

Karnataka CST Practice Paper — Computer Science

50 questions · 5 from each unit of the official Paper 2 syllabus · answers and explanations at the end

Unit 1: Fundamentals of Computers

1. Which Act gave legal validity to electronic commerce (e-commerce) in India?

- A. Companies Act
- B. Consumer Protection Act
- C. Information Technology Act
- D. Cyber Act

2. Which of the following is a type of secondary memory?

- A. Hard disk drive (HDD)
- B. Cache memory
- C. Registers
- D. Processor

3. Why is debugging an essential part of problem solving in programming?

- A. To find and fix errors in the code
- B. To write the algorithm
- C. To reduce the size of the program
- D. To develop the problem statement

4. What is the primary function of an operating system?

- A. To manage computer hardware and software resources
- B. To develop new software
- C. To provide internet security only
- D. To create graphics

5. What is a common effect of improper posture while using digital devices?

- A. Improved mental health
- B. Better physical fitness
- C. Back and neck pain and fatigue
- D. Sharper concentration

Unit 2: Discrete Structures and Optimization

6. The proposition $\neg(P \wedge Q) \Leftrightarrow (\neg P \vee \neg Q)$ is a

- A. Tautology
- B. Contradiction
- C. Contingency
- D. Invalid formula

7. Let $S = \{1, 2, 3, 6, 12\}$ with the operation $a * b = \text{GCD}(a, b)$. Which element is the identity element of $(S, *)$?
- A. 1
 - B. 2
 - C. 6
 - D. 12
8. Let X and Y be two sets having n elements each. The total number of bijective functions from X to Y is
- A. n
 - B. $2n$
 - C. $n!$
 - D. 2^n
9. Which rule of inference is used in the argument "It is foggy and cloudy now; therefore it is foggy now"?
- A. Addition
 - B. Simplification
 - C. Resolution
 - D. Conjunction
10. With the universal set $U = \{1, 2, 3, \dots, 10\}$, what is the bit string for the set $\{2, 4, 6, 8, 10\}$? (The first bit stands for 1, the last for 10.)
- A. 0101010101
 - B. 1010101010
 - C. 1010010101
 - D. 0010010101

Unit 3: Computer System Architecture

11. The operation of a staircase (two-way) light switch best explains the
- A. OR operation
 - B. AND operation
 - C. Exclusive-NOR operation
 - D. Exclusive-OR operation
12. How many different characters can be encoded using the 7-bit ASCII code?
- A. 64
 - B. 512
 - C. 256
 - D. 128

13. What is the decimal equivalent of the octal number (23)₈?

- A. 18
- B. 19
- C. 20
- D. 21

14. In the IEEE 754 single-precision floating-point representation, the hexadecimal value 0x00000000 corresponds to

- A. The normalized value 2^{-127}
- B. The normalized value 2^{-126}
- C. The normalized value +0
- D. The special value +0

15. How many bits make up one byte?

- A. 4
- B. 8
- C. 16
- D. 32

Unit 4: Programming Languages and Computer Graphics

16. In C++, functions that can be overridden in derived classes for run-time polymorphism are declared using the keyword

- A. void
- B. virtual
- C. public
- D. typeid

17. If cp is a pointer to char, what is sizeof(cp) on a 32-bit machine?

- A. 1 byte
- B. 2 bytes
- C. 3 bytes
- D. 4 bytes

18. In pickling, which term refers to reading a serialized object from a file and restoring it to its original state?

- A. Serialization
- B. Deserialization
- C. Encryption
- D. Compression

19. How does a while loop usually traverse a list?
- A. By using an index counter that is increased in each iteration
 - B. By accessing elements directly without any index
 - C. By using the list's keys
 - D. By using list comprehensions

20. Which of the following is NOT a parameter passing method?
- A. Call by value
 - B. Call by reference
 - C. Call by name
 - D. Call by function

