|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |

**C Reg. No. :**

**Question Paper Code: 59271**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019  Open elective  Civil Engineering  15UCS971– PROGRAMMING WITH C++  (Common to ECE, EEE, EIE, Mechanical, IT, Chemical)  (Regulation 2015) | | | | | | | | | | | | | |
| Duration: Three hours Maximum: 100 Marks | | | | | | | | | | | | | |
| Answer ALL Questions  PART 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) |