Total No. of Questions – [3]

Total No. of Printed Pages: IV

G.R./PRNNo.	

PAPER CODE	U123-202B(REG)

MAY 2023(INSEM+ ENDSEM) EXAM

F.Y. B. TECH. (SEMESTER - II)

COURSE NAME: PYTHON FOR ENGINEERS

COURSE CODE: CS10202B

(PATTERN 2020)

Time: [2Hr]

[Max. Marks: 60]

(*) Instructions to candidates:

1) Figures to the right indicate full marks.
2) Use of scientific calculator is allowed
3) Use suitable data where ever required

Question No.	Question Description	Marks	CO mapped	Blooms Taxonomy Level
Q.1	i. What will be the output of the following Python code? T1 = ("A", 17.7,3.3,11,"ABC") T1.sort(reverse==True) print('Reversed Tuple:',T1) a)Reversed Tuple:"A", 17.7,3.3,11,"ABC" b)TypeError c) AttributeError d) NameError	[2]	CO1	A
	ii. What will be the output of given Python code? S='EngiNNeringengineer' print(S[-1:-19:-3]) a) rnnnei b) rnnne c) rnnneiE d) No Error no output	[2]	CO1	A
	iii. What is the output of the following code l1 = [12, 22, 32, 42, 52, 62, 72, 82, 92, 102, 112,121] print(l1[l1.count(32)-4]) print(l1.count(l1[4])-len(l1)) a) 102 -11 b)-102 11 c) 112 -11 d)-112 11	[2]	CO1	A
	iv. What will be the output of the following Python code? T1 = (11, 22, 33, 44, 55, 66, 77, 88, 99, 110) print(T1[-2 : -7 : -1],T1[:: 2],T1[-1::5]) a)(99, 88, 77, 66, 55) (11, 33, 55, 77, 99) (110,66)	[2]	CO1	A

	b)(99, 88, 77, 66, 55)(11, 33, 55, 77, 99) (110) c)(99, 88, 77, 66, 55)(11, 33, 55, 77, 99) (110,) d)(99, 88, 77, 66, 55)(11, 33, 55, 77, 99)			
	v. Which of the following will give "Division" as output? str1="VIIT,Division,FYBTech" a)print(str1[-9:-17:-1]) b)print(str1[-16:-8]) c)print(str1[-9:-17:1]) d)print(str1[-16:-8:-1])	[2]	CO1	A
	vi. What will be the output of given Python code? a = (10, 20) b = a print(a) b += [30, 40] print(b) a) (10, 20) (10, 20, 30, 40) b) (10, 20) (10, 20, [30, 40]) c) TypeError d) NameError	[2]	CO1	A
	vii. What will be the output of the following Python code? print("Programming python" > "PYTHON Programming") print("FY" <"viit") a True False b) False False c) True True d) False True	[2]	CO1	
	viii. Which of the following Boolean expressions is not logically equivalent to the other three? a) not(-8>11 or-10==11) b) not(-8<10 or-8==11) c) -8>=0 and -8<=11 d) not(-8<0 and not(-10>11))	[2]	CO1	A

	ix. 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 2
	b) 1 1 1 1 1.....
	c) invalid Syntax d) none of the mentioned
		[2]	CO2	A

	x. What will be the output of the following Python code min = (lambda x, y,z: x if x > y or x < z else y) min(20*502, 10*501,30*503) a)10040 b)5010 c)SyntaxError d) None of the above	[2]	CO2	A

	xi. What is the output of the following
	str1="See You"
	c=0
	for x in str1:
	if(x!="Y"):
	c+=1
	else:
	pass
	print(c)
	a)6 b)5 c) syntax Error d) None of above
		[2]	CO2	A

	xii. What will be the output of the following Python code?
	for num in range(3, 10):
	  for i in range(3, num):
	  if num%i == 3:
	  print(num,end=" ")
	  break
	
	a) [7, 8, 9] b) (7, 8, 9)
	c) 7 8 9 d) None of the mentioned
		[2]	CO2	A

	xiii. What will be the output of the following Python code?
	name = "China"
	if name >= "India":
	  print("usa")
	elif name != "Bharat":
	  print("ireland")
	else:
	  print("Maharashatra")
	
	a) India b) ireland c) Maharashtra d) TypeError
		[2]	CO2	A

	xiv. What will be the output of the following Python code?
	i = 1
	while True:
	  if i*5 <= 20:
	  if i%5==0:
	  break
	  print(i,end=" ")
	  i += 2
	print(i,end=" ")
	
	a) 1 3 5.....19 b) infinite loop
	c) TypeError d) None of the mentioned
		[2]	CO2	A

	xv. What will be the output of the following Python code?
	for num in range(1,10,2):
	  for i in range(4, num):
	  if num%i != 0:
	  print(num,end=" ")
	  break
	a)No error no output b) 5 7 9 c) 5 7 9 10 d)TypeError
		[2]	CO2	A

Q2	Solve any three out of four a. Differentiate list and Numpy array. State examples of 1D array of size 6, 2D array of shape (3, 4) and 3D array.	[5]	CO3	U
	b. Write a NumPy program to get the following expected output of array values element-wise. arr1=np.array([[3,6,9],[4,8,12],[5,10,15]]) arr1=np.array([[1,2,3],[2,2,2],[4,5,6]]) Expected Output: [[3 3 3] [2 4 6] [1 2 2]] [[1 2 0] [2 2 2] [1 2 0]] [[1 1 1] [1 1 1] [1 1 8]]	[5]	CO3	A

	c. Consider three arrays as below A = [[5,10,15],[25,30,45]] B = [[10,20,30] C = [[5],[10]] Write a python code to perform (A+B) and (A*C). Justify (A+B) and (A*C) Output with the help of broadcasting rules. State suitable broadcasting rule.	[5]	CO3	A
	d. Describe subplot? Write a python code to get sin, cosine and tan signal waves over the period (0, 5*pi, 0.1) using subplot.	[5]	CO3	A
Q.3	Solve any three out of four			
	a. Differentiate between write and append mode with example? State the significance of read(), readline() and readlines() function.	[5]	CO4	U
	b. Study, analyze the code for given input file and predict the output based on given code. Consider below file – motive.txt. Input File : Tell me and I forget. Teach me and I remember. Involve me and I learn. Code: f = open("motive.txt","r+") print(f.read(5)) print(f.read(16)) print(f.tell()) print(f.read(7)) print(f.seek(27)) print(f.readline(5)) print(f.readlines())	[5]	CO4	A
	c. Consider above lines for the file motive.txt. Write a function count_lines() to count total number of 'me' word in the given file and display the total number of lines and total number of words from the file.	[5]	CO4	
	d. Write a program to count the number of upper-case alphabets present in a text file "motive.txt".	[5]	CO4	A