

Date - 20/9/18 Time - 9:30 AM TO 11:00 AM

Roll No. 

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Paper Code: TCS 101

END Semester Back Examination 2018

(Course- B.Tech) Semester I (All Branches)  
Paper Name - FUNDAMENTALS OF COMPUTER  
AND  
INTRODUCTION TO C PROGRAMMING

Time: Three Hours

MM:100

**Note:**

- (i) This question paper contains **five** questions with alternative choice.
- (ii) All Questions are compulsory.
- (iii) Each question carries three parts **a, b, c**. Attempt any two of each question.
- (iv) Each part carries **ten marks**. Total marks are assigned to each question are **twenty**.
- (v) If any misprinting occurs in the paper, do not ask the invigilators. Make appropriate assumption from your side.

- Q1. (a) Explain why do you need a programming language? Explain different types of programming languages. What are the various characteristics of C programming language? [10]
- (b) What is the difference between algorithms and flow-charts. Explain various flow-chart symbols and their task. [10]
- (c) Write a C program to find the minimum number among the three numbers. [10]
- Q2. (a) Explain 5 input and output devices in detail. [10]
- (b) Explain the essential parts of a computer system. Explain the various sequence of events occurs in processing the data. [10]
- (c) Write a C program to enter principal amount, rate and time and find the simple interest and compound interest. [10]
- Q3. (a) Differentiate the following with the help of examples: [5 + 5]
- 1. Precedence and associativity.
  - 2. Automatic and explicit typecasting.
- (b) Draw the flow charts for the following problems: [5 + 5]
- 1. LCM of two numbers.
  - 2. Check for a given number is palindrome or not.
- (c) Explain the following: [5+5]
- 1. Hard Disk
  - 2. Network Topologies
- Q4. (a) Write a C program to check whether the given number is an Armstrong number or not? [10]
- (b) What is an operating system? Why is it required for a computing device like mobile or computer? Explain different types of operating systems and services provided by operating system to the users. [10]
- (c) Write a C program to input five subject marks and calculate aggregate of marks and percentage of marks and print the grade according to following conditions- [10]
- if per>80 print A
  - if per>70 print B
  - if per>60 print C
  - otherwise fail

- Q5. (a) Write a C program to find and print the factorials of all odd numbers from 1 to N where N is a positive integer and entered by user. [10]
- (b) Write a short note on the following? [5+5]  
1. Formatted input/output.  
2. For Loop
- (c) Answer the following questions in brief. [1 x 10]  
1. Name any three system softwares.  
2. What is the fundamental task of a compiler?  
3. Write the format specifier for the datatype **double**?  
4. Evaluate the expression  $13 * 3 \% 7 < < 4 - 2$ .  
5. What is digitization process?  
6. Define string constants?  
7. What do you mean by modifier keys?  
8. Examples of qualifiers.  
9. Why machine code is non-portable?  
10. What is the full form of UPS?