write a program to find the distance between two points in cartesian cordinate system		4					

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
640	9	Write a program to find the slope between two points in cartesian cordinate system		4	LJU 2023				
641	9	Create a class student with following member attributes: roll no, name, age and total marks. Create suitable methods for reading and printing member variables. Write a python program to overload '==' operator to print the details of students having same marks.		6	LJU 2022				
642	9	Write a program to create a class called Data having "value" as its data member. Overload the (>) and the (<) operator for the class. Instantiate the class and compare the objects using _lt_ and _gt_.		5					
643	9	The following illustration creates a class called data. If no argument is passed while instantiating the class a false is returned, otherwise a true is returned.		4					
644	9	Create a 5X2 integer array from a range between 100 to 200 such that the difference between each element is 10		3					
645	9	Following is the provided numPy array. Return array of items by taking the third column from all rows sampleArray = numpy.array([[11 ,22, 33], [44, 55, 66], [77, 88, 99]])		2					
646	9	Return array of odd rows and even columns from below numpy array sampleArray = numpy.array([[3 ,6, 9, 12], [15 ,18, 21, 24], [27 ,30, 33, 36], [39 ,42, 45, 48], [51 ,54, 57, 60]])		3					
647	9	Sort following NumPy array Case 1: Sort array by the second row Case 2: Sort the array by the second column sampleArray = numpy.array([[34,43,73],[82,22,12],[53,94,66]])		2					
648	9	Print max from axis 0 and min from axis 1 from the following 2-D array. sampleArray = numpy.array([[34,43,73],[82,22,12],[53,94,66]])		3					
649	9	Write a NumPy array program to convert the values of Fahrenheit degrees into Celsius degrees. The numpy array to be considered is [0, 12, 45.21, 34, 99.91, 32] for Fahrenheit values. Values are stored into a NumPy array. After converting the following numpy array into Celsius, then sort the array and find the position of 0.0 (means where 0.0 value is located i.e. it's index) Formula to convert value of Fahrenheit to Celsius is: C=5*F/9 - 5*32/9 Output: Values in Fahrenheit degrees: [0. 12. 45.21 34. 99.91 32.] Values in Centigrade degrees: [-17.77777778 -11.11111111 7.33888889 1.11111111 37.72777778 0.] [-17.77777778 -11.11111111 0. 1.11111111 7.33888889 37.72777778] (array([2], dtype=int64),)		3					
650	9	import numpy as np arr = np.array([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]) Reshape arr into a 2D array and a 3D array.		2					

651	9	Imagine you own a call center. Use the following abstract class template to create three more classes, Respondent, Manager, and Director that inherit this Employee Abstract Class.
		
		from abc import ABC, abstractmethod
		
		class Employee(ABC):
		
