Paper Code – Regular – U119-109 CB (ESE)
Backlog – U119-1010 A (BE-FS)

G.R. No.	

DECEMBER 2019 / ENDSEM

F. Y. B.TECH. (PROGRAM/CB/NCB) (SEMESTER –I/II)

COURSE NAME: Computer Fundamentals (CB)

COURSE CODE: CS10182B - CB

(PATTERN 2018)

Time: [2 Hours]   [Max. Marks: 50]

(*) Instructions to candidates:
1) Attempt Q.1, Q.2, Q.3, Q.4OrQ.5, Q.6 Or Q.7,Q.8 Or Q.9 and Q.10
2) Figures to the right indicate full marks.
3) Use of scientific calculator is allowed.
4) Use suitable data wherever required.

Q.1) a) Define Operating System and also Describe various functions of Operating System? [4]

OR

   b) Draw flowchart to find whether the number is even or not.   [4]

Q.2) a) Write a program to reverse a number such as if number is 123 then output will be 321   [4]

OR

   b) Write and explain syntax of following statement with suitable example for each i)if….else ii)switch statement   [4]

Q.3) a) Define term Time Complexity and explain how it get calculated using suitable example.   [6]

OR

   b) Compare given sorting algorithms: Bubble sort and Selection sort and Insertion Sort [6]

Q.4) a) Write C program to swap two numbers using call by reference and call by value?   [5]
   b) Write a function to find the largest element of 3 by 3 matrix   [5]

OR

Q.5) a) What is Pointer? Explain with suitable example?   [5]
   b) Write C program to find out factorial using recursion function?   [5]

Q.6) a) Explain Private access specifier with example   [5]
   b) What is constructor? Write an example to describe types of constructor   [5]

OR

Q.7) a) What is use of destructor explain it with suitable example.   [5]
   b) Explain any five important feature of Object Oriented Programming   [5]

Q.8) a) Describe the concept of function overloading with suitable example.   [5]
   b) What is an embedded system? What are the characteristics of embedded system?   [5]

OR

Q.9) a) With the help of suitable example explain use of inline function in C++.   [5]

b) Explain multiple inheritance with suitable example. [5]

Q.10) a) If a function can perform more than 1 type of tasks, where the function name [1] remains same, which feature of OOP is used here?
   - A. Encapsulation   B. Inheritance
   - C. Polymorphism   D. Abstraction

b) Constructor is executed when _____. [1]
   - A. an object is created
   - B. an object is used
   - C. a class is declared
   - D. an object goes out of scope.

c) Which of the following type of data member can be shared by all instances of its [1] class?
   - A. Public
   - B. Inherited
   - C. Static
   - D. Friend

d) Which of the following statements is correct when a class is inherited privately? [1]
   - A. Public members of the base class become protected members of derived class.
   - B. Public members of the base class become private members of derived class.
   - C. Private members of the base class become private members of derived class.
   - D. Public members of the base class become public members of derived class.

e) Which of the following two entities (reading from Left to Right) can be connected [1] by the dot operator?
   - A. A class member and a class object.
   - B. A class object and a class.
   - C. A class and a member of that class.
   - D. A class object and a member of that class.

f) How can we make a class abstract? [1]
   - A. By making all member functions constant.
   - B. By making at least one member function as pure virtual function.
   - C. By declaring it abstract using the static keyword.
   - D. By declaring it abstract using the virtual keyword.

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