**РК4 Вариант 6**

1. Write the three-address codes (TAC) and quadruples for the following program segments. Assume two bytes are required to store each element of the array.

SUM = 0;

I : = 0;

While I ≤ 20 do

Begin

SUM = SUM + A[I];

I : = I + 1

End;

1. Identify the *basic blocks* in this TAC, and draw its control flow graph (CFG) having nodes which are the *basic blocks* and edges representing control flow among them. For each *basic block*, summarize the temporaries/registers used (before they are defined) and defined by the block.
2. Compute *liveness* information for each *instruction* in the TAC by tracing from uses back to definitions, being careful to propagate along both edges at a merge point in the CFG.