		@abstractmethod
		def receive_call(self):
		pass
		
		@abstractmethod
		def end_call(self):
		pass
		
		@abstractmethod
		def is_free(self):
		pass
		
		@abstractmethod
		def get_rank(self):
		pass
				9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
651	9	Create a program using the instructions given below: 1.Create a constructor in all three classes (Respondent, Manager and Director) which takes the id and name as input and initializes two additional variables, rank and free. rank should be equal to 3 for Respondent, 2 for Manager and 1 for Director. free should be a boolean variable with value True initially. (1 mark) 2.Implement rest of the methods in all three classes in the following way: (2 marks) a.receive_call(): prints the message, "call received by (name of the employee)" and sets the free variable to False. b.end_call(): prints the message, "call ended" and sets the free variable to True. c. is_free(): returns the value of the free variable d. get_rank(): returns the value of the rank variable 3.Create a class Call, with a constructor that accepts id and name of the caller and initializes a variable called assigned to False. (0.5 marks) 4.Create a class CallHandler, with three lists, respondents, managers and directors as class variables. (0.5 marks) 5.Create an add_employee() method in CallHandler class that allows you to add an employee (an object of Respondent/Manager/Director) into one of the above lists according to their rank. (1 mark) 6.Create a dispatch_call() method in CallHandler class that takes a call object as a parameter. This method should find the first available employee starting from rank 3, then rank 2 and then rank 1. If a free employee is found, call its receive_call() function and change the call's assigned variable value to True. If no free employee is found, print the message: "Sorry! All employees are currently busy." (2 marks) 7.Create 3 Respondent objects, 2 Manager objects and 1 Director object and add them into the list of available employees using the CallHandler's add_employee() method. (1 mark) 8.Create a Call object and demonstrate how it is assigned to an employee. (1 mark)		9					
652	9	Write a python program to create a Bus child class that inherits from the Vehicle class. In Vehicle class vehicle name, mileage and seatingcapacity as its data member. The default fare charge of any vehicle is seating capacity * 100. If Vehicle is Bus instance, we need to add an extra 10% on full fare as a maintenance charge. So total fare for bus instance will become the final amount = total fare + 10% of the total fare. Sample Output: The bus seating capacity is 50. so, the final fare amount should be 5000+500=5500. The car seating capacity is 5. so, the final fare amount should be 500.		4					
653	9	Create an abstract class named Shape. Create an abstract method named calculate_area for the Shape class. Create Two Classes named Rectangle and Circle which inherit Shape class. Create calculate_area method in Rectangle class. It should return the area of the rectangle object. (area of rectangle = (length * breadth)) Create calculate_area method in Circle class. It should return the area of the circle object. (area of circle =πr^2)) Create objects of Rectangle and Circle class. The python Program Should also check whether the area of one Rectangle object is greater than another rectangle object by overloading > operator. Execute the method resolution order of the Circle class.		9					
654	9	Write a python program to demonstrate the use of super() method to call the method of base class.		4					
655	9	Create a class called Matrix containing constructor that initialized the number of rows and number of columns of a new Matrix object.		9					
656	9	Find the MRO of class Z of below program: class A: pass class B: pass class C: pass class D:pass class E:pass class K1(C,A,B): pass class K3(A,D): pass class K2(B,D,E): pass class Z(K1,K3,K2): pass		2					
657	9	Write a Python Program to Find the Net Salary of Employee using Inheritance. Create three Class Employee, Perks, NetSalary. Make an Employee class as an abstract class. Employee class should have methods for following tasks. - To get employee details like employee id, name and salary from user. - To print the Employee details. - return Salary. - An abstract method emp_id. Perks class should have methods for following tasks. - To calculate DA, HRA, PF. - To print the individual and total of Perks (DA+HRA-PF). Netsalary class should have methods for following tasks. - Calculate the total Salary after Perks. - Print employee detail also prints DA, HRA, PF and net salary. Note 1: DA-35%, HRA-17%, PF-12% Note 2: It is compulsory to create objects and demonstrating the methods with Correct output. Example: Employee ID: 1 Employee Name: John Employee Basic Salary: 25000 DA: 8750.0 HRA: 4250.0 PF: 3000.0 Total Salary: 35000.0		9					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
658	10	In the following syntax given below: plt.plot(ypoints,'o:r') What does this 'o:r' stands for?	D	1		o (marker), : (color) and r (line)	o (color), : (line) and r (marker)	o (line), : (marker) and r (color)	o (marker), : (line) and r (color)
659	10	In the given chart, points surrounded with circle is called  	C	1		Labels	Ticks	Markers	Series
660	10	In the given syntax what does this ms indicates? plt.plot(ypoints,marker='o',ms=10)	D	1	LJU 2023	Markerborder	Markercolor	Markershape	Markersize
