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**Roll No# 21-Fet-Bsce-21**

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**Computer Architecture and Organization**

**Lab 10 Task:** Using Loop and Jump Instructions, write a program to add these decimal numbers:

**11 + 22 + 33 + 44 + 55 + 66 – 77 – 88 = 66 = 0x42**

/ Sum four numbers

ORG 0 /Starting Address

LDA ADS /Load first address

STA PTR /Store in pointer

LDA NBR /Load -4

STA CTR /Store in counter

CLA /Clear accumulator

LOP, ADD PTR I /Add an operand to AC

ISZ PTR /Increment pointer

ISZ CTR /Increment counter

BUN LOP /Repeat loop again

STA SUM /Store sum

HLT /Haalt

ADS, HEX 10 /First address of operand

PTR, DEC 0 /Reserved for a pointer

NBR, DEC -8 /loop 4 times

CTR, DEC 0 /Reserved for a counter

SUM, DEC 0 /Sum is stored here

ORG 10

DEC 11 /address of data

DEC 22 /1st operand

DEC 33 /2nd operand

DEC 44 /3rd operand

DEC 55

DEC 66

DEC -77

DEC -88 /Last operand

END /End of symbolic program