

B.E. (Electronics Engineering / Electronics Telecommunication Engineering /
Electronics Communication Engineering) Third Semester (C.B.S.)
Object Oriented Programming & Data Structure

P. Pages : 2

Time : Three Hours



NRJ/KW/17/4355/4360

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Illustrate your answers whenever necessary with the help of neat sketches.
 9. Use of non programmable calculator is permitted.

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|-----------|----|---|---|
| 1. | a) | Explain data types in C++ & operators in C++. | 7 |
| | b) | List and explain the types of constructor. | 6 |
| OR | | | |
| 2. | a) | Write a short note on exceptional Handling. | 7 |
| | b) | Describe with example the elements of OOPs. | 6 |
| 3. | a) | Explain unary and binary operators with an example. | 8 |
| | b) | What is function overloading. | 5 |
| OR | | | |
| 4. | a) | Explain the rules which are used to overload operators. | 6 |
| | b) | Explain genetic programming. | 7 |
| 5. | a) | Explain multilevel inheritance with on example. | 9 |
| | b) | What is the use of virtual function. | 5 |
| OR | | | |
| 6. | a) | Write a program using multiple inheritance to get the data from two base classes and display it by using are derived class. | 8 |
| | b) | Write a short note on hybrid inheritance. | 6 |
| 7. | a) | WAP in C++ to implement the bubble sort technique. | 8 |
| | b) | Explain binary search with on example. | 5 |

OR

8. a) Perform Quick Sort for the following numbers. 54, 26, 93, 17, 77, 31, 44, 55, 20 **6**
- b) Explain selection sort technique with an example. **7**
9. a) WAP to implement stack using linked list. **8**
- b) Explain Queue with example. What operation can be performed with it? **6**

OR

10. a) Compare **6**
- a) Stack and Queue
- b) Linked list and array.
- b) What is linked list? What operations are performed on linked list? **8**
11. a) Discuss representation of binary tree with an example. **6**
- b) WAP to create a binary tree. **7**

OR

12. a) Construct a binary tree **7**
- In order : 20, 30, 40, 25, 50, 125, 175, 150, 100
- Pre order: 20, 25, 30, 40, 100, 125, 150, 175
- b) Explain the following: **6**
- a) Inorder
- b) Perorder
- c) Postorder traversal
