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Your Roll No ..

6188

B.Sc.(Hons.)/III Sem./Computer Science J

Paper 302 – SYSTEM SOFTWARES

(Admissions of 2001 and onwards)

Time : 3 Hours

Maximum Marks : 75

(Write your Roll No on the top immediately on receipt of this question paper)

Attempt all questions

Parts of question should be answered together

Section – I

- | | | |
|---|--|---|
| 1 | (a) Give two advantages of using a make file | 3 |
| | (b) List facilities provided of SCCS | 2 |
| | (c) Write a shell script to print input in backward line order along with line nos using awk | 5 |
| 2 | Differentiate between following commands | |
| | (a) cat < file and cat > file | 3 |
| | (b) \$ echo *** and \$ echo * * * | 2 |
| | (c) cmp and comm | 3 |
| 3 | What is the output of following commands ? | 3 |
| | (a) Sort +of +o -u file 2 | 2 |
| | (b) Trap "1 2 15 | |

- 4 (a) Use sed to put a * on every empty line of the file given through the command line 2
 (b) Given command to list files whose name start and end with a vowel (using grep) 3

Section - II

- 5 Under what circumstances is the modification records required by the assembler ? Give format of the modification record 4
 6 Generate object code for each statement in the following SIC statements Give value of location counter for each instruction 6

Copy	Start	1000
FIRST	STL	RETADR
CLOOP	JSUB	RDREC
	LDA	LENGTH
	COMP	ZERO
	JEQ	ENDFIL
	JSUB	WRREC
	J	CLOOP
ENDFIL	LDA	EOF
	STA	BUFFER
	LDA	THREE
	STA	LENGTH
	JSUB	WRREC
	LDL	RETADR
	RSUB	
EOF	BYTE	'EOF'
THREE	WORD	3
ZERO	WORD	0
RETADR	RESW	1
LENGTH	RESW	1
BUFFER	RESB	4096

Where LOC for RDREC is 2039' and LOC for WRREC 2061

OPCODEs are given as follows

STL	14	STA	0C
JSUB	48	LDL	08
LDA	00	RSUB	4C
COMP	28	EOF	454F46
JEQ	30		
J	3C		

- 7 Explain the working of the linking loader Give a diagrammatic representation 4
- 8 How is operating system is loaded in the main memory ' Explain the loading process. 4
- 9 You are required to write a lex program to do the following 4
- Define a pattern 'endnine' which matches those numbers that end with 9 A file my file contains a number on each line Count the number of patterns of type endnine found in the file
- 10 What is the role of YACC in a compiler ? 2

Section – III

- 11 Write a Java Script function (sort numbers) which sorts 10 nos input by user through prompt command 5

- 12 Write a Java Script program to enter a string and a sub string in input boxes box1 and box2 on pressing button. button 1 if the substring is found in the string it displays “found at location _____” else alert “not found” **5**
- 13 (a) What are features of a well formed XML file ? **2**
- (b) What is DTD ? What sort of validation does it perform ? **2**
- (c) Write an XML file which contains the mark list of at least three students For each student, the name, class, marks in Physics, Chemistry and Maths are to be stored A student may or may not be a sports person **5**
- (d) What are the different data types in pert ? Explain the use of each data type **4**
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