|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **Computer Networks** | **Course Code:** | **CL-307** |
| **Program:** | **BS(Computer Science)** | **Semester:** | **Fall 2018** |
| **Duration:** | **30 Minutes** | **Total Marks:** | **30** |
| **Paper Date:** | **08-October-18** | **Weight** | **5%** |
| **Section:** | **A** | **Page(s):** | **4** |
| **Exam:** | **Quiz 1** | **Reg. No.** |  |
| **Instruction/Notes:** |  | | | |

**PART 1 (Marks: 7)**

**Suppose you have TCPclient and TCPserver on one host and UDPclient and UDPserver on another host.**

1. **Suppose you run TCPclient before TCPserver. What happens and why? (2)**
2. **Suppose you run UDPclient before UDPserver. What happens and why? (2)**
3. **What happens if you use different port numbers for the client and server sides (explain in both cases-UDP and TCP)? (2)**
4. **Why Bind fail error occur? (1)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PART 2 (Marks: 8)**

1. **What information is needed to create a TCP Socket using socket function? What does it return?(2)**
2. **Differentiate between TCP and UDP. Give example where TCP and UDP are used**? **(3)**
3. **Give two uses of Touch command? Which Linux command is used to show Memory and CPU utilization for running processes? (3)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PART 3 (Marks: 15)**

**Select an appropriate answer for each of the following questions.**

1. GNU Debugger, which is also called

A. gbd B. gnud C. gdb D. None

1. **Which combination of family and type of socket is used to create a datagram socket  
   Select one:**A. AF\_ROUTE, SOCK\_DGRAM B. AF\_INET, SOCK\_DGRAM  
   C. AF\_INET, SOCK\_STREAM D. AF\_KEY, SOCK\_DGRAM
2. The combination of an IP address and a port number is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Network address C. MAC address
4. Socket addresses D. None of the choices are correct
5. How many bits make up IPv4 and IPv6 addresses respectively?
6. 16 and 128
7. 32 and 128
8. 16 and 32
9. None
10. What is the default packet size for ping command on Linux System?
11. 32 \* 8 bits B. 32 bits C. 32 \* 16 bits D. 32 \* 2 bits
12. Which of the following function puts the server in blocking state in TCP Socket Programming until client sends connection request?  
    A. Recv() B. Listen() C. Accept() D. both A and B
13. MAC Address of machine can be found using which Linux command:
14. Host –s MAC B. ipconfig
15. Both a & b D. None of these
16. Which one is incorrect Port No?
17. 65535 B. 241 C. 30987 D. None
18. Network byte order is also known as
19. Little Endian B. Big Endian C. Can be little/big endian
20. Can socket stream send data without a connection?
21. A connection needs to be established to send/receive data.
22. NO
23. Can be
24. ClientSocket = socket (AF\_INET, **SOCK\_DGRAM**, IPPROTO\_UDP)

The second parameter indicates that socket is of \_\_\_\_\_ type.

1. TCP
2. UDP
3. TCP/UDP
4. None
5. \_\_\_\_\_\_ command can be used to verify the path that your data will take to reach its destination, without actually sending your data.
6. Ping
7. Traceroute
8. Wget
9. Route
10. Which statement about capture filters is correct (SELECT ALL THAT APPLY)?
11. Capture filters can be applied after the capture process begins
12. Capture filters can be applied while you are opening a trace file
13. Wireshark includes a default set of capture filters
14. Which Display filter will show only packets for the source address of 192.168.0.25?
15. Ip.addr == 192.168.0.25 src
16. Ip.src == 192.168.0.25
17. !ip.src == 192.168.0.25
18. Write a capture filter that would filter all the traffic coming from Google or Facebook on TCP Ports 20 or 21(Server Side Port Numbers) to your PC (Suppose Google IP: **G.G.G.G** & Facebook IP: **F.F.F.F**