Unit 1

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| S.No | MCQ | BTL |  |
|  | In the layer hierarchy as the data packet moves from the upper to the lower layers, headers are **a) Added** b) Removed c) Rearranged d) Modified |  | a |
|  | The structure or format of data is called **a) Syntax** b) Semantics c) Struct d) None of the mentioned |  | a |
|  | Communication between a computer and a keyboard involves \_\_\_\_\_\_\_\_\_\_\_\_\_\_ transmission a) Automatic b) Half-duplex c) Full-duplex **d) Simplex** |  | d |
|  | The first Network a) CNNET b) NSFNET c) ASAPNET **d) ARPANET** |  | d |
|  | The \_\_\_\_\_\_\_ is the physical path over which a message travels a) Path **b) Medium** c) Protocol d) Route |  | b |
|  | Which organization has authority over interstate and international commerce in the communications field? a) ITU-T b) IEEE **c) FCC** d) ISOC |  | c |
|  | Which of this is not a network edge device? a) PC b) Smartphones c) Servers **d) Switch** |  | d |
|  | A set of rules that governs data communication a) **Protocols** b) Standards c) RFCs d) None of the mentioned |  | a |
|  | Three or more devices share a link in \_\_\_\_\_\_\_\_ connection a) Unipoint **b) Multipoint** c) Point to point d) None of the mentioned |  | b |
|  | The number of layers in Internet protocol stack **a) 5** b) 7 c) 6 d) None of the mentioned |  | a |
|  | The number of layers in ISO OSI reference model a) 5 **b) 7** c) 6 d) None of the mentioned |  | b |
|  | This layer is an addition to OSI model when compared with TCP IP model a) Application layer b) Presentation layer c) Session layer **d) Both Session and Presentation laye** |  | d |
|  | Application layer is implemented in **a) End system** b) NIC c) Ethernet d) None of the mentioned |  | a |
|  | Transport layer is implemented in **a) End system** b) NIC c) Ethernet d) None of the mentioned |  | a |
|  | The functionalities of presentation layer includes a) Data compression b) Data encryption c) Data description **d) All of the mentioned** |  | b |
|  | Delimiting and synchronization of data exchange is provided by a) Application layer **b) Session layer** c) Transport layer d) Link layer |  | b |
|  | In OSI model, when data is sent from device A to device B, the 5th layer to receive data at B is a) Application layer b) Transport layer c) Link layer **d) Session layer** |  | d |
|  | In TCP IP Model, when data is sent from device A to device B, the 5th layer to receive data at B is **a) Application layer** b) Transport layer c) Link layer d) Session layer |  | a |
|  | In the OSI model, as a data packet moves from the lower to the upper layers, headers are \_\_\_\_\_\_\_ a) Added **b) Removed** c) Rearranged d) None of the mentioned |  | b |
|  | Identify the statement which cannot be associated with OSI model a) A structured way to discuss and easier update system components b) One layer may duplicate lower layer functionality **c) Functionality at one layer no way requires information from another layer** d) None of the mentioned |  | c |
|  | OSI stands for **a) open system interconnection** b) operating system interface c) optical service implementation d) none of the mentioned |  | a |
|  | The OSI model has \_\_\_\_\_\_\_ layers. a) 4 b) 5 c) 6 **d) 7** |  | d |
|  | TCP/IP model does not have \_\_\_\_\_\_ layer but OSI model have this layer. **a) session layer** b) transport layer c) application layer d) None of the mentioned |  | a |
|  | Which layer links the network support layers and user support layers a) session layer b) data link layer **c) transport layer** d) network layer |  | c |
|  | Which address is used in an internet employing the TCP/IP protocols? a) physical address and logical address b) port address c) specific address **d) all of the mentioned** |  | d |
|  | TCP/IP model was developed \_\_\_\_\_ the OSI model. **a) prior to** b) after c) simultaneous to d) none of the mentioned |  | a |
|  | Which layer is responsible for process to process delivery? a) network layer **b) transport layer** c) session layer d) data link layer |  | b |
|  | Which address identifies a process on a host? a) physical address b) logical address **c) port address** d) specific address |  | c |
|  | Which layer provides the services to user? **a) application layer** b) session layer c) presentation layer d) none of the mentioned |  | a |
