

(Even Sem)

CS251 - System Programming - 2021-2022
Mid Semester Examinations : Key.

Q1.

Logic of successive addition — 8
 (as well as SIC features)

Starting address - 3000. — 1

Multiplicand & multiplier in memory. — 1

Product in memory. — 1

Product to output device. — 1

Overall — individually — 3
15

Q2.

Address assignment — 3

Object code generation for each instruction. — 4

Constants → Object code internal representation. — 1

Object Program writing $\left\{ \begin{array}{l} H-1 \\ T-2 \\ E-1 \end{array} \right\}$ 4.

Output — end of Pass 1 — SYMTAB, intermediate file. } → 2

Output — end of Pass 2 — 1

15

ADD	18	LDA	00
COMP	28	RSUB	4C
J	3C	STA	0C
JEQ	30	TD	EO
JGT	34	TIX	2C
JLT	38	ND	DC
JSUB	48		

P.T.O.

Q.3 a) RSUB

4C0000.

4F0000.

11110000

b) TIXR T

B850.

c) STCH BUFFER, X

57C003

d) +LDT #4096.

75101000

e) BYTE C'EOF'

45 4F46.

$$2 \times 5 = (10)$$

1. a. 3 points x ~~1~~ = 3 marks

b) Relative — 1
Justification — 2.

c) Proposal with necessary justification. (K)

✓