Unit 5: Database Management Systems

21. Which aggregate function returns the largest value in a column?
- A. MAX()
 - B. MIN()
 - C. COUNT()
 - D. AVG()
22. The index of an index-sequential file maintains
- A. the record structure
 - B. the storage structure
 - C. the addresses of records based on the key field
 - D. None of the above
23. A relation schema R is in 3NF if every nonprime attribute of R is
- A. fully functionally dependent on every key of R
 - B. non-transitively dependent on every key of R
 - C. both fully functionally dependent and non-transitively dependent on every key of R
 - D. partially dependent on the primary key
24. Which operation combines the rows of two tables and removes duplicates?
- A. INTERSECT
 - B. MINUS
 - C. UNION
 - D. JOIN
25. A table has fields F1, F2, F3, F4 and F5 with the functional dependencies $F1 \rightarrow F3$, $F2 \rightarrow F4$ and $(F1, F2) \rightarrow F5$. In terms of normalization, this table is in
- A. 1NF
 - B. 2NF
 - C. 3NF
 - D. 4NF

Unit 6: System Software and Operating System

26. A loader is a

- A. Program that translates assembly language into machine language
- B. Program that places programs into memory and prepares them for execution
- C. Program that accepts a high-level language program and produces its object program
- D. Program that translates byte code into machine code

27. The worst-fit memory allocation algorithm

- A. Is used only when nothing better is available
- B. Places a program in the largest available partition
- C. Should never be used
- D. Places a program in the smallest possible partition

28. In UNIX, the default permission bits of a file when it is created for the first time are controlled by the

- A. chmod value
- B. fmask value
- C. fvalue
- D. umask value

29. YACC builds which type of parsing table?

- A. SLR parsing table
- B. Canonical LR parsing table
- C. Operator-precedence parsing table
- D. LALR parsing table

30. In a regular expression, ? indicates

- A. Match any single character
- B. Match zero or more instances of the previous item
- C. Match one or more instances of the previous item
- D. Match zero or one instance of the previous item

Unit 7: Software Engineering

31. The top-down divide strategy is used in software engineering

- A. to refine the statement of the problem into decomposed partitions
- B. to draw up specification requirements
- C. to estimate the software cost
- D. to collect data to test a code

32. The design phase includes

- A. Data, architectural and procedural design only
- B. Architectural, procedural and interface design only
- C. Data, architectural and interface design only
- D. Data, architectural, interface and procedural design

33. The linear sequential model in software engineering is the

- A. prototype model
- B. waterfall model
- C. incremental model
- D. spiral model

34. Which of the following is NOT desired in a good SRS document?

- A. Functional requirements
- B. Non-functional requirements
- C. Goals of implementation
- D. Algorithms for software implementation

35. Which one of the following is not considered a software quality factor?

- A. Maintainability
- B. Feasibility
- C. Usability (user friendliness)
- D. Portability

Unit 8: Data Structures and Algorithms

36. Trying to delete an element from an empty stack results in which condition?

- A. Overflow
- B. Peek
- C. Underflow
- D. Full stack

37. In a deque, if insertion and deletion are both done at the same end, it behaves as a

- A. queue
- B. stack
- C. list
- D. string

38. In which searching technique is the key compared with the element in the middle of a sorted list?

- A. Linear search
- B. Binary search
- C. Search by hashing
- D. Sequential search

39. For a square array A of size $n \times n$, which loop structure visits exactly the lower triangular elements (including the diagonal)?

- A. for $i \leftarrow 1$ to n do for $j \leftarrow 1$ to i
- B. for $i \leftarrow 1$ to n do for $j \leftarrow i$ to n
- C. for $i \leftarrow 1$ to n do for $j \leftarrow 1$ to n
- D. for $i \leftarrow 1$ to n do for $j \leftarrow n$ down to i

40. Algorithms A1, A2, A3 and A4 solve the same problem with efficiency classes $\log n$, $\log(\log n)$, $n \log n$ and n^2 respectively. Which is the second-best algorithm?

- A. A1
- B. A2
- C. A3
- D. A4

Unit 9: Data Communication and Computer Networks

41. In which topology is each node connected to exactly two other devices, one on each side?

- A. Ring
- B. Star
- C. Mesh
- D. Tree

42. Which of the following is NOT a closed-loop congestion control mechanism?

- A. Backpressure
- B. Explicit signalling
- C. Implicit signalling
- D. Retransmission policy

43. Which one of the following is true about the interior gateway routing protocols RIP (Routing Information Protocol) and OSPF (Open Shortest Path First)?

