KNS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CSE/ISE

Question Bank for 1st IA Test

Academic Year : (2021 – 2022)

Semester	7th	Subject Code	18CS61	Subject Name	SYSTEM SOFTWARE & COMPILER DESIGN
Faculty	SRUJANA. S. N				
Date	20/1/2021				

COURSE OUTCOMES:
CO 1:Knowledge about System Software
CO2: Designing of assembly level source programs
CO3:Creation of object file from source file using datastructures and algorithm

The following are the knowledge levels according to Bloom's taxonomy.

L1 Remember   L2 Understand   L3 Apply   L4 Analyze   L5 Evaluate   L6 Create

Q	SYLLABUS : 2MODULES	M	CO	Knowledge level
1	Explain SIC Architecture.	8	CO1	L1, L2, L6
2	Explain SIC-XE Architecture.	8	CO1	L1, L2, L4
3	Explain the pass-1 algorithm and the datastructures used.	8	CO3	L1, L2
4	Explain the pass-2 algorithm.	8	CO3	L1, L2
5	List and explain various Addressing modes used in SIC-XE Architecture.	8	CO2	L1, L2, L4
6	Generate the object code for the following 　0000　+JSUB　RDREC 　0004　STL　RTADR 　0008　LDB　#LENGTH 　000A　CLEAR X Given the opcodes JSUB= 48 , STL= 14, LC= 60 , CLEAR= B4 LOCCTR values for RDREC= 1036, RETADR= 0030, LENGTH= 0033 MNUEMONIC values for the Registers are A= 0, X= 1, L= 2, B= 3, S= 4, T= 5, F= 6, PC= 8, SW= 9	8	CO3	L1, L2
7	Explain the different machine independent features.	8	CO1, CO3	L1L2
8	Explain program Relocation with a diagram and its modification record with a example.	8	CO1, CO3	L1, L2
9	Explain the following assembler directives i.BYTE ii. RESW	8	CO2	L1, L2

	iii. RESB iv. WORD v. USE			
10	Explain the differences between system software and application software.	9	CO4	L1, L2, L4

11	Generate the object program for the following SIC/XE assembly program.
	
	WRREC START 405D
	
	          CLEAR X
	
	WLOOP
	
	          LDT LENGTH
	
	          TD OUTPUT
	
	          JEQ WLOOP
	
	          LDCH BUFFER , X
	
	          WD OUTPUT
	
	          JLT WLOOP
	
	          RSUB
	
	OUTPUT BYTE X'05'
	
	               END
	
	Address of the buffer 4033
	
	Address of length 4036
	
	Opcodes CLEAR= B4, JEQ= 30, WD= 0C, LDT= 74,
	LDCH= 50, TIXR= B8, RSUB= 4C
		8	CO4, CO5	L1, L2

12	Explain various instruction formats used in SIC- XE Architecture.	9	CO4	L1, L2

Signature of HOD