

# FYIT/SEM I/REG/Programming Principle with C

Time: 2½ hrs.

Marks:75

Note:

1. All questions are compulsory with internal choice.
2. Draw neat diagrams wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 Answer the following (any Three) (15)**
- (a) What is an algorithm? Write an algorithm to accept two numbers and display its product.
  - (b) Draw the flowchart to check if the year entered is leap or not.
  - (c) Explain scanf() functions with suitable example.
  - (d) Write a short note on arithmetic and relational operators.
  - (e) Write an algorithm and draw flowchart for sum of 1 to 5 numbers.
  - (f) Write an algorithm and draw flowchart to compute the addition of digits of a given number
- Q.2 Answer the following (any Three) (15)**
- (a) What is loop? Explain for loop with its syntax and suitable example.
  - (b) Write a program in C to calculate the factorial of a given number.
  - (c) Illustrate the use of goto and break statement.
  - (d) Explain switch-case statement with suitable example.
  - (e) Write a program in C to print the Floyd's triangle.
  - (f) Write a program in C to input an alphabet and check whether it is vowel or consonant using switch case.
- Q.3 Answer the following (any Three) (15)**
- (a) What is function? Explain with suitable example.
  - (b) Explain any two mathematical functions.
  - (c) Write a program to demonstrate global data.
  - (d) Explain call by value parameters used in function.
  - (e) Write a recursion? How to find factorial of a number using recursion in C program.
  - (f) Write a C program to input two numbers from user and find maximum of the given numbers using function.
- Q.4 Answer the following (any Three) (15)**
- (a) What is an array? Explain single dimensional array.
  - (b) Write a C program to read and display the elements of 3x3 matrix.
  - (c) Explain strlen() and strcat() string functions with suitable example.
  - (d) What is pointer? Explain in brief.
  - (e) Write a C program to add any five numbers using single dimensional array.
  - (f) Which are the dynamic memory allocation operators?
- Q.5 Answer the following (any Three) (15)**
- (a) What is structure? Explain with suitable example.
  - (b) Write a program to copy the contents of the file from one file into other.
  - (c) Explain the types of errors used in C.
  - (d) Explain the functions used for file mangement.
  - (e) Write a program to print the structure using
    - Title
    - Author
    - Subject
    - Book IDPrint the details of two students
  - (f) Explain command line arguments used in file system.

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