Enrollment No......................................

Faculty of Engineering

End Sem (Odd) Examination Dec-2018

CA5EL01 Object Oriented Programming Paradigm/

OE00012 Object Oriented Programming

Programme: MCA   Branch/Specialisation: Computer Application

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1   i.   What will be the output of following program?   **1**

```
#include<iostream>
Using namespace std;
int main()
{
   int n=15;
   for( ; ; )
   cout<<n;
   return 0;
}
```

(a) Compilation Error   (b) 15
(c) Infinite Loop   (d) None of these

ii.   C++ is developed by   **1**
(a) Bjarne Stroustrup   (b) Denis Richi
(c) James Gossling   (d) Herbert Schildt

iii.   Which of the following operator cannot be overloaded?   **1**
(a) ++   (b) !   (c) ==   (d) ?:

iv.   Static members are initialized with __ automatically   **1**
(a) 0   (b) 1   (c) -1   (d) NULL

v.   Which is not valid access specifier in c++   **1**
(a) Public   (b) Private   (c) Internal   (d) Protected

vi.   Pure virtual functions are also called   **1**
(a) Do-nothing function   (b) Inline function
(c) Friend function   (d) Virtual function

vii.   Which symbol is used to create template class?   **1**
(a) < >   (b) { }   (c) [ ]   (d) ( )

viii.   Which of the following is sequence container?   **1**
(a) Set   (b) Stack   (c) Queue   (d) Dequeue

ix.   Which of the following is incorrect?   **1**
(a) Exceptions are caught using catch.
(b) The catch block must immediately follow the try block.
(c) Exceptions are errors that occur at compile time
(d) None of these

x.   Offset counted from current position using?   **1**
(a) ios::curr   (b) ios::cr   (c) ios::cur   (d) ios::current

Q.2   i.   What is prototype declaration of function?   **3**
ii.   Define various notation used in flowchart. Draw a flowchart to check number is Armstrong number or not.   **7**
OR   iii.   Explain features of OOP in detail.   **7**

Q.3   i.   Differentiate between type conversion and type casting   **3**
ii.   What is unary operator overloading? Explain with the help of program.   **7**
OR   iii.   Write a program to implement friend function in two classes.   **7**

Q.4   i.   Define abstract base class with an example.   **3**
ii.   What is virtual function? Explain it with the help of program.   **7**
OR   iii.   Write ambiguity in multiple inheritance and how it can be resolved.   **7**

Q.5   i.   Define sequence containers.   **3**
ii.   What is STL? Explain its components.   **7**
OR   iii.   What is template class with multiple parameter? Explain its implementation with the help of program.   **7**

Q.6   Write short note on any two:
i.   Exception handling mechanism   **5**
ii.   I/O stream   **5**
iii.   File modes   **5**

P.T.O.

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Q.1 i. What will be the output of following program? **1**
```
#include<iostream>
Using namespace std;
int main()
{
    int n=15;
    for( ; ; )
    cout<<n;
    return 0;
}
```
(c) Infinite Loop

ii. C++ is developed by **1**
(a) Bjarne Stroustrup

iii. Which of the following operator can not be overloaded? **1**
(d) ?:

iv. Static members are initialized with __ automatically **1**
(a) 0

v. Which is not valid access specifier in c++ **1**
(c) Internal

vi. Pure virtual functions are also called **1**
(a) Do-nothing function

vii. Which symbol is used to create template class? **1**
(a) < >

viii. Which of the following is sequence container? **1**
(d) Dqueue

ix. Which of the following is incorrect? **1**
(c) Exceptions are errors that occur at compile time

x. Offset counted from current position using? **1**
(c)ios::cur

Q.2 i. What is prototype declaration of function? **3**
Syntax Declaration	1 mark	
Description	2 marks	

ii. Symbols description 3 marks **7**
Flowchart making 4 marks

OR iii. features of OOP. With example **7**

Q.3 i. Type conversion 1.5 marks **3**
Type casting 1.5 marks

ii. Unary operator overloading definition 2 marks **7**
Program 5 marks

OR iii. Program 6 marks **7**
Output 1 mark

Q.4 i. Definition of Abstract base class. **2**

ii. Definition of virtual function 2 marks **8**
Program. 6 marks

OR iii. Writing ambiguity problem 2 marks **8**
Diagram 1 mark
Discussing with program of virtual base class 5 marks

Q.5 i. Definition of sequence containers 2 marks **3**
Diagram 1 mark

ii. Definition of STL 2 marks **7**
Its components description 5 marks

OR iii. Describing template class with multiple parameter 2 marks **7**
Program. 5 marks

Q.6 Write short note on : (any two)

i. Exception handling mechanism **5**
Diagram and keywords 1 mark
Description 4 marks

ii. I/O stream **5**
Diagram of I/O 1 mark
Description 4 marks

iii. File modes **5**
Writing modes 2 marks
Describing 3 marks

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