Vivekananda College of Engineering & Technology, Puttur
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

CRM08	Rev 1.10	<EC>	<11/5/2022>

CONTINUOUS INTERNAL EVALUATION - 1

Dept: EC	Sem / Div:VI /A&B	Course:Python Application Programming	Course Code: 18EC646
Date: 17/5/2022	Time: 3:00 to 4:30.p.m	Max Marks: 50	Elective: Y

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	CO's
		PART A			
1	a	Explain the following reserve words and its usage with an example program (a) yield (b) lambda (c)global (d)nonlocal (e)try, except and finally	10	L2	CO1
	b	(i)Explain precedence of operators in python (ii)Evaluate the result for the following expressions given below (a)1*3/4**2 (b)6*2%3*3 (c)2/3**3+(2-3) (d)1+2-3*2**3	10	L2, L3	CO1
	c	Write a python program to prompt user to read a number and find the sum of digits present in it. Also warn the user to enter valid number, if he chooses to enter invalid number. Program should run repeatedly.	5	L3	CO1
		OR			
2	a	(i)Explain the chained and nested conditional execution statements along with examples and flow chart (ii)Write a python script to check whether the number is	10	L2, L3	CO1

positive, negative or zero. If the number is positive, read side from the user and print the area of square, if the number is negative, read length and breadth from the user and print the area of rectangle, else read radius from the user and print area of the circle.

Expected outcomes:

(a)

Enter the number 5
Enter the side of square 4
Area of square= 16

(b)

Enter the number -5
Enter the length of rectangle 3
Enter the breadth of rectangle 4
Area of rectangle= 12

(c)

Enter the number 0
Enter the radius 3
Area of circle=28.274

b (i)Explain the following:
(a)Interactive mode
(b)Script mode
(c)Short circuit evaluation of expressions
(d)Modulus operator

10 | L2, L3 | CO1

(ii)Create a python function named **marks2grade** which accepts an argument marks and returns the grade back to the main program. The program should check whether the user enters valid number between 0 to 100. If the entered data is out of range or invalid number, print error message as Badscore. Program should run repeatedly.

Marks	Grade
>=90	S
>=80	A+
>=70	A
>=60	B

		<60 | F **Test cases:** Enter marks: 95 Grade= S Enter marks: 63 Grade=B Enter marks: 110 Badscore Enter marks: hundred Badscore			
	c	What do you mean by void and fruitful functions? Explain with suitable examples.	5	L2	CO2
		PART B			
3	a	(i)List the features of Python Programming Language(Any Five). (ii)Write a Python program to Create an user defined function named hr_mn_sc which accepts an integer value and returns hours, minutes and seconds. Prompt the user to read the integer value, if entered value is not an integer should display invalid number. Indicate main program too. Go through the test cases to understand the input and output of the program. **Test cases:** Enter the time, completely in seconds: 8000 hours=2, minutes=13, seconds=20 Enter the time, completely in seconds: 4000 hours=1, minutes=6, seconds=40, Enter the time, completely in seconds: onetwentyfive Invalid number	10	L2, L3	CO1
	b	(i)Create an userdefined function **primeornot** which takes one argument and returns True if number is prime and False if number is not prime. primeornot(11) Output: True primeornot(10) Output: False	10	L3	CO1

		(ii)Write a python script to print all the prime numbers in the range 100			
	c	Explain the following (i)Interpreters and Compilers. (ii)Two Skills required for programmer	5	L2	CO1
		OR			
4	a	(i)What is an Boolean expression. Explain the various comparison and logical operators with short description and example for each.	10	L2, L3	CO1
	b	(i)Explain the concept of type conversion functions and math functions in python with examples (ii)Create a user defined function mysin(), which accepts x in radians and returns mysin(x) values between -1 to 1. Use taylor's series to compute mysin(x), take fact(n) till n=13 $$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots$$ **Test cases:** mysin(3.14156) 0 **Note:** Answer may not be exact zero mysin(1.785) 1 **Note:** Answer may not be exact one	10	L2, L3	CO1
	c	Write a short note on building blocks of the program	5	L2	CO1

Prepared by: Shivaprasad 11/5/22

HOD