

Que. No.	Questions	Marks	CO	BL
1(a)	i) Choose correct phase where grammar of the programming is checked. a) Semantic analysis b) Syntax analysis c) Code optimization d) Code generation  ii) Identify a compiler for a high-level language that runs on one machine and produces code for a different machine. a) Optimizing compiler b) One pass compiler c) Cross compiler d) Multipass compiler	2	CO1	III
(b)	Explain different types of translators with example	5	CO1	II
(c)	Explain various phases of compilers comes under front end	7	CO1	II
	OR			
2(a)	i) Choose the correct option for Lexical analysis is about breaking a sequence of characters into _____ a) Groups b) Packets c) Lines d) Tokens  ii) In which phase, source code is converted into TAC. a) Lexical Analyzer b) Syntax Analyzer c) Intermediate Code generation	2	CO1	III I
(b)	Write short notes on Cross Compilers ii) Bootstrap Compilers	5	CO1	II
(c)	Explain various phases of compilers comes under back end	7	CO1	II
3(a)	i) Grammar of the programming is checked at _____ phase of compiler. a) Semantic analysis b) Syntax analysis c) Code optimization d) Code Generation  ii) The action of parsing the source program into proper syntactic classes is called _____ a) Syntax Analysis b) Lexical Analysis c) Interpretation analysis d) General Syntax Analysis	2	CO2	I
(b)	Explain Top Down Parser with example.	5	CO2	II
(c)	Find the FIRST() and FOLLOW() for the following grammar. $S \rightarrow aJh, I \rightarrow IbSe/c, J \rightarrow KLKr/E, K \rightarrow d/ \epsilon, L \rightarrow p/ \epsilon$	7	CO2	I
	OR			
4(a)	i) A bottom up parser generates _____ a) Right most derivation b) Rightmost derivation in reverse c) Leftmost derivation d) Leftmost derivation in reverse	2	CO2	I



	ii) Shift reduce parsers are _____ a) Top down Parser b) Bottom Up parser c) May be top down or bottom up d) None of the mentioned			II
(b)	Explain why Top Down Parser is called left most derivative Parser.	5	CO2	II
(c)	consider the following grammar $S \rightarrow ABC$ $A \rightarrow a/e$ $B \rightarrow r/e$ $C \rightarrow b/e$ Construct parsing table with LL(1) Parser	7	CO2	III
5(a)	i) The graph that shows basic blocks and their successor relationship is called _____ a) DAG b) Flow Graph c) Control Graph d) Hamilton Graph  ii) An intermediate code form is _____ a) Postfix notation b) Syntax Trees c) Three Address code d) All of the mentioned	2	CO3	I   I
(b)	Write Quadruple, Triple and Indirect triples for the following expression. $-(a + b) * (c + d) + (a + b + c)$	5	CO3	I
OR				
6(a)	i) A synthesized attribute is an attribute whose value at a parse tree node depends on _____ a) Attributes at the siblings only b) Attributes at parent node only c) Attributes at children nodes only d) None of the mentioned  ii) In a syntax directed translation scheme, if value of an attribute of a node is a function of the values of the attributes of its children, then it is called a) synthesized attribute b) inherited attribute c) canonical attribute d) none of these	2	CO3	I   II
(b)	For the given grammar : $E \rightarrow E + T / T$ $T \rightarrow T * F / F$ $F \rightarrow (E) / id$ Construct parse tree and syntax tree for string $W = id + id * id$	5	CO3	III