SATHYABAMA
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ASSIGNMENT – I

COMMON TO B.E/B.Tech(CSE/IT)

Program : B.E. (Computer Science and Engineering)	**Max. Marks : 15**
Course : Compiler Design	
Course Code : SCSA1604	**Sem : VI**
Batch : 2019 - 2023	**Due Date : 16.03.2022**

Part-A   **Answer ALL the questions**   **(5×1=5)**

Multiple Choice Questions and Fill in the Blanks

1. A fragment of code that resides in the loop and computes the same value at each iteration is called a ---------?
    a. Induction analysis
    b. Strength reduction
    c. loop-invariant code
    d. None of the above

2. ---------------- code plays no role in any program operation and can simply be eliminated.

3. A compiler for a high-level language that runs on one machine and produces code for a different machine is called ……..
    a. optimizing compiler
    b. one pass compiler
    c. cross compiler
    d. multipass compiler

4. The nodes of the flow graph are -------------.

5. ------------- replaces expensive operations by equivalent cheaper ones on the target machine.

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Part-B   **Answer ALL the questions**   **(5×1=5)**

Short Answers

1. Differentiate machine dependent and machine independent optimization.
2. Explain constant folding with an example.
3. List out the applications of DAG.
4. Write the data flow equations.
5. State 90-10 rule.

Part-C   **Long question**   **(1×5=5)**

1. Construct the flow graph and DAG for the following code

```
begin
       prod :=0;
       i:=1;
       do begin
       prod :=prod+ a[i] * b[i];
       i :=i+1;
       end
       while i <= 20
end
```