|  | Transmission data rate is decided by a) network layer **b) physical layer** c) data link layer d) transport layer Access Networks |  | b |
|  | Which of this is not a constituent of residential telephone line? a) A high-speed downstream channel b) A medium-speed downstream channel **c) A low-speed downstream channel** d) None of the mentioned |  | c |
|  | In DSL telco provides these services a) Wired phone access b) ISP **c) All of the mentioned** d) None of the mentioned |  | c |
|  | The function of DSLAM is **a) Convert analog signals into digital signals** b) Convert digital signals into analog signals c) Amplify digital signals d) None of the mentioned |  | a |
|  | HFC contains a) Fibre cable b) Coaxial cable **c) Both Fibre cable and Coaxial cable** d) None of the mentioned |  | c |
|  | Choose the statement which is not applicable for cable internet access a) It is a shared broadcast medium b) It includes HFCs c) Cable modem connects home PC to Ethernet port **d) Analog signal is converted to digital signal in DSLAM** |  | d |
|  | Among the optical-distribution architectures that are essentially switched ethernet is **a) AON** b) PON c) NON d) None of the mentioned |  | a |
|  | StarBand provides a) FTTH internet access b) Cable access c) Telephone access **d) Satellite access** |  | d |
|  | Home Access is provided by a) DSL b) FTTP c) Cable **d) All of the mentioned** |  | d |
|  | ONT is connected to splitter using a) High speed fibre cable b) HFC **c) Optical cable** d) None of the mentioned |  | c |
|  | When collection of various computers seems a single coherent system to its client, then it is called a) computer network **b) distributed system** c) networking system d) none of the mentioned |  | b |
|  | Two devices are in network if **a) a process in one device is able to exchange information with a process in another device** b) a process is running on both devices c) PIDs of the processes running of different devices are same d) none of the mentioned |  | a |
|  | Which one of the following computer network is built on the top of another network? a) prior network b) chief network c) prime network **d) overlay network** |  | d |
|  | In computer network nodes are a) the computer that originates the data b) the computer that routes the data c) the computer that terminates the data **d) all of the mentioned** |  | d |
|  | Communication channel is shared by all the machines on the network in **a) broadcast network** b) unicast network c) multicast network d) none of the mentioned |  | a |
|  | Bluetooth is an example of **a) personal area network** b) local area network c) virtual private network d) none of the mentioned |  | a |
|  | A \_\_\_\_\_\_\_\_\_\_ is a device that forwards packets between networks by processing the routing information included in the packet. a) bridge b) firewall **c) router** d) all of the mentioned |  | c |
|  | A list of protocols used by a system, one protocol per layer, is called a) protocol architecture **b) protocol stack** c) protocol suite d) none of the mentioned |  | b |
|  | Network congestion occurs **a) in case of traffic overloading** b) when a system terminates c) when connection between two nodes terminates d) none of the mentioned |  | a |
|  | Which one of the following extends a private network across public networks? a) local area network **b) virtual private network** c) enterprise private network d) storage area network |  | b |
|  | The physical layer concerns with **a) bit-by-bit delivery** p) process to process delivery c) application to application delivery d) none of the mentioned |  | a |
|  | Which transmission media has the highest transmission speed in a network? a) coaxial cable b) twisted pair cable **c) optical fiber** d) electrical cable |  | c |
|  | Bits can be send over guided and unguided media as analog signal by **a) digital modulation** b) amplitude modulation c) frequency modulation d) phase modulation |  | a |
|  | The portion of physical layer that interfaces with the media access control sublayer is called **a) physical signalling sublayer** b) physical data sublayer c) physical address sublayer d) none of the mentioned |  | a |
|  | physical layer provides a) mechanical specifications of electrical connectors and cables b) electrical specification of transmission line signal level c) specification for IR over optical fiber **d) all of the mentioned** |  | d |
