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| **P.V.P Siddhartha Institute of Technology(Autonomous)** | | | | | | | | | | | | | | | | | | | **Signature of Invigilator with date:** | | **Marks Obtained:** | |
| **Department of Computer Science and Engineering** | | | | | | | | | | | | | | | | | | |
| **Course: B. Tech** | | **Year: III** | | | | | **Semester: II** | | | | | | **Objective: II** | | | | | |
| **Regulation: PVP20** | | | **Maximum Marks:10M** | | | | | | | | | | | | **Session: F. N** | | | |
| **A.Y:2024-25** | | | **Date:24-03-2025** | | | | | | | | | **Duration: 20 min** | | | | | | |
| **Subject Name: Compiler Design** | | | | | | | | | | | | | | | | | | | | | | | |
| **Registered Number:** | | | | | | | | | | | | | | **Name:** | | | | | | | | | |
| **Answer all the Questions. Each Question carries ½ Mark 20×½ M =10M** | | | | | | | | | | | | | | | | | | | | | | | |
| **S. No** | **Question** | | | | | | | | | | | | | | | | | | | **CO** | **Level** | **Answer** |
| 1. | Which of the following graph shows basic blocks along with their successor relationship? | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Direct Acyclic graph | | b) Control graph | | | | | | c) Flow graph | | | | | | | | d) Hamiltonian graph | | |
| 2. | A\_\_\_\_\_ is a production with dot at somewhere in the body | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) token | | | | | | | | b) item | | | | | | | | | | |
| c) viable | | | | | | | | d) invalid item | | | | | | | | | | |
| 3. | Identify the most powerful parser? | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) LALR | | | | | | | | b) SLR | | | | | | | | | | |
| c) CLR | | | | | | | | d) Operator Precedence | | | | | | | | | | |
| 4. | What does CLR stand for? | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Construct LR | | | | | | | | b) Canonical LR | | | | | | | | | | |
| c) Complete LR | | | | | | | | d) Closed LR | | | | | | | | | | |
| 5. | Fragmentation can be reduced by using \_\_\_\_ Algorithm | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Worst fit | | b) Best fit | | | | | | c) Large fit | | | | | | | | d) None | | |
| 6. | The value of which variable is updated inside the loop by a loop-invariant value? | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Loop | | b) Strength | | | | | | | | | c) Induction | | | | | d) Invariable | | |
| 7. | Indirect triples consist of a \_\_\_\_\_. | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) listing of pointers to triples | | b) listing of triples themselves. | | | | | | c) listing of temporary | | | | | | | | d) listing of variables | | |
| 8. | DAG is an abbreviation of\_\_\_\_\_\_\_\_ | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a)Detecting Acyclic Graph | | | | | | | | b)Data Acyclic Graph | | | | | | | | | | |
| c)Dynamic Acyclic Graph | | | | | | | | d)Directed Acyclic Graph | | | | | | | | | | |
| 9. | Which of the following intermediate code form has three fields? | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Parse tree | | b)Triples | | | | | | c) Indirect Triples | | | | | | | | d) Quadruples | | |
| 10. | In which of the following tree, the leaf indicates the operand, and the interior node represents the operator. | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Syntax tree | | b) Heap tree | | | | | | c) Structured tree | | | | | | | | d) Semantic Tree | | |
| 11. | X2 can be replaced by which of the following operation to hold strength reduction property | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) X+X | | b) X\*X | | | | | | c) X/X | | | | | | | | d) X+2 | | |
| 12. | Which of the following function is called the canonical collection of LR(0) item. | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) FIRST | | b) GOTO | | | | | | c) COMPUTE | | | | | | | | d) FOLLOW | | |
| 13. | Peephole optimization is ……. | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Machine independent optimization | | | b) Local Optimization | | | | | | c) Machine dependent optimization | | | | | | d)None | | | |
| 14. | The full form of YACC is | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Yet Another Computer Computer | | | | | | | | | b)Yet Another Computer Compiler | | | | | | | | | |
| c)Yet Another Compiler Computer | | | | | | | | | d) Yet Another Compiler Compiler | | | | | | | | | |
| 15. | DAG representation of a basic block allows | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Automatic detection of local common sub expressions | | | | | b) Automatic detection of induction variables | | | c)Automatic detection of loop variant | | | | | | | | | d)None | |
| 16. | An intermediate code form is | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a)Postfix notation | | b)Syntax trees | | | | | | c)Three address code | | | | | | | | d) All | | |
| 17. | A variable “x” is said to be \_\_\_\_if there is a positive or negative constant  “c” such that each time “x” is assigned, its value increases by c. | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) a dead variable | | b) a live variable | | | | | | c) an induction variable | | | | | | | | d) a reduction variable | | |
| 18. | Heap is an area in memory for storing data created at\_\_\_\_\_ | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Compile time | | | | | | | | b) Run time | | | | | | | | | | |
| c) Static time | | | | | | | | d) None | | | | | | | | | | |
| 19. | Substitution of values for names whose values are constant, is done in | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Local optimization | | | | | | | b) Loop optimization | | | | | | | | | | | |
| c) Constant folding | | | | | | | d) None | | | | | | | | | | | |
| 20. | Peephole optimization can be performed on \_\_\_\_. | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) machine code | | | | b) intermediate code | | | | | | c) syntax tree | | | | | | | d) tokens | |