- A. OSPF uses distance vector routing and RIP uses link state routing
- B. RIP uses distance vector routing and OSPF uses link state routing
- C. Both RIP and OSPF use link state routing
- D. Both RIP and OSPF use distance vector routing

44. Transmitting data through the air using electromagnetic waves is done using

- A. Guided media
- B. Data transfer rate
- C. Unguided media
- D. Switching

- 45.** Malware that looks like legitimate software, does not replicate itself, and usually spreads through email attachments and files downloaded and run from the Internet is called a
- A. Virus
 - B. Worm
 - C. Trojan
 - D. Ransomware

Unit 10: Artificial Intelligence

- 46.** An agent is composed of
- A. Architecture
 - B. Agent function
 - C. Percept sequence
 - D. Architecture and program
- 47.** Which of the following is an application of AI?
- A. Printing a document
 - B. Traffic prediction in map applications
 - C. Copying files to a pen drive
 - D. Typing text in a word processor
- 48.** Siri, Alexa and Google Assistant are examples of:
- A. Virtual machines
 - B. Database management systems
 - C. AI-powered digital personal assistants
 - D. Augmented reality games
- 49.** Which AI subsystem deals with interaction between computers and humans using natural languages?
- A. Machine Learning
 - B. Natural Language Processing
 - C. Data Analytics
 - D. Virtual Reality
- 50.** An autoassociative network is
- A. A neural network that contains no loops
 - B. A neural network that contains feedback
 - C. A neural network that has only one loop
 - D. A neural network that has two loops

Answer key with explanations

1. C — Information Technology Act

- The Information Technology Act, 2000 gave legal recognition to electronic records and digital signatures, enabling e-commerce in India.
- It was based on the UNCITRAL Model Law on Electronic Commerce adopted by the United Nations.
- The Act also defines cyber offences and their penalties, and it was amended in 2008.
- India has no separate law called the Cyber Act; cyber law is mainly the IT Act.

2. A — Hard disk drive (HDD)

- A hard disk drive is secondary memory, used to store data and programs permanently in large amounts.
- Other examples of secondary storage are SSDs, CDs, DVDs, pen drives and memory cards.
- Cache memory and registers are fast, small, volatile memories closely tied to the CPU, and a processor is not memory at all.

3. A — To find and fix errors in the code

- Debugging is the process of locating and correcting errors, called bugs, in a program.
- Errors may be syntax errors, logical errors or runtime errors.
- A program that has not been debugged may crash or quietly give wrong results.

4. A — To manage computer hardware and software resources

- An operating system is system software that manages hardware and software resources and provides common services to programs.
- Its tasks include process management, memory management, file management and device management.
- It also provides the user interface, such as a command line or a GUI, through which users work with the computer.

5. C — Back and neck pain and fatigue

- Improper posture while using devices, such as bending the neck over a phone, leads to back and neck pain and general fatigue.
- Sitting upright with the screen at eye level and feet flat on the floor reduces such physical strain.
- Using ergonomically designed chairs and desks and taking short stretching breaks also help.

6. A — Tautology

- This is De Morgan's law, so both sides have the same truth value in every row of the truth table and the biconditional is always true: a tautology.
- A tautology is true for every assignment of truth values; a contradiction is false for every assignment.
- A contingency is true for some assignments and false for others.
- The companion law is $\neg(P \vee Q) \Leftrightarrow (\neg P \wedge \neg Q)$, also a tautology.

7. D — 12

- 12 is the identity because $\text{GCD}(a, 12) = a$ for every a in S , since every element of S divides 12.
- GCD is associative and commutative, so $(S, *)$ is a commutative semigroup; having the identity 12 makes it a commutative monoid.
- The element 1 behaves as a zero, not an identity: $\text{GCD}(a, 1) = 1$ for every a .

8. C — $n!$

- A bijection pairs each element of X with a distinct element of Y : n choices for the first, $n - 1$ for the second and so on, giving $n!$.
- A bijective function is both one-one (injective) and onto (surjective), so it has an inverse function.
- A bijection between two finite sets exists only when both sets have the same number of elements.
- The total number of all functions from X to Y is n^n , which is much larger than $n!$.

9. B — Simplification

- Simplification lets us conclude p from $p \wedge q$, so from "foggy and cloudy" we may conclude "foggy".
- Addition works the other way: from p we may conclude $p \vee q$.
- Conjunction combines two separate premises p and q into $p \wedge q$.

