

Reg. No.:

Name :



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TERM END EXAMINATIONS (TEE) – December 2021- January 2022

Programme	: B.Tech	Semester	:	Fall 2021-22
Course Name	: Introduction to Problem Solving and Programming	Code	:	CSE1021
Faculty Name	: Dr. Manickavasagam B	Slot/ Class No.	:	B11+B12+B13 / 0072
Time	: 1 ½ hours	Max. Marks	:	50

Answer ALL the Questions

Q. No.	Question Description	Marks
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PART - A (30 Marks)

1 (a) Draw the flow chart for the given program.
var = 100
if var < 200:
 print "Expression value is less than 200"
 if var == 150:
 print "Which is 150"
 elif var == 100:
 print "Which is 100"
 elif var == 50:
 print "Which is 50"
 elif var < 50:
 print "Expression value is less than 50"
else:
 print "Could not find true expression"
print "Good bye!"

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OR

(b) Create a Python programme that prompts the user for values and defines a function that converts one metric value to another and returns the converted values according to the options.

```

*****
OPERATION          OPTIONS
*****
Kilometre TO meter    1
Miles TO Kilometer    3
Inches TO Feet        5
Feet TO Yard          7

```

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- 2 (a) This program allows users to enter the number of subjects along with marks obtained in all subjects. That is, this program finds and prints grades of the student based on marks obtained in N subjects.

The grade must be calculated as per the following rules:

Average Mark	Grade
91-100	A1
81-90	A2
71-80	B1
61-70	B2
51-60	C1
41-50	C2
33-40	D
21-32	E1
0-20	E2

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OR

- (b) Find the factorial number for a given value

Example

Input: 362880

Output: 362880 is a factor of 9

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Input: 3628900

Output: 3628900 is lies between 10! and 11!

- 3 (a) Write a program that prompts the user to enter the maximum value of range and display the values in the triangle format and use any notation for the white space to make a complete triangle.

Example:

Enter the maximum range: 37

```

                                     1
                                   3  2
                                 6  5  4
                               10 9  8  7
                             15 14 13 12 11
                           21 20 19 18 17 16
                         28 27 26 25 24 23 22
                       36 35 34 33 32 31 30 29
                     *  *  *  *  *  *  *  * 37

```

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OR

- (b) Write the python program that gets string input from users and convert the ASCII values for the characters. Find the sum of all ASCII values' factors.

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PART - B (20 Marks)

- 4 Write a python program that allows the user to enter the statement and create multiple functions to convert the given statement into the following format.
Text = "Hello, And Welcome To My World!"

1. Print : Hello, and welcome to my world.
2. Print : hello, and welcome to my world!
3. Print the statement after 20 whitespace
4. Print the statement in the following format (split).

Hello,
And
Welcome
To
My
World!

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- 5 Write a python program that prompts the user to enter integer values (minimum 10 inputs) for each of two lists (E.g. A and B), applies the following relational algebra among the list and store the results in different tuples and print it in reverse order.

- a) $A \cup B$
- b) $A - B$

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