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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 |