661	10	Consider the code given below: plt.bar(cities, population,color=['r','g','b','m']) what will be the colour of last bar?	A	1		Magneta	Green	Blue	Black
662	10	Which type of error will be generated in this program and why? import matplotlib.pyplot as plt import numpy as np ypoints = np.array([3,8,1,10,5,7]) plt.plot(ypoints,linestyle='*') plt.show()	B	1		Syntax Error as '*' this type of linestyle does not exist	Value Error as '*' this type of linestyle does not exist	Type Error as linestyle is not proper with this type of array	Syntax Error as this is not a syntax of linestyle
663	10	Which linestyle does Python takes by default?	D	1		Dashpot	Dotted	Dashed	Solid
664	10	The following code will generate which type of linestyle? plt.plot(ypoints,linestyle=':')	A	1		Dotted	Dashed	Value Error	Syntax Error
665	10	Consider the following code written to display a bar chart x=range(0,40,8) y=range(10,100,10) plt.bar(x,y) While executing it, is producing error. Why?	B	1		Both the sequences x and y do not start with 0	Both the sequences x and y are not of same shape	Values produced by range is not considered for chart.	Both the sequences x and y have values with different intervals
666	10	The following syntax will create: plt.subplot(2,1,1) plt.subplot(2,1,2)	A	1		Will create two subplots- above and below	Will create two different line plots	Will create two subplots (side by side)	Syntax error will be generated
667	10	The following syntax indicates: plt.subplot(3,1,2)	A	1		position of 1st plot at 3rd row, 1st column and 2nd place	position of 1st plot at 1st row, 3rd column, and 2nd place	position of 1st plot at 2nd row, 3rd column and 1st place	position of 1st plot at 2nd row, 1st column and 3rd place
668	10	Which function is used to configure page title, layout, and favicon in Streamlit?	B	1		st.page_config()	st.set_page_config()	st.configure_page()	st.page_setup()
669	10	Which of the following is correct to display the largest heading in Streamlit?	B	1		st.header("Welcome")	st.title("Welcome")	st.markdown("Welcome")	st.heading("Welcome")
670	10	Which of the following can display both text and variables together?	B	1		st.text()	st.write()	st.code()	st.header()
671	10	Which function is used to place widgets inside a sidebar?	C	1		st.sidebar.widget()	st.sidebar()	st.sidebar.<widget>()	st.column.sidebar()
672	10	Which function will allow a multi-line text input from the user?	B	1		st.text_input()	st.text_area()	st.write_input()	st.multiline_input()
673	10	Which widget is best suited for selecting a value between 0 and 100 continuously?	B	1		st.number_input()	st.slider()	st.selectbox()	st.radio()
674	10	Which input widget allows multiple selections from a list?	D	1		st.radio()	st.checkbox()	st.selectbox()	st.multiselect()
675	10	Which of the following widgets is NOT available in Streamlit?	C	1		st.date_input()	st.time_input()	st.datetime_input()	st.file_uploader()
676	10	Which function is used to upload CSV, images, or PDF files?	C	1		st.upload()	st.file_uploader()	st.file_upload()	st.upload_file()
677	10	Which function is used to create a downloadable file button?	B	1		st.button()	st.download_button()	st.save_button()	st.export_button()
678	10	Which function is used to display images in Streamlit?	D	1		st.show_image()	st.display_image()	st.img()	st.image()
679	10	Which function will show a green success message?	A	1		st.success()	st.done()	st.complete()	st.info()
680	10	What will be displayed after clicking the button in the following code? if st.button("Click Me"): st.write("Hello Streamlit")	C	1		Nothing	Always "Hello Streamlit"	"Hello Streamlit" only when button is clicked	Error
681	10	Which function is used to display a Matplotlib chart in Streamlit?	C	1		st.chart()	st.plot()	st.pyplot()	st.line_chart()
682	10	Which function directly creates a line chart without using Matplotlib?	A	1		st.line_chart()	st.plot_line()	st.draw_line()	st.chart_line()
683	10	What will the slider return in the following code? age = st.slider("Select Age", 0, 100, 25) st.write("Age:", age)	B	1		Always returns 25	Returns user's selected age between 0–100	Returns only 0 or 100	Error
684	10	What will be the output of the following code if "Python" is selected? lang = st.selectbox("Choose Language", ["Python", "Java", "C++"]) st.write("You selected:", lang)	C	1		You selected: Java	You selected: C++	You selected: Python	Error
685	10	What will this code do? with st.expander("See Details"): st.write("This is inside expander")	B	1		Always shows text without toggle	Shows collapsible section with "See Details"	Error	Creates sidebar only
686	10	What does the following code do? file = st.file_uploader("Upload a CSV", type=["csv"]) if file is not None: st.write("File Uploaded Successfully!")	C	1		Always shows "File Uploaded Successfully!"	Uploads only images	Uploads CSV and confirms success	Error
687	10	These cost categories applied to a $9.00 microcontroller: Engineering $1.35 Manufacturing $3.60 Sales $2.25 Profit $1.80 Create a pie chart will show the cost breakdown as different sized pieces.		3					
688	10	Here is how many students got each grade in the recent test: A- 4, B-12, C-10, D-2. Plot a pie chart for the student grades in the recent chart with different colors for each student grades and create a wedge for D. Also put a chart title as student's grade history.		3					

