

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination-II, May, 2019

B. Tech. in Computer Science Engineering (IBM) Backlog, Semester II

Roll No.....

CSESP201 : Software Foundation Programming using C++

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
 2. Assume suitable data wherever required and mention it clearly.
 3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
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| Q.1 | Design a class named Distance that has data member feet as integer and inches as float. The class has the following member functions: <ul style="list-style-type: none">- void set(int, float) to give value to object- void disp() to display distance in feet and inches- Distance add(Distance) to sum two distances & return distance- Parameterized constructor that takes distance in inches as its only argument and initialize the feet and inches data members with appropriate values. | 15 |
| Q.2 | Illustrate the various methods available to detect the end of file. Design a single manipulator to provide a following output specification for printing float value. <ul style="list-style-type: none">i) Three position precisionii) Trailing zeros shown are display + sign as first position. | 10 |
| Q.3 | Describe the mechanism of accessing data members and member functions in the following cases: <ul style="list-style-type: none">(a) Inside the main program.(b) Inside a member function of the same class.(c) Inside a member function of another class. | 15 |
| Q.4 | Create a function template to display the absolute value of an argument of basic type. Using this function template, write a program to display the absolute value of a variable of type int, float, and double. | 10 |
| Q.5 | Handle exception (in C++) in case of buffer overflow while adding 10 integer values inside array and access the 11 th position which doesn't exist. | 10 |
| Q.6 | Explain the utility of XML. Make a XML document – club.xml – populate it with club category, member name, duration. | 10 |

Q.7	Design two classes named Rupees and Dollars to represent currency in Indian system and American system respectively. Write conversion routines for converting currency from one system to another system using both the features - when conversion facility is built in source and when conversion facility is built in destination class. Use concept of operator overloading.	15
Q8	Design a class named Date with day, month and year (all of type int) as its data members declared in private section of the class. Define the following constructors for the class: (i) Zero argument constructor that initialize the day, month, and year data members to 12, 3, and 1993 respectively. (ii) Parameterized constructor which takes three arguments, all of which are declared with default values as 12, 10 and 2000 respectively, and initializes the day, month and year data members with corresponding arguments. (iii) Copy Constructor.	15