Teracom Training Institute
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Quality in telecommunications and networking technology training since 1992

REV 4

the teracomtraining.com telecom, datacom and networking quiz

Assess your knowledge of telecommunications, data communications and networking fundamentals!

Use this quiz to measure your knowledge of telecommunications, data communications and networking fundamentals! This will help you assess whether your knowledge base is solid, or whether you need to attend our high-quality training seminars or order our videos.

INSTRUCTIONS

1. Print this document using the Acrobat reader's print function.
2. Write down your answers.
3. Get the correct answers: visit the online resources area at www.teracomtraining.com by following the links to tutorials and quizzes. Answers to a section of the quiz will be posted each month.
4. No one expects you to know all this stuff…but comparing your answers to the correct ones, you may well find that you need to improve your knowledge base. Our public seminars and video courses are the ideal way to fill in the gaps, put in place a solid base of knowledge and a structure on which to build.
5. Register for one of our high-quality public seminars, hold a private on-site seminar, or order our self-paced video series.
6. Learn what the jargon and buzzwords really mean, and how it all fits together. Be more effective and less frustrated. Deal with telecom and networking equipment vendors and carriers. Converse with "techies". Obtain a valuable reference book.
7. Gain serenity, a promotion, a revitalized career, new job, or even achieve world domination.*
   *Individual results may vary

QUIZ PART 1: TELECOM AND TELEPHONY BASICS

1. What material is used to connect a telephone to a telephone switch? What is this called? What is its maximum length?

2. What is the name of the building that contains the telephone switch to which telephones are attached?

3. What does "analog" mean? Why is the term "analog circuit" not precise?

4. What is the correct term for "dial-up?"

5. What does "bandwidth" mean? What is "the voiceband"?

6. What do we call circuit-switched voiceband analog service in the business?

7. What is a "CLEC"? What service is driving their business today?

8. How are Central Offices organized to connect to long-distance networks?

9. What is the name given to the interconnection point between the local access networks and long-distance networks?

10. How many pieces was the Bell System split into following anti-trust actions?

QUIZ PART 2: TRANSMISSION FUNDAMENTALS

1. What are the first three reasons for using digital transmission techniques?

2. How is bandwidth measured on analog circuits? On digital?

3. During analog-digital conversion, how many levels are used when quantizing a voice signal in the telephone system?

4. During analog-digital conversion, how often do we take a sample of the voice signal on a phone line?

5. How many BYTES per second does that work out to? How many bits per second? What is this rate called?

6. What is the DS1 rate? The DS3 rate?

7. What's the difference between T1 and DS1? Between T3 and DS3?

8. What does a repeater do?

9. Why are some digital data circuits 56 kb/s instead of 64 kb/s?

10. What does SONET stand for? What is "OC"?

QUIZ PART 3: DATACOM BASICS

1. What is DTE? DCE? What do they do?

2. What name do we give to DCE for analog circuits?

3. What name do we give to DCE for digital circuits?

4. What does "asynchronous" mean? How is this term used in data communications?

5. What did people used to mean when they said "synchronous" communications? Why should we avoid this term? What is the correct one?

6. What is a multi-drop circuit? What control information or functions are required?

7. What makes a LAN a LAN?
How does this differ from older ideas such as IBM mainframe cabling systems?

8. What are the similarities?

9. What is a packet?

10. How are packets are frames related?

QUIZ PART 4: DATA ON DIGITAL TRANSMISSION CIRCUITS

1. What is subrate multiplexing? Why is it needed?

2. Why is subrate multiplexing not efficient?

3. What is the difference between channelized and statistical multiplexing?

4. Why is statistical multiplexing called statistical multiplexing?

5. Can we connect more or fewer terminals on a circuit if we implement statistical multiplexing? Why?

QUIZ PART 5: LOCAL CABLING: LANs

1. What is a "bus topology"?

2. How did this evolve?

3. What was the original bus LAN technology? How fast did it run?

4. What was another choice for LAN technology?

5. What is the standard choice today for LAN, cables and hubs?

QUIZ PART 6: NETWORKING

1.What does "protocol" mean?

2. What is the difference between a protocol and a standard?

3. What are the seven layers of the OSI model?

4. What does "encapsulation" mean? Why do we do this?

5. What is the principal function of a router?

6. What does it use to do this?

7. Why do we want to use routers instead of bridges?

8. What is an IP address class? How do you get publicly valid IP addresses?

9. Can you use any IP addresses on a private network (not connected to the Internet)? If so, should you?

10. What is a virtual circuit?

11. What is the difference between connection-oriented and connectionless network services?

12. Why is Frame Relay faster than X.25?

13. What was ATM supposed to do that Frame Relay doesn't?

14. Why are people interested in IP over ATM?

15. What are two ways that you could obtain IP over ATM service? What are the advantages and disadvantages of each?

QUIZ PART 7: INTERNET

1. What was one of the original design objectives of the Internet?

2. What protocol ensures reliable end-to-end communications across the Internet?

3. What technique does it employ to ensure this reliability?

4. Give two reasons why we need the Domain Name System.

5. What limitation did Internet mail programs have?
What did this prevent us from doing?

6. How is this limitation overcome?
What name do we give the scheme for automating the fix?

7. What is PPP?

8. Where did we get the term "Web" from? Where did the term network come from? What is the difference between the Web and the Internet?

9. What is HTML? What is the difference between this strategy and WYSIWYG?

10. What is the difference between the Internet and an intranet?

QUIZ CONCLUSION / SELF ASSESSMENT

Thanks for taking the teracomtraining.com telecom, datacom and networking quiz!

If you had all the answers right, we're interested in hiring you as an instructor.

More likely, there were some gaps in your knowledge. While **no one expects you to know all of this stuff**, it is necessary to build a **solid base of knowledge** and a structural **understanding of how it all fits together**… and a detailed book you can refer to for specific information.

Our public seminars and video courses are geared for the **non-engineering professional** needing a comprehensive overview and update, **and those new to the business** needing to get up to speed. They're the ideal way to put in place a solid base of knowledge.

We **start at the beginning** of the story, progress through it in a logical order and finish at the end. We'll **explain the jargon and buzzwords**, and even more importantly, provide you with a **structured understanding on which you can build** in the future.

Career-enhancing training.

NEXT STEP: VISIT OUR WEBSITE AT WWW.TERACOMTRAINING.COM

Review the outline for our most popular seminar,
Telecommunications, Data Communications and Networking for Non-Engineers.

Check out a sneak preview of our materials with our free on-line tutorials.

Register for seminars or order video courses,
so you can benefit from this career-enhancing training today!

Many thanks!

Eric C. Coll, M.Eng., P.Eng., Director
Teracom Training Institute

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