10. A — 01010101

- Bit i is 1 when the number i is in the set; the even numbers 2, 4, 6, 8, 10 occupy positions 2, 4, 6, 8 and 10, giving 01010101.
- Bit strings make set operations easy: union is bitwise OR, intersection is bitwise AND and complement flips every bit.
- 10101010 would represent the odd numbers $\{1, 3, 5, 7, 9\}$, the complement of the given set.

11. D — Exclusive-OR operation

- With a staircase switch, toggling either switch changes the state of the lamp, which is exactly the behaviour of an exclusive-OR (XOR) function.
- The output of XOR is 1 when its inputs differ and 0 when they are the same, so flipping any one input flips the output.
- XOR gates are also used in parity generators, comparators and the sum output of half and full adders.

12. D — 128

- With 7 bits there are $2^7 = 128$ different bit patterns, so ASCII can encode 128 characters (codes 0 to 127).
- In general, n bits can represent 2^n distinct values.
- An 8-bit code doubles this to 256 characters, which is why ISCII and extended ASCII use 8 bits.

13. B — 19

- $(23)_8 = 2 \times 8 + 3 \times 1 = 16 + 3 = 19$.
- In octal, each position carries a power of 8: 1, 8, 64, 512 and so on.
- Octal digits range only from 0 to 7, so a digit 8 or 9 can never appear in an octal number.

14. D — The special value +0

- When the sign bit, exponent field and fraction field are all zero, IEEE 754 defines the special value +0; zero cannot be a normalized number.
- An exponent field of all zeros marks zero or denormalized numbers, and all ones marks infinity or NaN; these are the special values.
- 0x80000000, with only the sign bit set, represents -0; IEEE 754 has both a positive and a negative zero.

15. B — 8

- One byte is a group of 8 bits and is the basic unit used to measure memory.
- A group of 4 bits, half a byte, is called a nibble.
- Larger units are built from bytes, for example 1 KB = 1024 bytes.

16. B — virtual

- A function declared virtual in the base class can be overridden in derived classes, and the call is resolved at run time.
- When called through a base-class pointer or reference, the derived class's version runs; this is dynamic binding.
- A pure virtual function, declared with = 0, makes the class abstract.
- Base classes with virtual functions should also have a virtual destructor so derived objects are destroyed correctly.

17. D — 4 bytes

- A pointer stores a memory address, and on a 32-bit machine addresses are 32 bits, so every pointer is 4 bytes.
- The size of a pointer does not depend on the type it points to; char *, int * and double * are all the same size.
- On a 64-bit machine pointers are usually 8 bytes, while sizeof(*cp), the char itself, is always 1.

18. B — Deserialization

- Deserialization, or unpickling, converts a byte stream back into the original Python object.
- In Python it is done with pickle.load().
- Serialization is the opposite direction: converting an object into a byte stream with pickle.dump().

19. A — By using an index counter that is increased in each iteration

- A while loop starts an index variable at 0, reads list1[i], and increases i by 1 until i equals len(list1).
- Forgetting to increase the counter makes the condition stay true and causes an infinite loop.
- Direct traversal without an index, as in for item in list1, is a feature of the for loop.

20. D — Call by function

- Call by function is not a parameter passing technique; the standard methods are by value, by reference, by name and by value-result.
- In call by value, a copy of the argument is passed, so changes inside the function do not affect the caller.
- In call by reference, the address of the argument is passed, so the function can change the caller's variable.
- In call by name, used in ALGOL 60, the argument expression is re-evaluated every time the parameter is used.

21. A — MAX()

- MAX(column) returns the highest value in the column, for example the highest price or the latest date.
- MIN(column) returns the smallest value in the column.
- MAX() and MIN() work on numbers, strings and dates, and they ignore NULL values.

22. C — the addresses of records based on the key field

- In an index-sequential file, records are stored in key order and an index maps key values to record addresses.
- This supports both sequential processing in key order and fast direct access to a single record.
- ISAM (Indexed Sequential Access Method) is the classic example, with overflow areas for new records.

23. C — both fully functionally dependent and non-transitively dependent on every key of R

- The general definition of 3NF requires every nonprime attribute to be both fully functionally dependent and non-transitively dependent on every key of R.
- Full functional dependency on every key is the 2NF condition; adding the absence of transitive dependency gives 3NF.
- A nonprime attribute is one that is not a member of any candidate key of the relation.

