CHAPTER 20

FTP

20.1 MULTIPLE-CHOICE QUESTIONS

1. d   3. c   5. b   7. a   9. d

11. c   13. b

20.2 EXERCISES

15. If the control connection is accidentally severed during an FTP transfer, there would be no problem until the transfer completed and the client attempted to send another command.

17. There should be limitations on anonymous FTP because it is unwise to grant complete access to a system to just anyone. If the commands that an anonymous user could use were not limited, that user could do great damage to the file system (e.g., erase it completely)

19. See Figure 20.1.

21. See Figure 20.2.

23. Server to Client: 220 (Service Ready)

Client to Server: USER forouzan

Server to Client: 331 (User name OK, password is needed)

Client to Server: PASS xxxx

Server to Client: 230 (User login OK)

Client to Server: PASV

(Server opens a passive socket)

Server to Client: 227 (Entering passive mode. Here's the socket address)

(Client issues an active open to the returned socket address)

Client to Server: LIST /usr/user/report

Server to Client: 125 (Data connection open. Data transfer will start shortly)

Figure 20.1   *Exercise 19*

Ephemeral port number		21	
Sequence number			
Acknowledgment number			
5	Reserved	Flags	Window size
Checksum		Urgent Pointer	
"C"	"O"	"M"	"M"
"A"	"N"	"D"	" "
"a"	"r"	"g"	"u"
"m"	"e"	"n"	"t"
"s"	CR	LF	

Figure 20.2   *Exercise 21*

Ephemeral port number		20	
Sequence number			
Acknowledgment number			
5	Reserved	Flags	Window size
Checksum		Urgent Pointer	
DATA			

< Data transfer from Server to Client >

Server to Client: 226 (Closing data connection)
Client to Server: QUIT
Server to Client: 221 (Service Closing)

25. Server to Client: 220 (Service Ready)
Client to Server: USER forouzan
Server to Client: 331 (User name OK, password is needed)
Client to Server: PASS xxxx
Server to Client: 230 (User login OK)
(Client opens a passive socket)
Client to Server: PORT 8888
(Server issues an active open to the returned port)
Server to Client: 150 (File status OK. Data connection will be open shortly)
Client to Server: RETR /usr/user/report
Server to Client: 250 (Requested file action OK)

< Data transfer from Server to Client >

Server to Client: 226 (Closing data connection)
Client to Server: QUIT
Server to Client: 221 (Service Closing)

27. Server to Client: 220 (Service Ready)
Client to Server: USER forouzan
Server to Client: 331 (User name OK, password is needed)
Client to Server: PASS xxxx
Server to Client: 230 (User login OK)
Client to Server: NOOP
Server to Client: 211 (System status or help reply)
Client to Server: QUIT
Server to Client: 221 (Service Closing)

29. % ftp mcGraw.com
Connected to mcGraw.com
Server to Client: 220 (Service Ready)
Client to Server: USER forouzan
Server to Client: 331 (User name OK, password is needed)
Client to Server: PASS xxxx
Server to Client: 230 (User login OK)
Client to Server: MKD /usr/usrs/letters/Jan
Server to Client: 200 (Command OK)

31. % ftp mcGraw.com
Connected to mcGraw.com
Server to Client: 220 (Service Ready)
Client to Server: USER forouzan
Server to Client: 331 (User name OK, password is needed)
Client to Server: PASS xxxx
Server to Client: 230 (User login OK)
Client to Server: PWD
Server to Client: 212 (Directory status) /usr/users/forouzan
Client to Server: RNFR /usr/usrs/reprot/file1
Server to Client: 200 (Command OK)
Client to Server: RNTO /usr/usrs/letters/file1
Server to Client: 200 (Command OK)

33. See Table 20.1.

Table 20.1 *FTP commands in UNIX and TCP/IP*

UNIX	TCP/IP	UNIX	TCP/IP	UNIX	TCP/IP
!	No Equivalent	$	No Equivalent	account	No Equivalent
append	APPE	ascii	TYPE A	bell	No Equivalent
binary	TYPE I	bye	QUIT	case	No Equivalent
cd	CWD	cdup	CDUP	close	QUIT
cr	TYPE N	delete	DELE	debug	No Equivalent
dir	LIST	discount	No Equivalent	form	STRU
get	RETR	glob	No Equivalent	hash	No Equivalent
help	HELP	lcd	No Equivalent	ls	LIST
macdef	No Equivalent	mdelete	DELE	mdir	LIST
mget	RETR	mkdir	MKD	mls	LIST
mode	MODE	mput	No Equivalent	nmap	No Equivalent
ntrans	No Equivalent	open	ftp < hostname >	prompt	No Equivalent
proxy	No Equivalent	sendport	PORT	put	STOR
pwd	PWD	quit	QUIT	quote	No Equivalent
recv	RETR	remote-help	HELP	rename	RNFR, RNTO
reset	REIN	rmdir	RMD	runique	STOU
send	STOR	status	NOOP	struct	STRU R
sunique	STOU	tenex	No Equivalent	trace	No Equivalent
type	TYPE	user	USER	verbose	No Equivalent
?	HELP				