Department of Computer Science and Engineering
Indian Institute of Technology, Kharagpur

Compiler Theory: CS31003
3rd year CSE, 5th Semester

Assignment - 1: Phases of a Compiler *Marks: 10*
Assign Date: September 07, 2020 Submit Date: 23:55, September 15, 2020
Mode: Individual Submission

1. Discuss the phases of a four-pass compilation of the below C program. $4 \times 1 = 4$

   ```c
   #include <stdio.h>

   int main() {
       int a = 5, b = 6, c = 2, d;

       d = b * c + a;

       printf("%d", d);

       return 0;
   }
   ```

2. State and explain the major differences between compiler and interpreter with example. 2

3. Discuss just-in-time compilation with a proper example. How it helps in terms of performance? $1 + 2 + 1 = 4$

Note: Please submit your answer handwritten in paper. Upload your answer in .pdf format to the Moodle server. File name should be set as ass1_roll.pdf, where "roll" is your roll number.