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B. Tech. (Sem. III) (Main / Back) Examination, December - 2017
Computer Sc. & Engg.
3CS4A Object Oriented Programming
EE,EX,CS,IT

Time : 3 Hours**Maximum Marks : 80****Min. Passing Marks : 26**

Attempt any five questions, selecting one question from each unit.

All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.

*Use of following supporting material is permitted during examination.
 (Mentioned in form No. 205)*

1. _____ Nil 2. _____ Nil

UNIT - I

- 1 / (a) Define structure in C and how it is declared. Explain with suitable example. 8
- (b) How are structure element accessed using a pointer ? Which operator is used give example ? 8

OR

- 1 (a) Explain nested structure and its need with a suitable example. 8
- (b) How passing structure to function ? Give an example. 8

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UNIT - II

- 2 (a) Explain the concept of object oriented analysis with explanation of all steps of analysis. 8
- (b) What is the meaning of message passing ? Explain in-brief. 8

OR

- 2 (a) How we create and destroy object dynamically using new and delete operator discuss with example. 8
- (b) Write short note on constructors and destructors in C++. 8

UNIT - III

- 3 (a) What is type conversion in C++ ? How it is achieved in user defined data types ? 8
- (b) What is operator overloading ? Why do need operator overloading ? 8

OR

- 3 (a) What are the limitation of overloading unary increment / decrement operator ? Write a program to overload unary operator. 8
- (b) How we concatenate two string by (+) operator give suitable example. 8

UNIT - IV

4 / (a) What is inheritance ? What are the various forms of inheritance ?
Explain each with the help of examples.

10

6

(b) Define virtual function. Why we need it ?

OR

4 (a) Explain the term dynamic binding. How it is useful in OOPs ?

8

(b) Discuss abstract data type concept. How is an abstract class useful ?

8

UNIT - V

5 / (a) Design two classes to show the multiple inheritance. How does a object of derived class access the member of base class ?

8

(b) Write short note on Templates.

8

OR

5 (a) Explain the effect of using the access specifiers with class members on inheritance.

8

(b) Write short note on exception handling.

8