Subject :	**SEHH2238 : Computer Networking**
Lab/Tutorial :	**Session 1 : Basic**

1) Topology

1) For *n* devices in a network, what is the number of cable links required for:

No. of devices		*Mesh*	*Ring*	*Bus*	*Star*
9	***Total No. of Cables***	36	9	1+9	9
	No. of Ports per device	8	2	1	1
N	***Total No. of Cables***	n(n-1)/2	n	1+n	n
	No. of Ports per device	n-1	2	1	1 n for hub

2) Draw a hybrid topology with a star backbone connecting three bus backbones. Each bus backbone connects three ring networks.

2) Transmission Mode / Data Flow

transmission mode:
simplex?
half-duplex?
full-duplex?

1) Communication between a computer and a keyboard involves simplex transmission.

2) A television broadcast is an example of simplex transmission.

3) The B is the physical path over which a message travels.
A) Protocol B) Medium C) Signal D) All the above

4) The information to be communicated in a data communications system is the _____.
A) Medium B) Protocol C) Message D) Transmission

5) Network performance is good when throughput is _____ and delay is _____.
A) high, high B) high, low C) low, high D) low, low

6) _____ is the protocol suite for the current Internet.
A) TCP/IP B) OSI C) UNIX D) ATM

7) In TCP/IP protocol suite, _____ layer provides reliable end-to-end connection.
A) application B) transport C) network D) data link

Additional Questions

1) A color image uses 16 bits to represent a pixel. What is the maximum number of different colors that can be represented? What is the maximum number of characters that can be represented by Unicode?
2^16 for all color
each char = 2byte = 16 bit
max no. of char = 2^16

2) A pixel can have 1000 colours. How many bits are required to represent a pixel?

2^10 > 1000
10bit required