

Reg. No. :

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Question Paper Code : Q 2719

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

First Year — Annual Pattern

Automobile Engineering

GE 1X02 — COMPUTER PROGRAMMING

(Common to all Branches Except Metallurgical Engineering/Textile Technology
(Textile Chemistry))

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. On which basis computers are classified into different categories? Also give the classification.
2. What are the four phases of the Information Processing Cycle?
3. Differentiate algorithm from program.
4. Why 'C' is called as a middle-level language?
5. What is the purpose of the 'for' statement? How does it differ from the 'while' statement?
6. Distinguish between a function declaration and a function definition with an example.
7. In what way does an array differ from an ordinary variable?
8. Define Pointer. Also give the declaration of a pointer variable.
9. What are the possible ways that structures can be passed to the functions?
10. What are the advantages of using linked list?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the various phases of program development cycle as applied to software development. (10)
- (ii) Differentiate System Software and Application Software. State any four application software. (6)

Or

- (b) Describe that how to search the Web successfully using various search tools. (16)
12. (a) Explain the different categories of 'C' operators with relevant example. (16)

Or

- (b) Write a 'C' program for the following : (8 + 8)
- (i) Find the prime numbers from 1 to 300.
- (ii) Find a factorial of a given number using the for loop.
13. (a) Write a function for the following : (16)
- (i) String Concatenation
- (ii) String Comparison
- (iii) String Reverse
- (iv) String Copy.

Or

- (b) Write a 'C' program to read 3 × 3 matrices and find their sum and difference. (16)
14. (a) (i) Write a 'C' program using pointers to read in an array of strings and print the strings in alphabetical order. (8)
- (ii) Describe the operations that can be performed on pointers. (8)

Or

(b) (i) Write a 'C' program to accept roll number, name, mark1, mark2, mark3 and total for 3 students using array of structure. Calculate the total mark of each student and print the details. (8)

(ii) Explain "structures within structures" with suitable example. (8)

15. (a) Explain the implementation of singly linked list with the followings :

(i) insertion (8)

(ii) deletion. (8)

Or

(b) Write a 'C' program to implement queue using linked list. (16)