

Enrollment No.....



Faculty of Engineering
End Sem (Odd) Examination Dec-2017
CS2CO03 Object Oriented Technology

Programme: Diploma

Branch/Specialisation: CS

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 is use of \r in c 1
 (a) Used to insert a vertical tab.
 (b) Used to insert a tab.
 (c) Places cursor at the end of line.
 (d) Places cursor at the start of line.
- ii. Total number of keywords in C are 1
 (a) 30 (b) 32 (c) 48 (d) 132
- iii. Which of the following type of array is possible? 1
 (a) Int (b) Char (c) Float (d) All of these
- iv. The statement int **a is: 1
 (a) Illegal
 (b) Legal but meaningless
 (c) Syntactically and semantically correct
 (d) None of these
- v. What will be the output of following program 1

```
#include
main()
{
int x,y = 10;
x = y * NULL;
printf("%d",x);
}
```

 (a) Error (b) 0 (c) 10 (d) Garbage value

P.T.O.

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- vi. Continue statement used for: **1**
(a) To continue to the next line of code.
(b) To stop the current iteration and begin the next iteration from the beginning.
(c) To handle run time error.
(d) None of these.
- vii. By default the members of the structure are **1**
(a) Private
(b) Protected
(c) Public
(d) Access specifiers not applicable for structures.
- viii. A constructor can be virtual: **1**
(a) True (b) False
- ix. 'cin' is an ___ **1**
(a) Class (b) Object (c) Package (d) Namespace
- x. The default access specifier for the class members is **1**
(a) Public (b) Private (c) Protected (d) None of these
- Q.2 i. Why OOPS methodology is popular in real world. **2**
ii. What are advantages of Object Oriented Languages over Procedure Oriented Programming Languages? **3**
iii. Write application concepts of C++ in real world programming problems. **5**
- OR iv. What is formal argument & actual argument passing in function? **5**
- Q.3 Attempt any two:
i. Write a Programme in C++ to insert an integer Matrix (order 3x3) and print diagonal elements of matrix. **5**
ii. How to initialize one Dimensional char array? **5**
Insert an array as:

I	N	D	O	R	E
---	---	---	---	---	---

WAP to print elements in shorted order.
iii. Explain the use of array and structure with the help of C program. **5**

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- Q.4 i. What is string class? Write and explain at least 6 string functions with explanation. **4**
ii. Define function overloading with syntax in brief. Write a programme to find area of square, circle & rectangle using overloading method. **6**
- OR iii. What is inheritance? Discuss all types of inheritance with diagram. **6**
- Q.5 i. Write difference between protected and private keywords in respect of inheritance. **3**
ii. How to achieve Operator overloading in C++. Write a programme to add to complex number? **7**
- OR iii. What is an abstract class and Qualifier classes? Give examples for each? **7**
- Q.6 Write short note on any two:
i. Macros **5**
ii. Friend function **5**
iii. Enum & union syntax **5**

CS2CO03 Object Oriented Technology
Marking Scheme

Q.1	i. What is use of \r in c (c) Places cursor at the end of line.	1
	ii. Total number of keywords in C are (b) 32	1
	iii. Which of the following type of array is possible? (d) All of these	1
	iv. The statement int **a is: (b) Legal but meaningless	1
	v. What will be the output of following program #include main() { int x,y = 10; x = y * NULL; printf("%d",x); } (c) 10	1
	vi. Continue statement used for: (c) To handle run time error.	1
	vii. By default the members of the structure are (c) Public	1
	viii. A constructor can be virtual: (b) False	1
	ix. 'cin' is an ___ (d) Namespace	1
	x. The default access specifier for the class members is (b) Private	1
Q.2	i. OOPS methodology is popular in real world, Justification	2
	ii. Advantages of Object Oriented Languages over Procedure Oriented Programming Languages (At least 3 points : 1 * 3 = 3 marks)	3
	iii. Application concepts of C++ in real world programming problems. (At least 5 points : 1 * 5 = 5marks)	5

OR	iv. Formal argument & actual argument passing in function? (Definition and Syntax 2.5 marks each: 2.5 * 2 = 5 marks)	5						
Q.3	Attempt any two:							
	i. Programme in C++ to insert an integer Matrix (order 3x3) and print diagonal elements of matrix. (Correct program 5 marks)	5						
	ii. Initialize one Dimensional char array: 1 mark Insert an array as: <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 5px;">I</td> <td style="padding: 2px 5px;">N</td> <td style="padding: 2px 5px;">D</td> <td style="padding: 2px 5px;">O</td> <td style="padding: 2px 5px;">R</td> <td style="padding: 2px 5px;">E</td> </tr> </table> WAP to print elements in sorted order (Correct Program – 4 marks) .	I	N	D	O	R	E	5
I	N	D	O	R	E			
	iii. Explain the use of array and structure with the help of C program. (Definition, Syntax and example 2.5 marks each: 2.5 * 2 = 5 marks)	5						
Q.4	i. What is string class? Write and explain at least 6 string functions with explanation. (Definition – 1 mark, each function 0.5 mark)	4						
	ii. Define function overloading with syntax in brief. Write a programme to find area of square, circle & rectangle using overloading method. (Definition 2 marks, program – 4 marks)	6						
OR	iii. What is inheritance? Discuss all types of inheritance with diagram. (Definition 2 marks, types with diagram – 4 marks)	6						
Q.5	i. Write difference between protected and private keywords in respect of inheritance. (At least 3 points : 1 * 3 = 3 marks)	3						
	ii. How to achieve Operator overloading in C++. Write a programme to add to complex number? (Definition 2 marks, program – 5 marks)	7						
OR	iii. What is an abstract class and Qualifier classes? Give examples for each? (Definition 2 marks, program with example – 5 marks)	7						

- Q.6 Write short note on any two:
- i. Macros 5
(Definition 2 marks, syntax with example – 3 marks)
 - ii. Friend function 5
(Definition 2 marks, Program – 3 marks)
 - iii. Enum & union syntax 5
(Definition, Syntax with example 2.5 marks each: $2.5 * 2 = 5$ marks)
