COMPUTER NETWORK ASSOCIATE III KNOWLEDGE TEST (CNAIIIKT) TEST GUIDE

WHY DO AT&T AND ITS AFFILIATES TEST?

At AT&T, we pride ourselves on matching the best jobs with the best people. To do this, we need to better understand your skills and abilities to make sure that you are indeed the right match for the job. Our ultimate goal is to set you up for success in your career at AT&T (that is, if AT&T is the right match for you). Research has shown that tests provide accurate measures of people's skills and abilities and, therefore, we use tests to identify people who are the best match for the job. Our philosophy is simple...if you succeed in your role, then we succeed as a company.

WHAT IS THE COMPUTER NETWORK ASSOCIATE III KNOWLEDGE TEST (CNAIIIKT)?

The CNAIIIKT measures knowledge that applies to the Computer Network Associate III functions. The test consists of 100 questions and covers the following four topics. Total testing time is approximately two hours.

COMPUTER FUNDAMENTALS (28 items)
This part of the test measures examinee knowledge of such areas as binary, hexadecimal and octal numbers, ROM, RAM, SCSI, data and program storage, UNIX, DOS, Windows, bits, memory problems, and computer components (e.g., CPU)

ELECTRONICS AND TELEPHONY (23 items)
This part of the test measures examinee knowledge of such areas as units of electronic measurement, resistors, data rates, simple circuits, identification of symbols, gates, truth tables, and signaling methods.

DATA (25 items)
This part of the test measures examinee knowledge of such areas as digital, analog, modems, transmission methods/modes, distortion, code sets, interfaces, twisted pair, coax, fiber, information transfer, switching, ASCII, ISDN, AMI, T1, RS232, X.25, multiplexing, and error correction.

NETWORKS (24 items)
This part of the test measures examinee knowledge of such areas as protocols (e.g., TCP/IP, PPP), architectures, PING, Network Adapter Cards, Network Interface Cards, CSMA/CD, OSI, SONET, LAN, WAN, MAN, HSLN, CBX, 10Base-T, routers, bridges, packet switching, ATM, frame relay, Internet, and firewalls.

Each problem has four answer choices. Only one answer choice is correct for each problem. The scoring of the test is based on the total number of correct answers. There is no penalty for guessing, so it is to your advantage to try as many questions as possible. If you are unsure about the answer to a question, a careful guess should be made.

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WHAT CAN I EXPECT TO SEE ON THE TEST?

PRACTICE TEST

The CNAIIIKT practice test consists of 25 items and covers the same four topics described above. As with the actual test, there are four answer choices lettered "a", "b", "c", and "d." Only one answer choice is correct for each problem.

The Practice Test Answer Key is on Page 6. There you will find the answers to each problem so that you can score your test. Your score on this test will provide you with some indication (although not a guarantee) of whether or not you are prepared to take the actual Computer Network Associate III Knowledge Test.

COMPUTER FUNDAMENTALS

1. The type of computer memory where software applications reside during operation is known as:
    a. Extended Memory
    b. Hard Disk Memory
    c. Random Access Memory
    d. Read Only Memory

2. Which of the following functions is NOT typically available on a PCMCIA card:
    a. LAN interface
    b. modem
    c. fax/modem
    d. tape drive

3. The sum of the binary numbers 1101 and 0010 is:
    a. 10100
    b. 1111
    c. 1010
    d. 10000

4. Which of the following best describes the density of data written on a tape?
    a. characters per block
    b. bits per track
    c. bits per inch
    d. characters per track

5. What is the purpose of a CONFIG.SYS file?
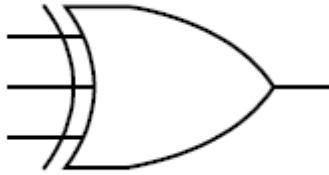   a. to configure the size of RAM
    b. to test all RAM in the system

c. contains special configuration commands that describe your system to DOS
d. contains only that information important to a hard disk system

