

JECRC UNIVERSITY
MCA II SEM
COMPETITIVE CODING USING C++
ASSIGNMENT QUESTION

Q1. Write a C++ program to print following pattern

```
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```

Q2. Write a C++ program to print following pattern

```
      *
     * * *
    * * * * *
   * * * * *
  * * * * *
 * * * * *
* * * * *
 * * * * *
  * * * * *
   * * * * *
    * * * * *
     * * *
      *
```

Q3. Explain this pointer in C++

Q4. Write a program that defines a class 'Time' that store time values as hours, min and sec respectively. Perform operation $t3=t1+t2$ on its object

Q5. Write a program to overload unary pre and post increment

- Q6. Explain dynamic constructor. Write a program to initialize array using dynamic constructor
- Q7. Write a program to find area of Rectangle, circle and square using Function Overloading.
- Q8. What is Constructor and destructor? Explain various type of Constructor. Is it Mandatory to use Constructor in a class? Justify it.
- Q9. Describe Operator overloading. List the operators which cannot be overloaded. Create a class to perform matrix addition using operator overloading.
- Q10. What is Friend Function? Write a program to swap private data of two different class.
- Q11. Write a program that defines a class 'Money' that store time values as Rupee and Paisa respectively. Perform operation $M3 = M1 + M2$ on its object
- Q12. Write a C++ program to add two complex number by overloading binary plus (+) operator.
- Q13. What is static variable and static function?
- Q14. What is Inheritance? Explain various types of inheritance giving an example for each
- Q15. Explain multilevel Inheritance in detail with suitable C++ code
- Q16. Explain Virtual Base class with suitable C++ code
- Q17. Explain Virtual Function with suitable C++ code
- Q18. Explain all the access specifiers with help of an example
- a). private
 - b). protected
 - c). public
- Q19. Explain scope resolution operator with an example
- Q20. What is destructor? Explain it with help of a program
- Q21. Write a program to demonstrate the runtime polymorphism.

Q22. Write a program to demonstrate the use of function template.

Q23. Write a program to copy the contents of a file to another file

Q24. Write a program to demonstrate the use of class template.

Q25. Write a program to demonstrate the exception handling.