Q.1 Forward edge is:

A. (u, v) where u is a proper ancesstor of v in the tree.

B. (u, v) where v is a proper ancesstor of u in the tree.

C. (u, v) where u is a proper descendent of v in the tree.

D. (u, v) where v is a proper descendent of u in the tree.

Q.2 Equivalence relation partitions the vertices into _____ classes of mutually reachable vertices and these are the strong components

A. Equivalence

B. Variance

C. Non equivalence

D. Non classes

Q.3 In Timestamped DFS, No back edges means _____.

A. BFS

B. 1 cycle

C. DFS

D. no cycles

Q.4 In undirected graph, by convention all the edges are called _____ edges.

A. Back

B. Cross

C. Both forward and back

D. Forward

Q.5 Computing the strongly connected components of a digraph is a/an _____ of the problem to determine whether a digraph is strongly connected or not.

A. connection

B. optimization

C. generalization

D. size

Q.6 The _____ given by DFS allow us to determine a number of things about a graph or digraph.

A. line stamps

B. time stamps

C. node stamps

D. color stamps

Q.7 In Timestamped DFS, If there is a back edge (u, v) then v is an ancestor of u and by following tree edge from v to u, we get _____.

A. a graph

B. nothing

C. a line

D. a cycle

Q.8 In computing the _____ components of a digraph, vertices of the digraph are partitioned into subsets.

A. weakly connected

B. worst

C. best

D. strongly connected

Q.9 Cross edge is :

A. (u, v) where u is ancesstor of v and v is not descendent of u.

B. (u, v) where u and v are not ancestor or descendent of one another

C. (u, v) where u and v are either ancestor or descendent of one another.

D. (u, v) where u and v are not ancestor of one another

Q.10 Digraphs _____ in communication and transportation networks.

A. parts are used

B. are used

C. final value is used

D. are not used

Q.11 _____has the significant effect on computer performance.

A. Stack paging

B. Queue paging

C. Self paging

D. Demand paging

Q.12 What is the purpose of the Banker's Algorithm?

A. Avoiding deadlock

B. Managing user passwords

C. Compressing resources

D. Speeding up memory access

Q.13 Logical data refers to the instruction or data stored in the _____.

A. Hash table space

B. Secondary memory location

C. Process address space

D. Physical memory location

Q.14 In Banker algorithm Max data structure is used. If_____, then process Pi can request maximum k instances of resource type Rj.

A. Max[i,j] = k

B. Max[k,j] = i

C. Max[i,k] = j

D. Max[j,i] = k

Q.15 In Logical to Physical Address Translation, how is the 20-bit Physical Address calculated?

A. (Segment / 16) + Offset

B. Segment + Offset

C. Segment * Offset

D. (Segment * 16) + Offset

Q.16 In _____a process must enter the maximum number of instances that he may need in the future.

A. Banker algorithm

B. Lotus algorithm

C. College algorithm

D. University algorithm

Q.17 What is the formula for calculating physical address size, if the page number is p, frame number is f memory is mem and offset is d?

A. p + f

B. f + d

C. p + d

D. pages + mem

Q.18 What is calculated by available[i] = maxres[i] - allocation[i] in Baker's algorithm?

A. Average memory usage

B. Total resource usage

C. Process priority

D. Remaining resources

Q.19 In most computers memory access time is ranging from _____.

A. 10 to 200 microseconds

B. 200 to 300 microseconds

C. 10 to 200 nanoseconds

D. 300 to 600 microseconds

Q.20 The address seen by memory unit i.e. the address loaded into the memory address register is commonly referred to as the _____.

A. Complex address

B. Logical address

C. Simple address

D. Physical address
