Question [1] 2 Mark(s): State whether each of the following statements is True or False:

1   In classful IP allocation, there are 2^{16} networks in class B.

   A-True   B-False

2   In classful IP allocation, there are 4 classes available for individual host addressing.

   A-True   B-False

3   To get the IP address of a website, your browser communicates with the DHCP server.

   A-True   B-False

4   TCP is an application layer protocol while HTTP is a transport layer protocol.

   A-True   B-False

Question [2] 4 Mark(s): Select the Correct Answer for each of the following statements

1   To connect to a server running on the same machine with the client, which of the following can't be used for the hostname?

   A-"localhost"   B-"127.0.0.1"   C- InetAddress.getLocalHost()   D-"127.0.0.0"

2   Which of the following protocol follows connection-less service?

   A- TCP   B- TCP/IP   C- UDP   D- HTTP

3   Which of the following tuples does represent a valid socket pair (src, dst)?

   A-(192.168.1.10: 4000)   B-   C-(192.168.1.15:4000,   D-
                              (192.168.1.10:21,192.168.1.11:5662)   3000)   (192.168.1.10:3000, 192.168.1.15:4000)

4 The TCP server socket (s) listens for a connection request from a client (c) using which of the following statements?

   A-SocketSocket c= new   B- Socket c = s.accept();   C- Socket c =   Socket c = new
   ServerSocket(port);   s.getSocket(port);   Socket(port);

Question [3] 4 Mark(s): Answer the Following:

1.   (2 Marks) Using classful IP address allocation; find the class, network ID, direct broadcast address, and local broadcast address from the IP address (192.50.6.17).

   - Class: C
   - Network id: 192.50.6.0
   - Direct broadcast address: 192.50.6.255
   - Local broadcast address: 255.255.255.255

2. (1 Mark) Find the compressed format of the IPv6 address.

2001:0db8:0000:0000:0000:a0b0:0008:0001

2001:db8::a0b0:8:1

3. (1 Mark) Expand the following IPv6 address (1050::5:600:300c:326b)

1050:0000:0000:0000:0005:0600:300c:326b