

**B. Tech. SEM -I (Computer Science & Business Systems) (CBCS  
(2018 Course) : WINTER - 2018  
SUBJECT: FUNDAMENTALS OF COMPUTER SCIENCE**

Day: Thursday  
Date: 29/11/2018

**W-2018-2257**

Time: 10.00 AM To 01.00 PM  
Max Marks. 60

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**N.B.**

- 1) All questions are **COMPULSORY**
  - 2) Figures to right indicate **FULL** marks.
  - 3) Draw neat and labelled diagram **WHEREVER** necessary.
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**Q.1** Define an algorithm? Write an algorithm and draw flowchart for Fibonacci series. (10)

**OR**

Explain following

- |                        |                              |
|------------------------|------------------------------|
| i) Operator precedence | ii) Order of evaluation      |
| iii) Bitwise operator  | iv) Rule for variable naming |

**Q.2** i) Illustrate with example statement and blocks with scope. (10)  
ii) Write a program to check whether given number is palindrome or not.

**OR**

Write a program for following patterns

- |    |           |     |         |
|----|-----------|-----|---------|
| i) | 1         | ii) | *       |
|    | 2 2       |     | * *     |
|    | 3 3 3     |     | * * *   |
|    | 4 4 4 4   |     | * * * * |
|    | 5 5 5 5 5 |     |         |

**Q.3** Define function? Illustrate with suitable example with its advantages? (10)

**OR**

Write a note in

- |                 |                |                     |
|-----------------|----------------|---------------------|
| i) Preprocessor | ii) Scope rule | iii) Initialization |
|-----------------|----------------|---------------------|

**Q.4** Write a note on (10)  
i) Command Line arguments      ii) Pointer arithmetics

**OR**

Define Array? Describe different types of array with suitable example.

**Q.5** Write a program for following I/O operations: (10)  
i) File Read      ii) File write

**OR**

- i) Explain difference between structures and Arrays
- ii) Write a note on :
  - a) Unions
  - ii) Typedef
  - iii) Bit – field

**Q.6** Explain file Descriptor in UNIX system Interface. (10)

**OR**

Define following terms:

- |              |                       |
|--------------|-----------------------|
| i) Debugging | ii) Make file Utility |
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