Vivekananda College of Engineering & Technology, Puttur
CS063
128
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

CRM08	Rev 1.10	CSE	11/05/22

CONTINUOUS INTERNAL EVALUATION- 1

Dept:CSE	Sem / Div:6 A & B	Sub:System software & Compilers	S Code:18CS61
Date:16/05/2022	Time : 9·30-11:00 am	Max Marks: 50	Elective:N

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	COs
		PART A			
1	a	Explain program blocks with example.	10	L2	CO1
	b	Define system software. Briefly Explain different types of system softwares. Compare system software and application software.	10	L2	CO1
	c	Compute the target address for the following machine instructions, where [B]=2500, [PC]=3000, [X]=800 i) 032350 ii) 03C488	5	L3	CO1
		OR			
2	a	Explain SIC/XE machine architecture with respect to the following: Memory, Registers, Data format, Instruction format, Addressing modes.	10	L2	CO1
	b	What do you mean by assembler directives? Explain the following assembler directives with example. RESB, RESW, BYTE, WORD, LTORG, EQU, CSECT, USE, LITTAB, ORG	10	L2	CO1
	c	Differentiate between absolute and relative expressions with example.	5	L2	CO1
		PART B			
3	a	Explain various data structures for assemblers with example.	10	L2	CO1
	b	Write complete object program for the following SIC/XE code. LDX=04, LDCH=50, STCH=54, TIX=2C, JLT=38, COMPR=A0, STA=0C	10	L3	CO1

```
COPY    START   2020
FIRST   LDX     #ZERO
MOVE    LDCH    STR1, X
        STCH    STR2, X
        STCH    STR3, X
        TIX     @LOC
        JLT     MOVE
        +STA    ZERO
        COMPR   A, S
STR1    BYTE    C'ABC'
STR2    RESB    4
STR3    RESW    10
ZERO    WORD    0
LOC     WORD    100
        END FIRST
```

Prepared by: Roopa G·k.

HOD

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c	Define control section. Explain EXTDEF and EXTREF with example. Write the structure of DEFINE and REFER Record.	5	L2	CO1

OR

4 a	Write the steps and algorithm for pass 2 of 2 pass assembler.	10	L2	CO1

b Write complete object program for the following SIC/XE code. — 10 — L3 — CO1

```
LDX – 04      LDA – 00      LDB – 68      ADD – 18      TIX – 2C
JLT – 38      STA – 0C      RSUB – 4C, COMPR=A0
SUM       START    1234
FIRST     LDX      #0
          LDA      #20
          +LDB     #TABLE2
BASE      TABLE2
LOOP      ADD      TABLE, X
          ADD      TABLE2, X
          TIX      COUNT
          JLT      LOOP
          +STA     TOTAL
          COMPR    A, S
          RSUB
COUNT     RESW     2
TABLE     RESW     150
TABLE2    RESB     72
TOTAL     RESW     1
END       FIRST
```

c	What is loader? What are its basic functions?	5	L2	CO1