

Answer the following questions:

1. Which of the following system calls are not used in a UDP connection?
 - a) bind ()
 - b) connect()
 - c) socket()
 - d) close()

Answer: connect()

2. Which of the following system calls is used to establish a connection between a client and a server in a TCP based connection?
 - a) fork()
 - b) bind()
 - c) connect()
 - d) write()

Answer: connect()

3. State True or False. In connection-less communication, each message carries the destination address and is routed independently from source to the destination.

Answer: True

4. State True or False. Concatenation of IP address, port and process name defines a socket.

Answer: True

5. State True or False. Network communications always use little-endian byte order.

Answer: False

6. In a Listen system call, what does the parameter Backlog define?
 - a) maximum number of pending connections allowed
 - b) maximum number of concurrent connections allowed
 - c) minimum number of concurrent connections allowed
 - d) minimum number of pending connections allowed

Answer: (a)

7. Complete the code snippet for establishing a TCP socket at a server. There are five statements that are to be completed (text in red color indicates where the code is to be inserted):

```
int sockfd, bindret, fd, clientfd;

    socklen_t clilen;
    struct sockaddr_in serv_addr, cli_addr;
    printf("Starting server...\n");
    sockfd = socket(AF_INET, ,0); /* 1: What will be the second argument
of the socket system call to create a TCP socket */
```

```
serv_addr.sin_family = ; /* 2: What will be the value that needs to  
be given to this field if the Address family is IPV4*/
```

```
serv_addr.sin_addr.s_addr = ;/* 3: What should be the value of  
this field if we wish to bind all local interfaces of the host*/
```

```
serv_addr.sin_port = ; /*4: What should be the value of this field  
if we want to use port no 2345 as the server port*/
```

```
[D]
```

```
bindret = bind(sockfd, ,sizeof(serv_addr)); /* 5 : What will be the  
second argument of bind() system call here*/
```

Answer:

1. SOCK_STREAM
2. AF_INET (Case Sensitive)
3. INADDR_ANY (Case Sensitive)
4. htons(2345)
5. (struct sockaddr *)&serv_addr