6. UNIX is a:
a. single user multitasking operating system
b. single user single task operating system
c. multi-user multitasking operating system
d. multi-user single task operating system

ELECTRONICS AND TELEPHONY

7. On local loops, what signal is indicated by an open circuit and no current flow?
a. off-hook
b. dial pulses
c. on-hook
d. loop start

8. The wires in a three-wire, single-phase power cord are colored white, green and black. When connecting this type of cord to a piece of equipment, which of the following procedures is correct?
a. white to "hot", green to frame ground, black to neutral
b. white to frame ground, green to neutral, black to "hot"
c. white to neutral, green to "hot", black to frame ground
d. white to neutral, green to frame ground, black to "hot"

9. Ohm's Law may be stated in various forms. Which one of the following is wrong?
a. $I = E/R$
b. $R = E/I$
c. $E = I/R$
d. $E = IR$

10. The unit of inductance is the:
a. henry
b. coulomb
c. ohm
d. farad

11. To properly measure voltage of a circuit in millivolts, the digital multimeter must be placed in:
a. series with the circuit
b. series parallel with the circuit
c. parallel with the circuit
d. shunt series with the circuit

12. The symbol shown above represents which type of gate?
    a. the AND gate
    b. the EXCLUSIVE OR gate
    c. the NAND gate
    d. the NOR gate

DATA

13. A modem in circuit can be found between the Data Terminal Equipment (DTE) and the transmission medium. Why is this circuit arrangement used?
    a. DTEs are limited in their data transmission capabilities and the modem enhances these capabilities.
    b. Transmission devices are too large to connect directly to DTEs.
    c. Transmission devices are expensive and could not be directly connected on a 1:1 basis with DTEs.
    d. The modem is connected to a central switch which must be activated before the DTE and transmission device can interact.

14. A null modem cable would be used:
    a. to replace a defective modem
    b. to allow a DTE device to communicate with another DTE device
    c. to connect a modem to a COM port on a PC
    d. none of the above

15. Digital signaling is used primarily with:
    a. data equipment
    b. key telephone systems
    c. home telephones
    d. loudspeaker paging systems

16. Which of the following describes a digital carrier facility used to transmit a DS-1 formatted signal at 1.544 megabits per second?
    a. full duplex
    b. half duplex
    c. common carrier
    d. T1 carrier

17. The number of bits per character in a code set is its:
    a. character space
    b. logical control
    c. code level
    d. device control

18. Digital transmission is best characterized by:
    a. amplitude signal variations
    b. infinite wavelengths
    c. a stream of binary bits
    d. frequency harmonics

19. A method of detecting and correcting data transmission errors in the received data without requesting the sending station to retransmit the error block and all subsequent blocks is:
    a. CRC
    b. FEC
    c. HRC
    d. LRC

NETWORKS

20. An IP address has:
    a. a portion of the address which identifies the network to which the individual belongs
    b. a portion of the address which identifies an individual host on a destination network
    c. a 32 bit addressing scheme
    d. all of the above

21. The medium that supports the fastest transmission rate is:
    a. shielded twisted pair
    b. coaxial cable
    c. type 3 unshielded twisted pair
    d. fiber optics

22. Which inter-networking technology is designed to support voice, video and data together?
    a. Asynchronous Transfer Mode(ATM)
    b. X.25
    c. frame relay
    d. all of the above

23. Which of the following best describes an Internet service provider?
    a. a company that trouble shoots problems on the Internet
    b. a company that provides connections to the Internet
    c. a type of software that provides a graphical user interface to the Internet
    d. a company that maintains the servers on the Internet

24. Which of the following describes the most common implementation of a Local Area Network?
    a. fast packet network used to connect PCs to mainframes in an SNA environment
    b. a moderate to high speed data network confined to a limited geographic area
    c. a high speed data network used to connect PCs in different geographic regions of the country
    d. a local network used primarily to connect IBM PC's to UNIX servers

25. Which of the following could be used to connect remote LANs?
    a. D4
    b. ISDN
    c. ATM
    d. all of the above

PRACTICE TEST ANSWER KEY

The table below provides the answers for each section of the test. After scoring your test, total the number of questions you got correct across all four sections. This is your Total Score.