|  | In asynchronous serial communication the physical layer provides a) start and stop signalling b) flow control **c) both start & stop signalling and flow control** d) none of the mentioned |  | c |
|  | The physical layer is responsible for a) line coding b) channel coding c) modulation **d) all of the mentioned** |  | d |
|  | The physical layer translates logical communication requests from the \_\_\_\_\_\_ into hardware specific operations. **a) data link layer** b) network layer c) trasnport layer d) application layer |  | a |
|  | A single channel is shared by multiple signals by a) analog modulation b) digital modulation **c) multiplexing** d) none of the mentioned |  | c |
|  | Wireless transmission can be done via a) radio waves b) microwaves c) infrared **d) all of the mentioned** |  | d |
|  | The data link layer takes the packets from \_\_\_\_\_\_\_\_\_ and encapsulates them into frames for transmission. **a) network layer** b) physical layer c) transport layer d) application layer |  | a |
|  | Which one of the following task is not done by data link layer? a) framing b) error control c) flow control **d) channel coding** |  | d |
|  | Which sublayer of the data link layer performs data link functions that depend upon the type of medium? a) logical link control sublayer **b) media access control sublayer** c) network interface control sublayer d) none of the mentioned |  | b |
|  | Header of a frame generally contains a) synchronization bytes b) addresses c) frame identifier **d) all of the mentioned** |  | d |
|  | Automatic repeat request error management mechanism is provided by **a) logical link control sublayer** b) media access control sublayer c) network interface control sublayer d) none of the mentioned |  | a |
|  | When 2 or more bits in a data unit has been changed during the transmission, the error is called a) random error **b) burst error** c) inverted error d) none of the mentioned |  | b |
|  | CRC stands for **a) cyclic redundancy check** b) code repeat check c) code redundancy check d) cyclic repeat check |  | a |
|  | Which one of the following is a data link protocol? a) ethernet b) point to point protocol c) hdlc **d) all of the mentioned** |  | d |
|  | Which one of the following is the multiple access protocol for channel access control? a) CSMA/CD b) CSMA/CA **c) Both CSMA/CD & CSMA/CA** d) None of the mentioned |  | c |
|  | The technique of temporarily delaying outgoing acknowledgements so that they can be hooked onto the next outgoing data frame is called **a) piggybacking** b) cyclic redundancy check c) fletcher’s checksum d) none of the mentioned |  | a |
|  | The network layer concerns with a) bits b) frames **c) packets** d) none of the mentioned |  | c |
|  | Which one of the following is not a function of network layer? a) routing b) inter-networking c) congestion control **d) none of the mentioned** |  | d |
|  | The 4 byte IP address consists of a) network address b) host address **c) both network address & host address** d) none of the mentioned |  | c |
|  | In virtual circuit network each packet contains a) full source and destination address **b) a short VC number** c) only source address d) only destination address |  | b |
|  | Which one of the following routing algorithm can be used for network layer design? a) shortest path algorithm b) distance vector routing c) link state routing **d) all of the mentioned** |  | d |
|  | Multidestination routing a) is same as broadcast routing b) contains the list of all destinations **c) data is not sent by packets** d) none of the mentioned |  | c |
|  | A subset of a network that includes all the routers but contains no loops is called **a) spanning tree** b) spider structure c) spider tree d) none of the mentioned |  | a |
|  | Which one of the following algorithm is not used for congestion control? a) traffic aware routing b) admission control c) load shedding **d) none of the mentioned** |  | d |
|  | The network layer protocol of internet is a) ethernet **b) internet protocol** c) hypertext transfer protocol d) none of the mentioned |  | b |
|  | ICMP is primarily used for **a) error and diagnostic functions** b) addressing c) forwarding d) none of the mentioned |  | a |
|  | