

(Following Roll No. to be filled by candidate)

11501390443

Roll No.

B.Tech.

FIRST SEMESTER EXAMINATION 2015-16

ECS101

COMPUTER CONCEPTS AND PROGRAMMING IN C

Max. Marks: 100

Time: 3 Hours

Note: Attempts all Questions. All Questions carry equal marks.

1. Attempt any four parts of the following.

[4x5]

- Explain the difference between procedural languages and object oriented language.
- What the features are of object oriented language.
- Convert the given number to
  - (123.65)<sub>8</sub> to decimal
  - (832A)<sub>16</sub> to binary
- Explain two's complement to perform binary subtraction of given numbers a subtract 1101 from 1101.
- Explain (n's) and (n-1)'s complement of

- Binary
- Decimal
- Octal

2. Attempt any four parts of the following.

[4x5]

- Explain user defined, derived and built in data types with their syntax.
- Write a program to convert the data types of a variable.
- Explain expressions and their types
- Explain operators according to their precedence and their associatively.
- Write short note on i) automatic register, ii) static variable, iii) global variable

3. Attempt any **FOUR** parts of the following.

[4x5]

- write a function using reference variables as arguments to swap values of a pair of integers
- Write a program to print following outputs

1

22

333

4444



- e. Explain the syntax of control structures
- d. Explain the difference between i) call by values, ii) call by reference
- e. Explain Recursion and iteration by example

4. Attempt any **FOUR** parts of the following.

[4x5]

- a. Write a function to read a matrix of  $m \times n$  From Keyboard
- b. How will a list be created using pointers
- c. Write a program to add elements of two 383 matrix
- d. Write a program using structure
- e. Write a program to use pointers as function arguments

5. Attempt any four of the following.

[4x5]

- a. Explain
  - i. ifstream
  - ii. ofstream
  - iii. fstream
- b. Difference between
  - i. put() and write()
  - ii. get() and getline() and read()
- c. Write macros
- d. Write a program to read a text file
- e. Write a program to find an element in an array?