Computer Fundamentals	Electronics and Telephony	Data	Networks
1. C	7. C	13. A	20. D
2. D	8. D	14. B	21. D
3. B	9. C	15. A	22. A
4. C	10. A	16. D	23. B
5. C	11. C	17. C	24. B
6. C	12. B	18. C	25. D
		19. B	

YOUR TOTAL SCORE: _____

INTERPRETING YOUR SCORE

Using the table below, you can estimate what your score might be if you were to take the actual Computer Network Associate III Knowledge Test (CNAIIIKT) today.

The information that is given below was derived from trial tests of the test items, in which a small number of people completed the items from both the actual test and the practice test. Because the trial test was taken by a small number of people, 100% equivalence between the practice test and the actual test cannot be assumed. Thus, the information in the table below is provided only to assist you in evaluating your readiness to take the actual CNAIIIKT. It is not a guarantee of your success on the actual test.

Practice Test Score	Probability of Passing Actual Test
Below 15	.01
15	.03
16	.11
17	.25
18	.46
19	.68
20	.85
21	.95
22	.99
23	>.99
24	>.99
25	>.99

WHAT CAN I DO TO PREPARE FOR THE TEST?

At AT&T, our goal in testing is not to cause you to fail; rather, our intent is to set our employees up for success. Remember, we succeed when you succeed. The best way for you to succeed on a given test is to adequately prepare. As illustrated above, the CNAIIIKT requires specific knowledge. Acquiring this knowledge through coursework or independent study is the best way to prepare for this test. Keep in mind, however, that completion of coursework or independent study will not guarantee that you will pass the test.

Here are some additional tips to help you prepare:

- ✓ Gather resources (books, articles, other materials, etc.) that cover the areas measured in this test
- ✓ Study the information carefully
- ✓ Have someone quiz you on the material prior to your testing date
- ✓ Seek out others who have knowledge in this area and may be able to assist you
- ✓ Get a good night's rest the night before your testing session
- ✓ Eat a well-balanced meal an hour before testing

It is important that you have an understanding of the material presented in the course or obtained through independent study.

HOW WILL THIS TEST BE ADMINISTERED?

A member of our Staffing team will provide you with the time and location for your testing session. Try to arrive at the location at least 15 minutes before your scheduled test time to give yourself time to relax before the test begins. You may want to bring a jacket or a sweater in case the temperature in the testing location is not to your liking. Feel free to ask questions before the test begins, and be sure you understand the format of the CNAIIIKT.

WHAT CAN I DO TO PERFORM MY BEST ON THE TEST?

- ✓ Read questions carefully.
- ✓ <u>Think</u> - reason out your answer.
- ✓ Answer questions you are sure of first.
- ✓ Reject immediately those answers you know are incorrect.
- ✓ Don't change your answers unless an obvious mistake has been detected.
- ✓ Be aware of the time (make a mental note of the time when the test begins and pace yourself accordingly).

RETEST INTERVALS

If you do not qualify on the CNAIIIKT, do not be discouraged. Perhaps, this would indicate that this position is really not the best match for you. Who knows – perhaps a better, more closely matched opportunity awaits you. If you feel strongly that this is the right position for you, then your first two retest opportunities are at six month intervals. Subsequent retests are at one-year intervals. However, please note that test standards are periodically updated to reflect current abilities and skills required for our jobs. Therefore, it may be necessary to meet new test standards should they be introduced prior to your placement on the job.

SUMMARY

When you succeed in your job, AT&T succeeds as a company! Successful completion of the CNAIIIKT qualifies you for possible placement into jobs requiring this test. Additional testing may be required for certain positions. See job briefs in your area for additional testing requirements for titles you are interested in.

Thank you for your interest in starting (or expanding) your career at AT&T!