**20EC204/CS02**

**Hall Ticket Number:**

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| **I/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **October, 2021** | **Electronics and Communication Engineering** | | |
| **Second Semester** | **Programming with C++** | | |
| **Time:** Three Hours | | **Maximum: 7**0 Marks | |
| *Answer Question* ***No. 1*** *Compulsorily.* | | | (14X1 = 14 Marks) |
| *Answer* ***ANY ONE*** *question from each* ***Unit.*** | | | (4X14=56Marks) |

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| 1. Answer the following. (14X1=14 Marks) | | | | | |
|  | a) | Why do we need preprocessor directive #include<iostream> | CO1 | |  |
|  | b) | List any two applications of C++. | CO1 | |  |
|  | c) | What is reference variable? | CO1 | |  |
|  | d) | State the use of scope resolution operator in C++ | CO1 | |  |
|  | e) | How to achieve function overloading? | CO2 | |  |
|  | f) | What are default arguments? | CO2 | |  |
|  | g) | Write the syntax for the inline function. | CO2 | |  |
|  | h) | What are the characteristics of member function? | CO2 | |  |
|  | i) | Give the order of calling constructors. | CO3 | |  |
|  | j) | Write the syntax of operator function. | CO3 | |  |
|  | k) | List the operators that cannot be overloaded. | CO3 | |  |
|  | l) | What is meant by dynamic polymorphism? | CO4 | |  |
|  | m) | What is virtual base class? | CO4 | |  |
|  | n) | Define inheritance? | CO4 | |  |
| **Unit - I** | | | | | |
| 2. |  | Explain loop control structures available in C++ with examples. | CO1 | **14M** | |
|  |  | **(OR)** |  |  | |
| 3. | a) | State the important features of object oriented programming. | CO1 | **7M** | |
|  | b) | Compare object oriented system with procedure oriented system. | CO1 | **7M** | |
| **Unit - II** | | | | | |
| 4. | a) | What is class? Explain class specification with an example. | CO2 | **7M** | |
|  | b) | Write a C++ program to demonstrate a function with default arguments. | CO2 | **7M** | |
|  |  | **(OR)** |  |  | |
| 5. | a) | What is friend function? Write the characteristics of friend function. | CO2 | **7M** | |
|  | b) | Write a C++ program to find the area of circle and square using function overloading. | CO2 | **7M** | |
| **Unit - III** | | | | | |
| 6. |  | Explain different types of constructors with an example. | CO3 | **14M** | |
|  |  | **(OR)** |  |  | |
| 7. | a) | What is meant by operator overloading? List out the rules for overloading operators. | CO3 | **7M** | |
|  | b) | Write a C++ program to overload binary operator + with a friend function. | CO3 | **7M** | |
| **Unit - IV** | | | | | |
| 8. | a) | Explain this pointer with suitable example. | CO4 | **7M** | |
|  | b) | Discuss the creation and usage of pointers to derived class. | CO4 | **7M** | |
|  |  | **(OR)** |  |  | |
| 9. |  | Explain different types inheritances in C++ with suitable examples | CO4 | **14M** | |

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