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OR

6. a) What is pointer? state its advantages. Also give details of pointer arithmetic. 7
- b) Write a program to print greatest numbers in an array using pointers. 7
7. a) Write a program in c-to draw five concentric circles and fill the inner most circle with BLUE color. 7
- b) What is the difference between graphic mode & text mode. 3
- c) Explain Initgraph () in detail, using example. 3

OR

8. a) Explain video Adopter in detail. 7
- b) Explain following functions using example. 6
- i) moverel () ii) moveto ()
9. a) Compute time and space complexity for bubble sort method. 7
- b) Prove the following by Mathematical Induction. 6
- $$0^2 + 1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}$$

OR

10. a) Explain basic models of computation. 7
- b) Explain the following. 6
- i) Iterative Vs Recursive process.
- ii) Functional programming.
11. a) Create a class rectangle with private data members. Length & breadth and public member function, get data () to get length & breadth, Also a member function area () to print area of rectangle, write main () function that create an object of rectangle and print area of rectangle. 6
- b) Write short notes on. 4
- i) Assertion & loop invariant. 4
- ii) Top down & bottom up design. 3

OR

12. a) Explain object-oriented programming features in details. 8
- b) Differentiate between structured programing and object oriented programming. 5



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It's hard to beat a person who never gives up.

~ Babe Ruth

