

Paper Id: 1 1 0 2 3 1

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Roll No.

## B.Tech. (SEM-II) THEORY EXAMINATION 2017-18 **COMPUTER SYSTEM & PROGRAMMING IN C**

Time: 3 Hours

Total Marks: 70

**Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

## **SECTION A**

#### 1. Attempt all questions in brief.

a. What is token in 'C' language?

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- b. What do you mean by formatted output in C language? Explain with example.
- c. What is the use of **fseek()** function in files. Write its syntax?
- d. Write down the output of the following.
  - main() int i=1; for(;;) ł printf("%d",i); if(i==7)break; }
- Explain function prototype? Why is it required? e.
- f. What are subscripts? How are they specified?
- g. Write the use of putchar() and getchar().

# **SECTION B**

#### 2. Attempt any three of the following:

- Write a program in C to find the largest number of elements in 4\*4 matrix. a.
- Explain the syntax and use of the following directives with examples: b.
  - (i) #ifdef (ii) #undef (iii)#pragma (iv) #include
- Write short note on: c.
  - (a) Top down program development approach.
  - (b) Differentiate Structure and Array.
- A Write a Recursive program in "C" language to print Fibonacci series. d.
- e. What is algorithm? What are the main steps followed in the development of an algorithm? Write an algorithm for sum of digits in a given number.

## **SECTION C**

#### 3. Attempt any *one* part of the following:

- Describe Compiler, interpreter, assembler? Write the names of compiler that (a) are used in c programming.
- (b) Convert the following:

(i) 
$$(0110110.1100)_2 = ()_8$$

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### $7 \ge 1 = 7$

 $7 \ge 3 = 21$ 

 $2 \ge 7 = 14$ 

(ii) (74 67)10	r.co =	$O_{16}$
(iii)(AB.CD) <sub>16</sub>	=	$0^{10}$
(iv)(EFE.45) <sub>16</sub>	=	()2
(v) (576.4)10	=	)6
(vi)(1234.7)8	=	()16
(vii)(334.43) <sub>8</sub>	=	()2

## 4. Attempt any *one* part of the following:

- (a) Explain different bitwise operators available in C with examples.
- (b) What is meant by type conversion? Why is necessary? Explain about implicit and explicit type conversion with examples.

### 5. Attempt any *one* part of the following:

- (a) Write a program to find the Armstrong number from 1 to 100.
- (b) Write a program to generate a following numbers structure:
  - 12345
  - 1234
  - 123
  - 12

## 6. Attempt any *one* part of the following:

- (a) Write a program to add two matrices of dimension 3\*3 and store the result in another matrix.
- (b) Write a program in C to create a database of fifty students to store personal details such as roll no, name and marks. Print all the details of student whose name is entered by user.

## 7. Attempt any *one* part of the following:

- (a) Write a program in C to reverse a string by using pointer.
- (b) Explain the following functions in file operations (2)
  - (i) getw() (ii) putw() (iii) fscanf() (iv) fprintf()

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 $7 \ge 1 = 7$ 

 $7 \ge 1 = 7$ 

 $7 \times 1 = 7$ 

7 x 1 = 7