Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **12EI212** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **C++ AND DATA STRUCTURES** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | Define Data structures. | 1 |
| 2. | If an element is pushed inside a full stack it will \_\_\_\_\_\_\_\_\_\_\_. | 1 |
| 3. | Pivot element is selected in which sort. | 1 |
| 4. | The first function executed during the creation of an object is called its \_\_\_\_\_\_\_\_\_\_\_. | 1 |
| 5. | List the types of constructors. | 1 |
| 6. | Member Functions can be defined outside the Class by using \_\_\_\_\_\_\_\_\_ operator. | 1 |
| 7. | Eating of different food by humans is an example of \_\_\_\_\_\_\_\_\_\_\_overloading. | 1 |
| 8. | Pointer variables store \_\_\_\_\_\_\_\_\_\_\_of another variable. | 1 |
| 9. | \_\_\_\_\_\_\_\_\_\_\_member functions are not attached to any particular object. | 1 |
| 10. | A pure virtual function is one with the expression \_\_\_\_\_\_\_\_\_ . | 1 |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11. | List some applications of Stack. | 3 |
| 12. | Write the result of the first pass for the following input sequence “5 1 4 2 8" using Bubble sort. | 3 |
| 13. | Write notes on constructor with example. | 3 |
| 14. | What is Inheritance? | 3 |
| 15. | Give an example for abstract class. | 3 |

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|  | **PART C(5 X 15= 75 MARKS)** | | |
| 16. |  | Explain in detail about the operations of Queue. | 15 |
|  |  | (OR) |  |
| 17. |  | With suitable example explain deletion operation in Binary search Tree. | 15 |
| 18. |  | Describe the Merge sort with example. | 15 |
|  |  | (OR) |  |
| 19. |  | Write the Binary search procedure and explain its function in detail. | 15 |
| 20. |  | How will you pass objects as function arguments? Explain with example. | 15 |
|  |  | (OR) |  |
| 21. |  | Explain Two Dimensional array with example. | 15 |
| 22. |  | Write a C++ program to perform addition, subtraction and multiplication of complex numbers using operator overloading. | 15 |
|  |  | (OR) |  |
| 23. |  | Explain different types of Inheritance with example. | 15 |
| 24. | a. | Write notes on Abstract Classes and Pure Virtual Functions. | 8 |
| b. | Explain Friend function with example. | 7 |
| (OR) | | | |
| 25. | a. | Write notes on ‘This’ pointer. | 8 |
| b. | Write in detail about Stream Errors. | 7 |