Home Work #1
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Question #1

Router Modes:

User EXEC Mode:

```
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)
Technical Support: http://www.cisco.com/techsupport
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Cisco 2620 (MPC860) processor (revision 0x200) with 253952K/8192K bytes of memory
.
Processor board ID JAD05190MTZ (4292891495)
M860 processor: part number 0, mask 49
Bridging software.
X.25 software, Version 3.0.0.
1 FastEthernet/IEEE 802.3 interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)


         --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no


Press RETURN to get started!



Router>
```

Privileged EXEC mode:

```
         --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no


Press RETURN to get started!



Router>enable
Router#
```

Global Configuration mode:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
```

Question #2

Changing Hostname of the Router:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname my_router
my_router(config)#exit
my_router#
```

Question #3

Configuring Date and Time on the Router (Clock Set Command)

```
my_router>enable
my_router#clock set ?
  hh:mm:ss  Current Time
my_router#clock set 6:00:00
% Incomplete command.
my_router#clock set 6:00:00 11 September 2001
my_router#show clock
6:0:6.772 UTC Tue Sep 11 2001
my_router#show clock
6:0:14.183 UTC Tue Sep 11 2001
my_router#show clock
6:0:22.422 UTC Tue Sep 11 2001
my_router#show clock
6:2:25.889 UTC Tue Sep 11 2001
my_router#
```

Question #4

Setting a banner on the Router

```
my_router>enable
my_router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
my_router(config)#banner motd #Welcome to the Network#
my_router(config)#exit
my_router#
%SYS-5-CONFIG_I: Configured from console by console

my_router#exit









my_router con0 is now available




Press RETURN to get started.









Welcome to the Network

my_router>
```

Question #5

Displaying the Router's Running-Configuration and Start-Up Configuration

```
my_router#
my_router#show running-config
Building configuration...

Current configuration : 448 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname my_router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface FastEthernet0/0
 no ip address
 duplex auto
 speed auto
 shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
banner motd ^CWelcome to the Network^C
!
!
!
!
!
line con 0
!
 --More-- |
```

```
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
!
end
```

Question #6

Enable Password and Enable Secret Password with the Encryption Techniques/Levels

```
my_router>enable
my_router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
my_router(config)#enable password my_pass123
my_router(config)#exit
my_router(config)#exit
my_router#
%SYS-5-CONFIG_I: Configured from console by console
exit
```

```
my_router con0 is now available
```

```
Press RETURN to get started.
```

```
Welcome to the Network

my_router>enable
Password:
my_router#
```

```
my_router#configu
my_router#configure termin
my_router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
my_router(config)#enabl
my_router(config)#enable ?
  password  Assign the privileged level password
  secret    Assign the privileged level secret
my_router(config)#enable en
my_router(config)#enable enab
my_router(config)#enable enable secre
my_router(config)#enable enable secret my_pass123
                          ^
% Invalid input detected at '^' marker.

my_router(config)#enable secret my_pass123
The enable secret you have chosen is the same as your enable password.
This is not recommended.  Re-enter the enable secret.
my_router(config)#enable secret my_pass1234
my_router(config)#eix
my_router(config)#eix
my_router(config)#exi
my_router(config)#exit
my_router#
%SYS-5-CONFIG_I: Configured from console by console

my_router#show runnu
my_router#show runn
my_router#show running-config
Building configuration...

Current configuration : 524 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname my_router
!
!
!
enable secret 5 $1$mERr$fwHP6nJ6QOpy4qLUUQY76/
enable password my_pass123
!
!
!
!
!
!
ip cef
 --More--
```

Question #7

Line Console Password Implementation on CISCO 2600 Series Router

```
my_router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
my_router(config)#line console 0
my_router(config-line)#password my_pass123
my_router(config-line)#login
my_router(config-line)#end
my_router#
%SYS-5-CONFIG_I: Configured from console by console
exi
my_router#exit
```

```
my_router con0 is now available
```

```
Press RETURN to get started.
```

```
Welcome to the Network

User Access Verification

Password:

my_router>
```

Question #8

What is Telnet? How to Telnet? + Line VTY/Telnet Password

Telnet is a network protocol used to virtually access a computer and to provide a two-way, collaborative
and text-based communication channel between two machines. It follows a user command Transmission
Control Protocol/Internet Protocol (TCP/IP) networking protocol for creating remote sessions.

You can Telnet into a router using the Telnet client included with Windows. ... Unlike other protocols, Telnet isn't secure and shouldn't be used over the Internet. For example, typing telnet hostname would connect a user to a hostname named hostname. Telnet
enables a user to manage an account or device remotely.

```
my_router#confi
my_router#configure ter
my_router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
my_router(config)#line vty 0 4
my_router(config-line)#passwo
my_router(config-line)#password my_pass123
my_router(config-line)#login
my_router(config-line)#exi
my_router(config-line)#exit
my_router(config)#ei
my_router(config)#exi
my_router(config)#exit
my_router#
%SYS-5-CONFIG_I: Configured from console by console

my_router#
```

Question #9

Usage of Router with different topology.

- Media, signal, and binary transmission
- Physical addressing
- Path determination and logical addressing
- End-to-End connection and reliability
- Interhost communication
- Data representation and encryption
- Network process to application.