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
689	10	Imagine you survey your friends to find the kind of movie they like best: Comedy- 4, Action -5, Romance - 6, Drama -1, SciFi - 4. Plot a pie chart for the above survey and use different color for each analysis and create a wedge for action movies. Also put as chart title as "Survey analysis of movie"		3					
690	10	Create a Pie Chart using Python Program for the popularity data of different programming languages and displayed it as a pie chart using the Matplotlib Python library. For Python- 29, Java – 19, Javascript – 8, C# - 7, PHP – 6, C,C++ - 5, R – 3. Create an exploded view of python and show the % of each programming language in Pie Chart.		3					
691	10	Write a python program to create a bar plot of course v/s no. of students using the following dictionary with appropriate labels for X and Y axes and colour of the bars green. Data={'C':20,'C++':15,'Java':30,'Python':35}		3					
692	10	Create a bar chart for the following dataset: Country = ['USA','Canada','Germany','UK','France'] GDP_Per_Capita = [45000,42000,52000,49000,47000]. Also plot title, X-Axis, Y-Axis, different color for each country and the grid should be visible		3					
693	10	A Bar Chart to display employee id numbers on X-axis and their salaries as Y-axis in the form of a bar graph for two departments of a company. There are two departments like sales department and purchase department. For sales department their id's and salaries are mentioned as : x= [1001,1003,1006,1007,1009,1011] and y= [10000, 23000.50,18000.33,16500.5,12000.75, 9999.99] and for purchase department their id's and salaries are mentioned as: x=[1002,1004,1010,1008,1014,1015] and y=[5000,6000,4500.5,12000,9000,10000]. Make the chart title as "Microsoft Inc.", x-axis as emplyee id and Y axis as Salary. Use different colors for sales and purchase department.		5					
694	10	Write a program to build two bar graphs using subplot function for given two dictionaries in which one graph is in 1st row and another in second row which is horizontal representation of bar graph. D1={"aryan":66,"bob":70,"jack":66,"seema":34} D2={"joy":45,"sid":85,"hina":90} And also make a title of graph at top as "BAR PLOT".		5					
695	10	A program to display a histogram showing the number of employees in specific age groups. The data is shown: emp_ages=[22,45,30,59,58,56,57,45,43,43,50,40,34,33,25,19] and their bins are [0,10,20,30,40,50,60]. Create a histogram with x-axis label as "emplyee ages" and y axis label as " no. of employees". Create a title of the plot as "Oracle Corp". Also teh color of histogram created should be cyan.		3					
696	10	Jeff is a branch manager at a local bank. Recently Jeff's is receiving customer feedback saying that the wait times for a client to be served by a customer service representative are too long. Jeff decides to observe and write down the time spent by each customer on waiting. Here are his findings from observing and writing down the wait times spent by 20 customers (in seconds): 43.1, 35.6, 37.6,36.5,45.3,43.5,40.3,50.2,47.3,31.2,42.2,45.5,30.3,31.4,35.6,45.2,54.1,45.6,36.5,43.1. Plot a histogram for the above data.		5					
697	10	Uncle Bruno owns a garden with 30 black cherry trees. Each tree is of a different height. The height of the trees (in inches): 61, 63, 64, 66, 68, 69, 71, 71.5, 72, 72.5, 73, 73.5, 74, 74.5, 76, 76.2, 76.5, 77, 77.5, 78, 78.5, 79, 79.2, 80, 81, 82, 83, 84, 85, 87. Plot a histogram with color green, title of the chart should be height of trees along with it's fontsize as 20.		3					
698	10	A Program to create a line graph to show the profits of a company in various years. The data is as mentioned: x axis as years and y axis as profits (in Millions). X=[2012,2013,2014,2015,2016,2017] and y = [9,10,10.5,8.8,10.9,9.75]. Plot a line chart with x axis as "Years" and y axis as "Profits (in Millions)" and title of the line chart as "XYZ Company". Also the linestyle should be dashed one.		3					
699	10	Laurell had visited a zoo recently and had collected the following data. How can Laurell use a scatter plot to represent this data? .Take Type of Animal as X-axis and no. in Y axis. The data is as follows: Zebra-25, Lions- 5, Monkeys- 50, Elephants - 10, Ostriches - 20		3					
700	10	Prayatna sells designer bags and wallets. During the sales season, he gave discounts ranging from 10% to 50% over a period of 5 weeks. He recorded his sales for each type of discount in an array. Draw a scatter plot to show a relationship between the discount offered and sales made. Take 5 sales in Rupees as user defined values		3					
