

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

CLASS: BTECH / IMSC
BRANCH: CEP&P/BT/CHEM.ENGG/CIVIL/MECH/PROD/FOOD TECH.

SEMESTER: I
SESSION: MO/2018

SUBJECT: CS101 PROGRAMMING FOR PROBLEM SOLVING

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
 2. Candidates may attempt for all 25 marks.
 3. Before attempting the question paper, be sure that you have got the correct question paper.
 4. The missing data, if any, may be assumed suitably.
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- Q1 (a) List the functions of ALU? [2]
Q1 (b) Outline the need of cache memory in a computer. [3]
- Q2 (a) Describe what do you mean by an Algorithm? [2]
Q2 (b) Design a flowchart for GCD of given numbers? [3]
- Q3 (a) Distinguish between typecasting and type conversion with examples in C. [2]
Q3 (b) Write a C program to print the prime factors of a number. [3]
- Q4 (a) Illustrate with examples what do you mean by decision control statements in C. [2]
Q4 (b) Write a C program that displays all the numbers between a user input range that are divisible by 2 as well as by 3. [3]
- Q5 (a) Write a C program to read an array and display the array of n numbers. [2]
Q5 (b) Develop a C program to find the product of two matrix and display it's result. [3]

::: 12/10/2018 M :::