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TERM END EXAMINATIONS (TEE) – May 2021			
Programme	: **B.Tech-Computer Sceince and Engineering**	**Semester**	: **Winter 2020-2021**
Course Name	: **Object Oriented Programming with C++**	**Course Code**	: **CSE2001**
Faculty Name	: **Dr. K Venkatachalam**	**Slot / Class No**	: **E11+E12+E13/0280**
Time	: **1½ hours**	**Max. Marks**	: **50**

Answer ALL the Questions

Q. No.	Question Description	Marks

PART - A (30 Marks)

1 (a) Define a class TEST in C++ with following description: 10
Private Members
TestCode of type integer
Description of type string
NoCandidate of type integer
CenterReqd (number of centers required) of type integer
A member function CALCNTR() to calculate and return the number of centers as (NoCandidates/100+1)
Public Members
- A function SCHEDULE() to allow user to enter values for TestCode, Description, NoCandidate & call function CALCNTR() to calculate the number of Centres
- A function DISPTEST() to allow user to view the content of all the data members

OR

(b) Define function overloading. Write a C++ program to define three overloaded functions   10
to swap two integers, swap two floats and swap two doubles.

2 (a) Write short note on: 10
i)Iterators
ii)Containers
iii)Algorithm

OR

(b) Write a C++ program to create menu driven calculator that performs basic arithmetic   10
operations (add, subtract, multiply and divide) using switch case and functions. The
calculator should input two numbers and an operator from user. It should perform
operation according to the operator entered and must take input in given format.

<number 1> <operator> <number 2>

1. Input two numbers and a character from user in the given format. Store them
in some variable say *num1*, *op* and *num2*.
2. Switch the value of *op* i.e. switch(op).

3. There are four possible values of *op* i.e. `'+'`, `'-'`, `'*'` and `'/'`.
4. For `case '+'` perform addition and store result in some variable i.e. `result = num1 + num2`.
5. Similarly for `case '-'` perform subtraction and store result in some variable i.e. `result = num1 - num2`.
6. Repeat the process for multiplication and division.
7. Finally print the value of *result*.

3 (a) Define exception handling. Explain the use of try, catch and throw for exception handling in C++. **10**

<div align="center">OR</div>

(b) Define pure virtual functions. Write a C++ program to illustrate pure virtual functions **10**

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PART - B (20 Marks)

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4 Define a class REPORT with the following specification: **10**
Private members :

adno	4 digit admission number
name	20 characters
marks	an array of 5 floating point values
average	average marks obtained
GETAVG()	a function to compute the average obtained in five subject

Public members:

READINFO() function to accept values for adno, name, marks. Invoke the function GETAVG()

DISPLAYINFO() function to display all data members of report on the screen.

5 Explain the file operation functions in C++ to manipulate the position of file pointers in a random access file. **10**

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