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**C Reg. No. :**

**Question Paper Code: 59271**

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| B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019Open electiveCivil Engineering15UCS971– PROGRAMMING WITH C++ (Common to ECE, EEE, EIE, Mechanical, IT, Chemical)(Regulation 2015) |
| Duration: Three hours Maximum: 100 Marks |
| Answer ALL QuestionsPART A - (5x 1 = 5 Marks) |
| 1. | --------- is the standard input stream | CO1- R |
|  | (a) cerr | (b) cout | (c) cin  | (d) clog |
| 2. | What does your class can hold?  | CO2- R |
|  | (a) data | (b) functions  | (c) both a & b | (d) none of the mentioned |
| 3. | Which of these operators can be overloaded?  | CO3- R |
|  | (a) Scope resolution | (b) size of c. new operator |
|  | (c) Conditional operator | (d) None of the above |
| 4. | If a \_\_\_\_\_\_\_\_\_\_\_\_\_\_is defined in the base class, it need not be necessarily redefined in the derived class. | CO2- R |
|  | (a) member function | (b) virtual function | (c) static function | (d) real function |
| 5. | An exception is caused by a ---------------  | CO3- R |
|  | (a) Syntactical error | (b) logical error | (c) Run-time error  | (d) Semantic error  |
| PART – B (5 x 3= 15 Marks) |
| 6. | Define entry controlled looping statements | CO1-U |
| 7. | Differentiate classes and objects.  | CO2- R |
| 8. | List out the operators which cannot be overloaded | CO3- R |
| 9. | List out the rules for Pure virtual functions. | CO4- R |
| 10. | Draw a schematic diagram for throwing an exception outside the try block.  | CO5- R |
|  | PART – C (5 x 16= 80Marks) |
| 11. | (a) | (i) Write a C++ Program to find complex addition using scope resolution operator.  | CO1- U | (8) |
|  |  | (ii) Explain ternary operator & logical operators with an example. | CO1- U | (8) |
|  |  | Or |  |  |
|  | (b) | (i) Illustrate call by value with an example.  | CO1- U | (8) |
|  |  | (ii) Write short notes on switch, break & continue. | CO1- U | (8) |
|  |  |  |  |  |
| 12. | (a) |  Write a C++ program to create a class “Student”. To calculate average of 10 student marks using classes and objects | CO2- U | (16) |
|  |  | Or |  |  |
|  | (b) | Write a C++ program to calculate square and cube of a given number using inline function | CO2- U | (16) |
|  |  |  |  |  |
| 13. | (a) |  Write a C++ program to print Fibonacci series using default constructors | CO3- App | (8) |
|  |  | (ii) Explain destructors with an example. | CO3- U | (8) |
|  |  | Or |  |  |
|  | (b) | (i) Writ Write a C++ program to find subtraction of two numbers using operator overloading.  | CO3- App | (8) |
|  |  | (ii) Explain in detail about assignment operator overloading.  | CO3- U | (8) |
|  |  |  |  |  |
| 14. | (a) | (i) Write a C++ program to find sum of three numbers using Multilevel Inheritance.  | CO4- App | (16) |
|  |  | Or |  |  |
|  | (b) | (i) Explain in detail about pointers to objects with an example. | CO4- U | (8) |
|  |  | (ii) Write a C++ program to perform virtual functions. | CO4- App | (8) |
|  |  |  |  |  |
| 15. | (a) | (i) Discuss exception handling mechanism in detail. | CO5- U | (8) |
|  |  | (ii) Write a C++ program to find the equivalent character of a given ASCII value.  | CO5- U | (8) |
|  |  | Or |  |  |
|  | (b) | Describe the various methods of performing formatted & Unformatted stream I/O operations. | CO5-U | (16) |