Read the questions carefully and check one option

Question 1: Which of the following statements is correct for attributes of a syntax directed definition:

A. Synthesized attributes are initialized by the scanner. B. Synthesized attributes depend only on information below them in the parse tree C. Inherited attributes are useful only in object-oriented languages. D. Synthesized attributes are computed at run time. Question 2: The main difference between a sentence and a sentential form is

A. there is no difference; B. a sentence contains only terminal symbols but a sentential form can contain some non-terminal symbols C. sententialforms are a subset of sentences but the converse is not true D. sentences are derived from S but sentential forms are not Question 3: Which of the following systems is used to describe syntax of a programming language?

A. BNF B. Syntax directed definition C. Finite automaton D. Regular expression Question 4: In KPL , the declaration const y = 0 + y + 1; leads to an error because we can not apply constant folding to its expression.

A. TRUE B. FALSE Question 5: How many tokens are there in the following assignment ac := ba (.1.) of KPL?

A. 6 B. 7 C. 8 D. 9 Question 6: What programming languages are classified as low-level language?

A. Basic, Fortran, Java B. Machine code and Assembly C. Visual C and Visual Foxpro D. Prolog Question 7: What are the stages in the compilation process?

A. Feasibility study, system design and testing B. Implementation and documentation C. Left recursion elimination D. Lexical analysis, syntax analysis and code generation Question 8: Shift reduce parsers are

A. Top down parser B. Bottom up parser C. May be top down or bottom up parser D. None of the above Question 9: A grammar will be meaningless

A. if terminal set and non-terminal set are not disjoint B. if left hand side of a production is a single terminal C. f left hand side of a production has no non terminal D. all of these Question 10: A computer software that translates some form of source code into machine code is called

A. Language processor B. Interpreter C. Compiler D. Assembler Question 11: Consider the context free grammar: A -> ABaa, A -> bCba, A--> ε, B --> BbC, B -> ε,C -> b , C -> ε. What is FIRST (A)?

A. {ε} C. {ε,b} B. {ε, a,b} D. None of the above Question 12: Given the following KPL program segment Procedure A, x, y : integer ; Procedure B;

x, z : real ; begin

S1 end; (\*B \*); Procedure C; i : integer ; begin

S2 end;(\*C\*) end ; (\*A\*) The variables accessible in S1 and S2 are

A. x of A, y, x of B and z in S1 and x of B, y and i in S2 B. x of B, y and z in S1 and x of B, i and z in S2 C. x of B, z and y in S1 and x of A, i and y in S2 D. none of these

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Question 13 : Given grammar S→ aSb, S → c and string aacbb. Which of the following is the next configuration of (q, 3, S1aS1aS1,aSbbb )?

A. (q, 3, S1aS1aS2, cbb#) B. (q, 4, S1aS1aS2c,bb#) C. (b, 3, S1aS1aS1,aSbbb#) D. None of the above Question 14: The translator used in C language is

A. Compiler B. Interpreter C. Assembler D. Linker Question 15: Which of the following statement is correct about array data type in KPL?

A. KPL supports only one- dimensional and two- dimentional arrays B. KPL supports only one-dimentional arrays C. KPL supports arrays with arbitrary number of dimension D. KPL does not support arrays Question 16:Which of the following systems is used to describe syntax of a programming language?

A. Push down automaton B. Syntax directed definition C. Finite automaton D. Formal grammar Question 17: We can optimize code by A. Dead code elimination B. Common subprograms C. Copy intermediate loop D. Loop declaration

Question 18: Left parse is

A. The sequence of productions used in an arbitrary derivation of a from S. B. Reversion of the sequence of productions used in left derivation of a from S C. The sequence of productions used in left derivation of a from S D. None of the above Question 19: Which of the following grammars is LL(1)

A. S → 1SA, S → 0A1, S → 2, A → 0A1, A → 1 B. S → aAS | B, A → cS | ε, B → c C. S → aSa | bSb | cSc | a | b | c | ε D. S → ε | ab | ba | aSb | bSa Question 20: Task of the lexical analysis is

A. To parse the source program into the basic elements or tokens of the language B. To build a literal table and an identifier table C. To build a uniform symbol table D. All of these Question 21: The output of the parser is

A. A set of regular expressions B. Syntax tree C. Set of tokens D. Strings of character

Question 22: Which of the following instructions is written in three address code?

A. t[i]:=x[1]+1 B. t[i]:=y[j] C. t[i]:=1+x[i] D. a:=t[i]+b

Question 23 : Each syntax diagram defines a

A. Non-terminal B. Grammar symbol C. Terminal D. Production

Question 24: Which of the following software tool is parser generator ?

A. Bison B. Yacc C. Both A and B D. None of these

Question 25: With which of the following kind of grammar the top down parser falls into an infinite derivation chain?

A. Ambiguous grammar B. Left linear grammar C. LR grammar D. Left recursive grammar

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Question 26: Recursive descent parser is an example of

A. Top down backtracking parser B. Bottom up backtracking parser C. Predictive parser D. None of the above Question 27: Consider the following context free grammar:

List → ids; ids → id,ids | id Which of the following is a sentential form for this language?

A. id,id,ids; B. ids,id,id; C. ids,ids; D. all of the above Question 28: Whether a given pattern constitutes a token or not depends on the

A. Source language B. Target language C. Compiler D. All of these Question 29: Which of the following is used to describe the result of a predictive parser?

A. State B. Stack C. Configuration D. Left parse Question 30: The graph that shows basic blocks and their successor relationship is called

A. Directed acyclic graph B. Flow graph C. Control graph D. Hamiltonion graph Question 31: Semantics analysis generate intermediate code

A. TRUE B. FALSE Question 32: Which of the following productions will match zero or more occurences of the letter b followed by exactly one c?

A. A → Ab | c B. A → bA | c C. A→ Ac | b D. A → bA |c Question 33: Consider the context free grammar {L → TL’, L’ → ∨TL’, L’ → ε, T → PT’, T’ → ∧PT’, T’ → ε, P → i, P → (L)}.What is Follow(T)?

A. {(, ∨} B. {∨, )} C. {∨, $, )} D. None of the above Question 34: A grammar that produces at most one parse tree for each string is called

A. Ambiguous B. Unambiguous C. Regular D. None of these Question 35: The phases of a compiler includes

A. Source Code, Token stream B. Testing and Coding C. Parse tree, Intermediate Code, Object Code D. All of the above E. None of the above

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