

English

1. Fuzzball is a _____

- (A) Mainframe computer
- (B) Mini computer
- (C) Microcomputer
- (D) Nano computer

Correct Option(s): B

English

2. How many states do finite automata have?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

Correct Option(s): B

English

3. Determine the Euler's Totient Function $\phi(37)$ and $\phi(35)$.

- (A) 36 and 24
- (B) 0 and 2
- (C) 36 and 2
- (D) 36 and 34

Correct Option(s): A

English

4. Recursive enumerable languages are not closed under

- (A) Union
- (B) Intersection
- (C) Reversal
- (D) Complement

Correct Option(s): D

English

5. The derivation tree is also known as _____

- (A) Comprehend tree
- (B) Deviated tree
- (C) Decipher tree
- (D) Parse tree

Correct Option(s): D

English

6. What do you mean by CNF?

- (A) Chomsky's normal form
- (B) Chompen normal form
- (C) Campbell's normal form
- (D) Campken normal form

Correct Option(s): A

English

7. DFA Transition function can be defined as _____

- (A) $\delta: Q \times \Sigma \rightarrow Q$
- (B) $W: Q \times \Sigma \rightarrow Q$
- (C) $\delta: Q \times \Sigma \rightarrow W$
- (D) $\delta: Q \times \Sigma \rightarrow F$

Correct Option(s): A

English

8. How many sheets are there, by default, when we create a new Excel file?

- (A) 1
- (B) 3
- (C) 5
- (D) 10

Correct Option(s): B

English

9. Which of the following windows versions support 64 bit processor?

- (A) windows 98
- (B) windows 2000
- (C) windows xp
- (D) windows 95

Correct Option(s): C

English

10. The memory which allocates space for DOS and application is called

- (A) expanded memory
- (B) cache memory
- (C) virtual memory
- (D) conventional memory

Correct Option(s): D

English

11. Which of the following is not a type of operating system?

- (A) Batch Operating System
- (B) Real-time Operating System
- (C) Sequential Operating System
- (D) Distributed Operating System

Correct Option(s): C

English

12. What does OS X has?

- (A) monolithic kernel with modules
- (B) microkernel
- (C) monolithic kernel
- (D) hybrid kernel

Correct Option(s): D

English

13. Hard real time operating system has _____ jitter than a soft real time operating system.

- (A) equal
- (B) more
- (C) less
- (D) no

Correct Option(s): C

English

14. In operating systems, a semaphore is:

- (A) A low-level programming language
- (B) A type of malware
- (C) An I/O device driver
- (D) A signal mechanism

Correct Option(s): D

English

15. What is a major advantage of using the Multilevel Queue scheduling algorithm?

- (A) It allows processes to move between queues
- (B) It reduces the overall system security
- (C) It simplifies the scheduler design
- (D) It increases the CPU utilization

Correct Option(s): A

English

16. If a node often loses communication, investigate:

- (A) UI design
- (B) Network configuration and connectivity
- (C) Application color scheme
- (D) Hardware branding

Correct Option(s): B

English

17. What is the primary file system used by Linux distributions?

- (A) FAT32
- (B) NTFS
- (C) ext4
- (D) HFS+

Correct Option(s): C

English

18. When a Windows system experiences a Blue Screen of Death (BSOD), which tool can provide in-depth diagnostic information?

- (A) Event Viewer
- (B) Disk Cleanup
- (C) Task Manager
- (D) Windows Memory Diagnostic

Correct Option(s): A

English

19. Which of the architecture is power efficient?

- (A) RISC
- (B) ISA
- (C) IANA
- (D) CISC

Correct Option(s): A

English

20. The VLIW architecture follows _____ approach to achieve parallelism.

- (A) SISD
- (B) MIMD
- (C) MISD
- (D) SIMD

Correct Option(s): B

English

21. For a given FINITE number of instructions to be executed, which architecture of the processor provides for faster execution?

- (A) ANSA
- (B) Super-scalar
- (C) ISA
- (D) All of the mentioned

Correct Option(s): B

English

22. The memory devices which are similar to EEPROM but differ in cost effectiveness is ____

- (A) CMOS
- (B) Memory sticks
- (C) Blue-ray devices
- (D) Flash memory

Correct Option(s): D

English

23. The I/O interface required to connect the I/O device to the bus consists of

- (A) address decoder and registers
- (B) control circuits
- (C) address decoder, registers and control circuits
- (D) only control circuits

Correct Option(s): C

English

24. An _____ is a set of entities of the same type that share the same properties, or attributes.

- (A) Entity set
- (B) Attribute set
- (C) Relation set
- (D) Entity model

Correct Option(s): A

English

25. Designers use which of the following to tune the performance of systems to support timecritical operations?

- (A) Denormalization
- (B) Redundant optimization
- (C) Optimization
- (D) Realization

Correct Option(s): A

English

26. Relation dept year(dept name, total inst 2007, total inst 2008, total inst 2009). Here the only functional dependencies are from dept name to the other attributes. This relation is in

- (A) Fourth NF
- (B) BCNF
- (C) Third NF
- (D) Second NF

Correct Option(s): B

English

27. An audit trail _____

- (A) Is used to make backup copies
- (B) Is the recorded history of operations performed on a file
- (C) Can be used to restore lost information
- (D) Storage space data in one spot will cause data inconsistency

Correct Option(s): B

English

28. What action does \bowtie operator perform in relational algebra

- (A) Output specified attributes from all rows of the input relation and remove duplicate tuples from the output
- (B) Outputs pairs of rows from the two input relations that have the same value on all attributes that have the same name
- (C) Output all pairs of rows from the two input relations (regardless of whether or not they have the same values on common attributes)
- (D) Return rows of the input relation that satisfy the predicate

Correct Option(s): A

English

29.

