

Total No. of printed pages = 3

Co-402/SP/4th Sem/2013/N

SYSTEM PROGRAMMING

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. Define language processor. What are the practical requirements of a language processor ? Explain different phases and passes of a language processor. 2+2+10=14
2. A sample assembly program is as follows :

	START	100
A	DS	1
B	DS	1
FIRST :	READ	A
	READ	B
	LOAD	A
	SUB	B
	TRIM	LARGE B
	PRINT	A
	STOP	
LARGE B	PRINT	B
	STOP	
	END	FIRST

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- (i) Identify different kinds of statements available in the above program.
- (ii) Discuss the process of two pass assembler to produce target program from above program. $4+10=14$
3. What is an assembly language? How assembly language can be differentiate from machine language? What are the different assembly statements available? Give examples of each type. $2+4+8=14$
4. What are Macro and Macro call? Explain MACRO definition and MACRO expansion with one example. $4+10=14$
5. (a) What do you mean by program relocation? What are the functions performed by a loader? $4+6=10$
- (b) Explain how a direct linking loader is designed. 4
6. What are the phases of a compiler? Explain each phase briefly. 14
7. (a) What is an interpreter? What do you mean by Lexical rules, Syntax rules and Semantic rules? $2+5=7$

- (b) What is a parser? What do you mean by bottom-up and top-down parser. 7
8. Write short notes on any *two* : 14
- (a) NFA and DFA
 - (b) Dynamic Loading
 - (c) Link-load and go-loading scheme.