24. C — UNION

- UNION returns all rows from both tables (or queries), keeping only one copy of any row that appears in both.
- UNION ALL is the variant that keeps the duplicate rows.
- INTERSECT returns only common rows, and MINUS returns rows of the first table that are not in the second.

25. A — 1NF

- The key is (F1, F2); F3 depends on F1 alone and F4 on F2 alone, so these are partial dependencies on part of the key.
- A relation with partial dependencies violates 2NF, so the table is only in 1NF.
- Decomposing it into (F1, F3), (F2, F4) and (F1, F2, F5) removes the partial dependencies and brings the design to 2NF and beyond.

26. B — Program that places programs into memory and prepares them for execution

- A loader places the executable program into main memory and prepares it for execution, including relocation where needed.
- An assembler translates assembly language, and a compiler translates a high-level language into object code.
- A linker combines object modules and library routines into a single executable before loading.

27. B — Places a program in the largest available partition

- Worst fit allocates the largest free hole, hoping that the leftover hole will be big enough to be useful.
- Best fit allocates the smallest hole that is large enough, leaving the smallest leftover.
- First fit allocates the first hole that is large enough and is usually the fastest.
- Simulations show first fit and best fit are generally better than worst fit in time and storage use.

28. D — umask value

- The umask (user file-creation mask) specifies which permission bits are switched off when a new file or directory is created.
- With the usual umask of 022, a new file gets 644 (rw-r--r--) and a new directory gets 755 (rwxr-xr-x).
- chmod changes the permissions of a file that already exists; it does not decide the default permissions at creation.

29. D — LALR parsing table

- YACC (Yet Another Compiler-Compiler) generates an LALR(1) parser from a grammar specification.
- LALR tables are much smaller than canonical LR(1) tables yet handle almost all programming-language grammars.
- LALR merges LR(1) states that have the same core, which can introduce reduce-reduce conflicts but never new shift-reduce conflicts.
- Bison is the GNU version of YACC and is often used with Lex or Flex.

30. D — Match zero or one instance of the previous item

- The ? quantifier makes the previous item optional: it matches zero or one occurrence, so colou?r matches both color and colour.
- * matches zero or more occurrences and + matches one or more occurrences of the previous item.
- The dot (.) matches any single character except a newline.
- In shell file-name wildcards, by contrast, ? matches exactly one character, which is a common source of confusion.

31. A — to refine the statement of the problem into decomposed partitions

- Top-down design starts from the whole problem and repeatedly breaks it into smaller sub-problems, refining each until it is simple enough to code.
- This stepwise refinement, described by Niklaus Wirth, produces a hierarchy of modules.
- Bottom-up design works the other way, building larger components from already-existing smaller ones.

32. D — Data, architectural, interface and procedural design

- Software design produces four models: data design, architectural design, interface design and procedural (component-level) design.
- Data design transforms the analysis model into data structures, and architectural design defines the relationships among major structural elements.
- Interface design describes how the software communicates with users and other systems, and procedural design details each component's processing.

33. B — waterfall model

- The linear sequential model is another name for the waterfall model, where phases follow one after another in a fixed order.
- Its phases are requirements analysis, design, coding, testing and maintenance, each starting after the previous one ends.
- The spiral model adds risk analysis in iterative cycles, and the incremental model delivers the product in parts.

34. D — Algorithms for software implementation

- An SRS states what the system must do, not how; algorithms belong to the design and coding phases.
- A good SRS contains functional requirements, non-functional requirements such as performance and reliability, and goals of implementation.
- A good SRS should also be correct, unambiguous, complete, consistent, verifiable, modifiable and traceable.

35. B — Feasibility

- Feasibility is assessed before a project starts to decide whether it is worth doing; it is not a quality attribute of the product.
- Quality factors, such as those in McCall's model and ISO 9126, include maintainability, usability, portability, reliability and efficiency.
- A feasibility study examines technical, economic, legal, operational and schedule feasibility before work begins.

36. C — Underflow

- Popping from an empty stack causes underflow, because there is no element to remove.
- Programs avoid underflow by calling an isEmpty check before every pop operation.
- In Python, calling pop() on an empty list raises an IndexError, which is how underflow shows up in a list-based stack.