Create table apartment(ownerID varchar (5), ownername varchar(25), floor numeric(4,0), primary key (ownerID:));Choose the correct option regarding the above statement

- (A) The statement is syntactically wrong
- (B) It creates a relation with three attributes ownerID, ownername, floor in which floor cannot be null.
- (C) It creates a relation with three attributes ownerID, ownername, floor in which ownerID cannot be null.
- (D) It creates a relation with three attributes ownerID, ownername, floor in which ownername must consist of at least 25 characters.

Correct Option(s): C

English

30. With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" ends with an "a"?

- (A) SELECT * FROM Persons WHERE FirstName='a'
- (B) SELECT * FROM Persons WHERE FirstName LIKE 'a%'
- (C) SELECT * FROM Persons WHERE FirstName LIKE '%a'
- (D) SELECT * FROM Persons WHERE FirstName='%a%'

Correct Option(s): C

English

31. Which of the following has each related entity set has its own schema and there is an additional schema for the relationship set?

- (A) A many-to-many relationship set
- (B) A multivalued attribute of an entity set
- (C) A one-to-many relationship set
- (D) None of the mentioned

Correct Option(s): A

English

32. Which layer of the OSI model ensures the error-free transmission of data?

- (A) Physical Layer
- (B) Data Link Layer
- (C) Network Layer
- (D) Transport Layer

Correct Option(s): B

English

33. The process of encapsulation involves data moving from which layer to which layer?

- (A) Application to Physical
- (B) Physical to Application
- (C) Transport to Network
- (D) Network to Transport

Correct Option(s): A

English

34. What is the standard Ethernet frame size for most networks?

- (A) 64 bytes to 1518 bytes
- (B) 128 bytes to 1024 bytes
- (C) 1500 bytes to 2000 bytes
- (D) 100 bytes to 1500 bytes

Correct Option(s): A

English

35. How many octets are dedicated to OUI(Organizationally unique identifier) in in 48 MAC address space?

- (A) 5
- (B) 3
- (C) 2
- (D) 4

Correct Option(s): B

English

36. What is the goal of Artificial Intelligence?

- (A) To solve artificial problems
- (B) To extract scientific causes
- (C) To explain various sorts of intelligence
- (D) To solve real-world problems

Correct Option(s): C

English

37. General games involves _____

- (A) Single-agent
- (B) Multi-agent
- (C) Neither Single-agent nor multi-agent
- (D) Only Single-agent and multi-agent

Correct Option(s): D

English

38. The initial state and the legal moves for each side define the _____ for the game.

- (A) Search Tree
- (B) Game Tree
- (C) State Space Search
- (D) Forest

Correct Option(s): B

English

39. General algorithm applied on game tree for making decision of win/lose is _____

- (A) DFS/BFS Search Algorithms
- (B) Heuristic Search Algorithms
- (C) Greedy Search Algorithms
- (D) MIN/MAX Algorithms

Correct Option(s): D

English

40. Web Crawler is a/an _____

- (A) Intelligent goal-based agent
- (B) Problem-solving agent
- (C) Simple reflex agent
- (D) Model based agent

Correct Option(s): A

English

41. Which is true for Decision theory?

- (A) Decision Theory = Probability theory + utility theory
- (B) Decision Theory = Inference theory + utility theory
- (C) Decision Theory = Uncertainty + utility theory
- (D) Decision Theory = Probability theory + preference

Correct Option(s): C

English

42. Which algorithm is used for solving temporal probabilistic reasoning?

- (A) Hill-climbing search
- (B) Hidden markov model
- (C) Depth-first search
- (D) Breadth-first search

Correct Option(s): B

English

43. Which of the given language is not commonly used for AI?

- (A) LISP
- (B) PROLOG
- (C) Python
- (D) Perl

Correct Option(s): D

English

44. Which algorithm is used in the Game tree to make decisions of Win/Lose?

- (A) Heuristic Search Algorithm
- (B) DFS/BFS algorithm
- (C) Greedy Search Algorithm
- (D) Min/Max algorithm

Correct Option(s): D

English

45. If according to the hypothesis, the result should be positive, but in fact it is negative, then it is known as _____.

- (A) False Negative Hypothesis
- (B) False Positive Hypothesis
- (C) Specialized Hypothesis
- (D) Consistent Hypothesis

Correct Option(s): B

English

46. In the TSP problem of n cities, the time taken for traversing all cities, without having prior knowledge of the length of the minimum tour will be _____.

- (A) $O(n)$
- (B) $O(n^2)$
- (C) $O(n!)$
- (D) $O(n/2)$

Correct Option(s): C

English

47. Which statement is valid for the Heuristic function?

- (A) The heuristic function is used to solve mathematical problems.
- (B) The heuristic function takes parameters of type string and returns an integer value.
- (C) The heuristic function does not have any return type.
- (D) The heuristic function calculates the cost of an optimal path between the pair of states.

Correct Option(s): D

English

48. How is Fuzzy Logic different from conventional control methods?

- (A) IF and THEN Approach
- (B) FOR Approach
- (C) WHILE Approach
- (D) DO Approach

Correct Option(s): A

English

49. _____ is an algorithm, a loop that continually moves in the direction of increasing value – that is uphill.

- (A) Up-Hill Search
- (B) Hill-Climbing
- (C) Hill algorithm
- (D) Reverse-Down-Hill search

Correct Option(s): B

English

50. What are the two main features of Genetic Algorithm?

- (A) Fitness function & Crossover techniques
- (B) Crossover techniques & Random mutation
- (C) Individuals among the population & Random mutation
- (D) Random mutation & Fitness function

Correct Option(s): A