701	10	Plot a subplot showing the marks of 5 students for 6 subjects (Digital Electronics, Probability and Stochastics, Python, Full Stack Development, IELTS (Reading), and Data Structure). All the marks for each subject and for each student is to be taken user defined. Subplot should be prepared for each subject. Each Subplot should have a title of subject along with a main title of a plot.		5					
702	10	Write a Python program to draw a scatter plot comparing two subject marks of Mathematics and Science. Use marks of 10 students. Test Data: math_marks = [88, 92, 80, 89, 100, 80, 60, 100, 80, 34] science_marks = [35, 79, 79, 48, 100, 88, 32, 45, 20, 30] marks_range = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100] Add appropriate labels, title and legend.		4					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
703	10	Draw multiple plots in one figure using subplot function. The multiple plots include below according to order: 1. Plot a scatter plot with following data: x = [5,7,8,7,2,17,2,9,4,11,12,9,6] y = [99,86,87,88,111,86,103,87,94,78,77,85,86] The x axis represents the age of car while y axis represents the speed of car. The title of the graph should be age v/s speed of car. Also in graph there should be x and y labels. The marker used should be star. The marker color should be green. The marker size should be 60. 2. Plot a horizontal bar with following data: x=["A", "B", "C", "D"] y=[3, 8, 1, 10] The x axis represents the name of car while y axis represents the selling of car. The title of the graph should be name v/s selling of car. Also in graph there should be x and y label. The horizontal bar chart's height should be 0.1. The color of bar should be yellow. 3. Plot a histogram with following data: data=[1,3,3,3,3,9,9,5,4,4,8,8,8,6,7] bins=4, the title of the graph should be histogram of cars. The orientation should be vertical. The color of plot should be violet 4. Plot a pie with following data: y=[35,25,25,15] mylabels=['Apple','Bananas','Cherries','Dates'] The title of the graph should be pie chart. The exploded view should be shown with 0.2 value for 'Apple' Also need to provide a superior title to the subplot prepared i.e 'My Subplot for cars'(0.5 marks) and subplot preparation (0.5 mark) For clear visualization can use the following syntax after importing matplotlib plt.figure(figsize=(10,10))		9	LJU 2022				
704	10	There is an array of scores of 5 Batsmen in 4 T20 Matches. Which is given below. Scores= [[13, 10, 9, 33], [63, 46, 90, 42], [39, 76, 13, 29], [82, 9, 29, 78], [67, 61, 59, 36]] Further you are asked to perform below tasks. (i). Add scores of every batsman of 5th Match given below in the same array and print the array. Match_6= [41, 87, 72, 36, 92] (ii). Add two new batsmen's scores in respective 5 T20 Matches in the array created in task (i) above and print the array. Batsman_6= [77, 83, 98, 95, 89] Batsman_7= [92, 71, 52, 61, 53] (iii). Add extra column with sum of all 5 T20 Matches' scores of each batsman in the array created in task (ii) and print the final array. Note: Use Numpy module for all the Arrays given above. Using the final array created in task(iii) above, generate graphs mentioned below: (a). Make a line chart of Total Scores of each batsman which is stored in last column of final array v/s No. of Batsman. Use dashed line in graph, with black color. Give label on x-axis as "No. of Batsman" and label on y-axis as "Scores". Give title to the chart as "Leader Board" with bold fonts. (b). Make one Bar chart of scores of Batsman_1 and Batsman_2 for all 5 T20 matches. Give color for bars of Batsman_1 as Purple and for Batsman_2 Dark red. Also show required legend in bar chart. (c). Make a pie chart of Total Scores of each batsman which is stored in last column of final array. Show the pie chart with exploded view of all pieces with 0.1 amount. Also display percentage in the pie chart. Also show required legend for pie chart. Note: Passing the values using numpy Array Slicing from array created in task(iii) for creating graphs above is compulsory.		9					
705	10	Write a program to build 6 graphs(3 row and 2 column) using subplot function for given data: Subplot 1: Draw a line from (5,5) to (10,17) to (25,25) to (60,40) to (80,30) with suitable label in the x axis, y axis and a title. Line color should be green. Line style should be dotted. Marker should be diamond. Subplot 2: Write a Python program to create bar plot of scores by group and gender. Give suitable label in the x axis, y axis and a title. Colors of all label should be black and title should be bold. Color of bar plot of men and women scores should be green and red. Data: Scores_men = (22, 30, 35, 35, 26) Scores_women = (25, 32, 30, 35, 29) Subplot 3: Write a Python programming to create a pie chart with a title of the popularity of Car company. Make multiple wedges of the pie. Also show the percentage. data: Car : Maruti Suzuki, Hyundai, Kia, Toyota, Honda Popularity: 25,50,30,20,35		9					

