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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:10Marks** | | | | | | | | | | | | **Session: F. N** | | | |
| **A.Y:2023-24** | | | **Date:26-03-2024** | | | | | | | | | **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. | **The item generated by** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) | | b) | | | | | | | c) | | | | | | | d) | | |
| 2. | **If a state does not know whether it will make a shift operation or reduction for a terminal is called \_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Shift/reduce conflict | | | | | | | | | b) Reduce /shift conflict | | | | | | | | | |
| c) Shift conflict | | | | | | | | | d) Reduce conflict | | | | | | | | | |
| 3. | **An intermediate code form is \_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Postfix Notation | | | | | | | | | b) Syntax Trees | | | | | | | | | |
| c) Three address code | | | | | | | | | d) All the Mentioned | | | | | | | | | |
| 4. | **Which of the following is TRUE for heap storage?** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) The heap is the portion of the store that is used for data that lives indefinitely or until the program explicitly deletes it. | | | | | | | | | b) The heap is an area of memory that allows objects or other data elements to obtain storage when they are created and to return that storage when they are invalidated. | | | | | | | | | |
| c) Both a and b | | | | | | | | | d) Neither a and b | | | | | | | | | |
| 5. | **Fragmentation can be reduced by using \_\_\_\_ Algorithm** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Worst fit | | b) Best fit | | | | | | | c) Large fit | | | | | | | d) None | | |
| 6. | **How many rules are there to find leader from three address code?** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| 1. 1 | | 1. 2 | | | | | | | | | 1. 3 | | | | | 1. 4 | | |
| 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 four fields?** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a)Parse tree | | b)Triples | | | | | | | c)Indirect Triples | | | | | | | d)Quadruples | | |
| 10. | **Which of the following is not available in activation record of a procedure** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Actual parameters | | b) Direct link | | | | | | | c) Control link | | | | | | | d) temporaries | | |
| 11. | **Which statement is an abstract form of intermediate code?** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a)3-address | | b) Syntax tree | | | | | | | c) post fix expression | | | | | | | d) None | | |
| 12. | **LR(1) items=** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| LR(0) items + look ahead | | LR(2) items - look ahead | | | | | | | LR(0) items - look ahead | | | | | | | LR(0) items + 2 look ahead | | |
| 13. | **Peephole optimization is …….** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Machine independent optimization | | | b)Local Optimization | | | | | c) Machine dependent optimization | | | | | | | d)None | | | |
| 14. | **The postfix expression of (a-b)\*(c+d) +(a-b)** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) abcd+ab-+-\* | | | | | | | | b) ab-cd+ab-+\* | | | | | | | | | | |
| c) b-cdab-++\* | | | | | | | | d) abcdab-+\*-+ | | | | | | | | | | |
| 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. | **X2 can be replaced by which of the following operation to hold strength reduction property** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| 1. x+x | | 1. x\*x | | | | | | | 1. x/x | | | | | | | 1. x+2 | | |
| 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. | **While(i<=limit-2)**  Which of the following is the resultant instruction after applying code motion to the given statement | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| 1. While(i>limit-2) | | | | | | | | | 1. While(i==limit-2) | | | | | | | | | |
| 1. While(i>=limit-2) | | | | | | | | | 1. t=limit-2   While(i<=t) | | | | | | | | | |
| 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. | **Heap is an area in memory for storing data created at\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | **CO1** | **L2** |  |
| a) Compile time | | | | b) Run time | | | | | | c) Static time | | | | | | | d)None | |