37. B — stack

- Using only one end for both insertion and deletion makes the deque follow LIFO, so it behaves as a stack.
- If elements are inserted at one end and deleted at the other, the deque behaves as a queue (FIFO).
- This flexibility is why a deque can implement both stacks and queues.

38. B — Binary search

- Binary search compares the key with the middle element; if they match, the search ends successfully.
- Otherwise it continues in the left half when the key is smaller and in the right half when the key is larger.
- Halving the search area each time gives a time complexity of $O(\log n)$.

39. A — for $i \leftarrow 1$ to n do for $j \leftarrow 1$ to i

- Lower triangular elements satisfy $j \leq i$, so for each row i the column index runs from 1 to i .
- Letting j run from i to n visits the upper triangular part instead, where $j \geq i$.
- Running j from 1 to n visits all n^2 elements; the lower triangle including the diagonal has $n(n + 1)/2$ elements.

40. A — A1

- Ordered by growth rate, $\log(\log n) < \log n < n \log n < n^2$, so A2 is best and A1, with $\log n$, is second best.
- A slower-growing efficiency class means fewer steps for large inputs.
- Useful order to remember: $1 < \log \log n < \log n < n < n \log n < n^2 < 2^n < n!$.

41. A — Ring

- In a ring topology each node is connected to two neighbours, one on either side, forming a closed loop.
- Data travels around the ring from node to node until it reaches its destination.
- A break in the ring can disrupt the whole network unless a dual ring or bypass is used.

42. D — Retransmission policy

- Retransmission policy is an open-loop (preventive) method, applied before congestion occurs.
- Closed-loop methods react after congestion appears: backpressure, choke packets, implicit signalling and explicit signalling.
- Other open-loop policies include window, acknowledgement, discarding and admission policies.

43. B — RIP uses distance vector routing and OSPF uses link state routing

- RIP is a distance vector protocol: routers exchange their routing tables with neighbours and use hop count as the metric, with 16 meaning unreachable.
- OSPF is a link state protocol: every router floods link state advertisements and computes shortest paths with Dijkstra's algorithm.
- Both are interior gateway protocols used inside one autonomous system, whereas BGP is the exterior protocol between autonomous systems.

44. C — Unguided media

- Unguided (wireless) media carry data through the air as electromagnetic waves, with no physical conductor.
- Radio waves, microwaves and infrared waves are the main types of unguided media.
- Wireless technologies such as Bluetooth, Wi-Fi (wireless LAN) and mobile networks all use unguided media.

45. C — Trojan

- A Trojan disguises itself as a useful or legitimate program, so the user is tricked into downloading and running it.
- Unlike viruses and worms, a Trojan does not self-replicate or infect other files; it spreads through email attachments and downloads.
- Its name comes from the Greek story of the Trojan horse, in which soldiers hid inside a wooden horse given as a gift.

46. D — Architecture and program

- In AI, agent = architecture + program: the program implements the agent function and runs on the architecture.
- The architecture is the computing device with sensors and actuators on which the program runs.
- The agent function maps every possible percept sequence to an action.

47. B — Traffic prediction in map applications

- Map applications use AI to analyse location data from many users and predict traffic congestion and the fastest route.
- Other everyday AI applications include tagging friends in photos on social media, voice assistants and spam filtering of e-mail.
- Printing, copying files and plain typing are fixed, rule-based tasks that need no learning or intelligent decision making.

48. C — AI-powered digital personal assistants

- Siri, Alexa and Google Assistant are AI-powered digital personal assistants that understand voice commands and respond to them.
- They use Natural Language Processing for speech recognition and Machine Learning to improve their answers over time.
- A virtual machine is software that emulates a computer, and a DBMS manages databases; neither interacts using human speech.

49. B — Natural Language Processing

- Natural Language Processing deals with interaction between computers and humans using natural languages such as English, Hindi or Kannada.
- It lets a computer read, understand, interpret and generate human language in text or speech form.
- Machine Learning is about learning from data in general; NLP often uses ML techniques but focuses specifically on language.

50. B — A neural network that contains feedback

- An autoassociative network feeds its outputs back as inputs, so it contains feedback, and it recalls a complete stored pattern from a partial or noisy one.
- The Hopfield network is the classic autoassociative memory: every neuron is connected to every other neuron.
- Heteroassociative networks, in contrast, map an input pattern to a different output pattern.
- A network without loops is a feedforward network, such as a multilayer perceptron.

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