

S.D.E.

B.C.A. (2004 COURSE SEM- I : WINTER - 2017

SUBJECT : ALGORITHM AND PROGRAM DESIGN

Day : Wednesday  
Date : 13/12/2017

W-2017-4148

Time : 10.00 AM TO 1.00 PM  
Max. Marks: 80

---

N. B. :

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Answers to both the sections should be written in the **SEPARATE** answer books.
- 

**SECTION - I**

- Q.1** Write a C program to read three numbers. Calculate maximum and minimum of three numbers. (10)
- Q.2** What is sorting? Write the types of various sorting techniques. (10)
- Q.3** What is an Algorithm? Trace the algorithm for prime numbers. (10)
- Q.4** What is structured programming? Give the benefits of structured programming. (10)
- Q.5** Define the following terms with an example : (10)
- a) Pointer
  - b) Flow Chart
  - c) Array
  - d) Fibonacci series
  - e) Recursion
- Q.6** Write a program in C to calculate LCM of given numbers (Assume appropriate data) (10)
- Q.7** Write a short note on the following : (10)
- a) Structured programming
  - b) Functions with arguments

**SECTION - II**

- Q.8** Design an algorithm and write a menu driven program in C to calculate area of circle and area of rectangle. (15)
- Q.9** Write a Pseudo code and flow chart to accept number to check whether it is even or odd and trace the output. (15)
- Q.10** Write the scope of 'C' language, its features and application area with various variables and data types. (15)

\* \* \*