SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2018
(Supplementary/Improvement)
(CUCBCSS – UG)
(Core Course: Computer Science)
CC15U BCS2 B02 – OOP CONCEPTS AND DATA STRUCTURES USING C $^{++}$
(2015, 2016 Admissions)

Time: Three Hours   Maximum: 80 Marks

SECTION A
Answer *all* questions. Each question carries 1 mark.

1. The extraction operation in C^{++} is ………………

2. Define encapsulation.

3. What is syntax to define a class in C^{++}.

4. How to find location of a two dimensional array's $(i,j)^{th}$ stored in row major form element if base address and width is given?

5. ……………… Is an example for non linear data structure.

6. The complexity of quick sort algorithm is ………………

7. Each node in a linked list has two parts ……………… and ………………

8. ……………… points to current object in C^{++}.

9. The memory size needed for a int data type in C^{++} is ………………

10. How to define a destructor?

(10 x 1 = 10 Marks)

SECTION B
Answer *all* questions. Each question carries 2 marks.

11. What do you mean by a static function?

12. What are the features of a hash table?

13. What do you mean by merging?

14. What is the difference between new and delete operator?

15. How to perform evaluation of postfix expression?

(5 x 2 = 10 Marks)

SECTION C
Answer any *five* questions. Each question carries 4 marks.

16. Explain various loops in C^{++}?

17. Convert following arithmetic expressions to prefix and postfix form.

   a) A*(B*C)/D-E/F-(G*H)-J*K

   b) A+B-C*(D-E)/F*G

18. Explain binary searching technique?

19. Write C^{++} program to add two complex numbers using object and class?

20. Explain features of virtual base class in C^{++} using suitable example.

21. Explain insertion and deletion of a value from an linked list.

22. Explain features of friend function with example.

23. What do you mean by parameterized and default constructors?

(5 x 4 = 20 Marks)

SECTION D
Answer any *five* questions. Each question carries 8 marks.

24. Explain various operators in C^{++}.

25. Explain types of inheritance techniques with example.

26. Explain various stack operations.

27. Explain insertion and deletion operations to a circular queue with suitable code.

28. Explain with suitable example how operator overloading is performed.

29. Explain various Object Oriented Programming concepts.

30. Explain function overloading in C^{++} with example

31. Explain with suitable example and algorithm quick sorting technique?

(5 x 8 = 40 Marks)

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