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Fundamentals of Computer Science using Python-I (FCSP-1) Practice Book (SEM-III 2025)

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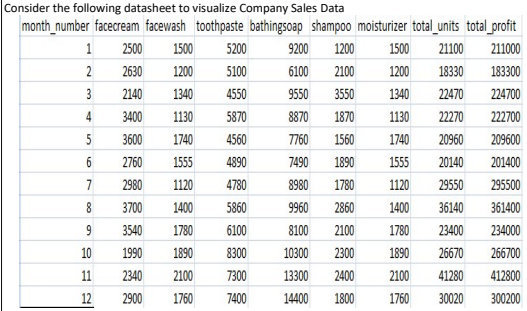
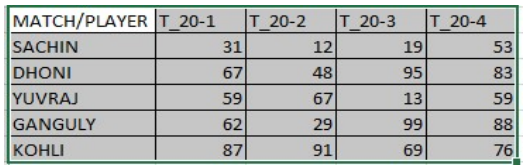
Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
		Subplot 4: Write a Python program to draw a scatter plot comparing two subject marks of Mathematics and Science. Use marks of 10 students. Marker of mathematics and science should be circle and star. Colors of marker of mathematics and science should be yellow and blue. Test Data: math_marks = [88, 92, 80, 89, 100, 80, 60, 100, 80, 34] science_marks = [35, 79, 79, 48, 100, 88, 32, 45, 20, 30] Subplot 5: Write a Python programming to display a horizontal bar chart of the popularity of programming Languages. Colors of all programming Languages should be different. Give suitable label in the x axis, y axis and a title. data: Programming languages: Java, Python, PHP, JavaScript, C, C++ Popularity: 20,100,25,30,45,50 Subplot 6: Write a Python programming to display a Histogram chart for given data. Color of chart should be red. Data=[10,20,20,30,30,30,40,40,40,40,50,50,50,60,60,70]							
706	10	Consider the following datasheet to visualize Company Sales Data  Get total profit of all months and show line plot with the following Style properties: •Line Style dotted and Line-color should be red •Show legend at the lower right location. •X label name = Month Number •Y label name = Total Profits •Add a circle marker •Line marker color as blue •Line marker size as 5 •Line width should be 3							
707	10	There is an array of scores of 5 Batsmen in 4 T20 Matches. Which is given below. Scores= [[31, 12, 19, 53], [67, 48, 95, 83], [59, 67, 13, 59], [62, 29, 99, 88], [87, 91, 69, 76]]  1. Find the maximum score in T_20-3 and print it (use only the numpy module) 2. Find the minimum score of YUVRAJ and print it (use only the numpy module) 3. Add an extra column with the sum of all 4 T20 Matches' scores of each batsman in the array created and print it. (use only the numpy module)		9					

month_number	facecream	facewash	toothpaste	bathingsoap	shampoo	moisturizer	total_units	total_profit
1	2500	1500	5200	9200	1200	1500	21100	211000
2	2630	1200	5100	6100	2100	1200	18330	183300
3	2140	1340	4550	9550	3550	1340	22470	224700
4	3400	1130	5870	8870	1870	1130	22270	222700
5	3600	1740	4560	7760	1560	1740	20960	209600
6	2760	1555	4890	7490	1890	1555	20140	201400
7	2980	1120	4780	8980	1780	1120	29550	295500
8	3700	1400	5860	9960	2860	1400	36140	361400
9	3540	1780	6100	8100	2100	1780	23400	234000
10	1990	1890	8300	10300	2300	1890	26670	266700
11	2340	2100	7300	13300	2400	2100	41280	412800
12	2900	1760	7400	14400	1800	1760	30020	300200

MATCH/PLAYER	T_20-1	T_20-2	T_20-3	T_20-4
SACHIN	31	12	19	53
DHONI	67	48	95	83
YUVRAJ	59	67	13	59
GANGULY	62	29	99	88
KOHLI	87	91	69	76

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
708	10	Write a NumPy program to swap columns in a given array. Take number of rows, number of columns, and also take the values of each rows and columns as input and also number of columns to be swapped. Enter the number of rows: 3 Enter the number of columns: 4 Enter values for row 1: 0 1 2 3 Enter values for row 2: 4 5 6 7 Enter values for row 3: 8 9 10 11 Enter the index of the first column to be swapped: 0 Enter the index of the second column to be swapped: 1 Original array: [[0 1 2 3] [4 5 6 7] [8 9 10 11]] After swapping arrays: [[1 0 2 3] [5 4 6 7] [9 8 10 11]]		3	LJU 2023				
709	10	You are given a dataset representing the daily workout durations (workout_durations_data = [40, 50, 45, 55, 60, 30, 40, 50, 45, 55, 60, 30, 40, 50, 45, 55, 60, 30, 40, 50, 45, 55, 60, 30, 40, 50, 45, 55]) of an individual over the course of a month. Additionally, there is data on calories burned (calories_burned_data= [200, 250, 220, 270, 300, 150, 200, 250, 220, 270, 300, 150, 200, 250, 220, 270, 300, 150, 200, 250, 220, 270, 300, 150, 200, 250, 220, 270]) during each workout session. Your task is to perform a comprehensive analysis and visualization of this fitness data. Calculate Weekly Averages: Calculate the weekly average workout duration and calories burned. Use a loop to compute these averages for each week. Create Visualizations: Design a 3x2 subplot layout to visualize the following aspects: Subplot 1 (Line plot for daily workout durations): (Days v/s Duration (in Minutes) Use a blue line with circular markers (marker size 8). Title: "Daily Workout Durations" Subplot 2 (Line plot for weekly averages of workout duration and weekly calories burned): Use a green line with circular markers (marker size 8) for workout duration. Use an orange line with square markers (marker size 8) for calories burned. Title: "Weekly Averages" Subplot 3 (Bar chart for daily workout durations): Use a blue color for bars. Title: "Daily Workout Durations (Bar Chart)" Subplot 4 (Histogram for workout durations distribution): Use a skyblue color for bars. Take value of bins as 10 Title: "Workout Durations Distribution (Histogram)" Subplot 5 (Pie chart for calories burned distribution over the weeks): startangle should be 90 degree and also display percentage in pie chart with 1 digits after one decimal place. Also display labels Title: "Calories Burned Distribution (Pie Chart)" Subplot 6 (Line plot for the rate of change in workout durations): Use a red line with triangular markers (marker size 8). Title: "Rate of Change in Workout Durations" Features and Customizations: Utilize different colors for each plot. Add markers to the line plots for emphasis. Adjust marker sizes for better visibility. Formula and Calculation: The rate of change in workout durations can be calculated using the formula: Let's consider an example to illustrate this. Suppose we have the following workout duration data for four consecutive days: Workout Duration already given in list above at top (workout_durations_data): Day 1: Workout Duration = 40 minutes Day 2: Workout Duration = 50 minutes Day 3: Workout Duration = 45 minutes Day 4: Workout Duration = 55 minutes We want to calculate the rate of change in workout durations for each day. $\text{Rate of Change} = \frac{\text{Workout Duration}_{\text{next day}} - \text{Workout Duration}_{\text{current day}}}{\text{Days}_{\text{next day}} - \text{Days}_{\text{current day}}}$		9	LJU 2023				

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
		1. **Between Day 1 and Day 2:** $$\text{Rate of Change} = \frac{50-40}{2-1} = 10 \text{ minutes per day}$$ 2. **Between Day 2 and Day 3:** $$\text{Rate of Change} = \frac{45-50}{3-2} = -5 \text{ minutes per day}$$ 3. **Between Day 3 and Day 4:** $$\text{Rate of Change} = \frac{55-45}{4-3} = 10 \text{ minutes per day}$$ The negative rate of change between Day 2 and Day 3 indicates a decrease in workout duration, while the positive rate of c↓je between Day 3 and Day 4 indicates an increase. The negative rate of change between Day 2 and Day 3 indicates a decrease in workout duration, while the positive rate of change between Day 3 and Day 4 indicates an increase. In the context of the fitness data visualization, the rate of change plot will show how the workout durations are changing on a daily basis, providing insights into trends and fluctuations in the individual's exercise routine. Instructions: Implement the required calculations using nested loops. Ensure that each subplot is labeled appropriately. Customize the visualizations with specific colors, markers, and marker sizes. Display the main title for the entire figure.								
710	10	Write a Python program to create a single figure with multiple subplots using the matplotlib library. The figure should have the following plots arranged in a 2x2 grid: 1.Scatter Plot x = [2, 4, 6, 8, 10, 12, 14, 16, 18, 20] y = [55, 60, 58, 63, 70, 65, 75, 80, 78, 85] X-Axis Label: "Engine Age (Years)" Y-Axis Label: "Fuel Efficiency (MPG)" Title: "Engine Age v/s Fuel Efficiency" Marker: Diamond (D), red color, size 80. 2.Horizontal Bar Chart x = ["Model A", "Model B", "Model C", "Model D", "Model E"] y = [25, 30, 15, 40, 20] X-Axis Label: "Sales Volume" Y-Axis Label: "Car Model" Title: "Car Model v/s Sales Volume" Bar height: 0.3, bar color: pink. 3.Histogram data = [4, 5, 5, 6, 6, 6, 7, 7, 8, 8, 8, 9, 10, 10, 10] Number of bins: 6 Title: "Mileage Distribution" Color: Green		6	LJU -2024				
711	10	Create a Streamlit app where the user can: - Enter Name (text input) - Select Age (slider: 10–100) - Choose Gender (radio: Male, Female, Other) - Select multiple Hobbies (multiselect) - Upload a profile picture (file uploader for images) When the user clicks Submit, display the profile details and show the uploaded image		5					
712	10	Build a Streamlit app with: - Sidebar to select a country from a dropdown (India, USA, UK, Canada) - Number input for Total Population - Number input for Vaccinated People - A button that, when clicked, calculates and displays the vaccination percentage - Display results with a progress bar and a success/warning message depending on whether the vaccination rate is above 70%		5					
713	10	Create a Streamlit app where the user can input marks of 5 subjects (using number_input in columns). - Add a button to calculate: - Total marks - Average marks - Division (First/Second/Fail based on average) - Display results inside an expander section		5					
714	10	BMI Calculator App Take user inputs: - Weight (kg) (number input) - Height (cm) (number input) On button click, calculate BMI = weight / (height/100)^2. - Display: - BMI Value - A health category (Underweight, Normal, Overweight, Obese) - Show results in colored messages (st.success(), st.warning(), st.error()).		5					
715	10	Matplotlib Integration App Take number input n (number of random points). - Generate n random values for x and y. - Plot them in Matplotlib as a scatter plot. - Display the plot in Streamlit using st.pyplot().		5					

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Sr. No.	unit_number	question_text	MCQ Answer	marks	Previous Year	option A	option B	option C	option D
716	10	To-Do List App Let the user enter a task in a text input and add it via a button. - Show all added tasks in a checkbox list. - When a checkbox is ticked, mark the task as completed (use st.success() message).		5					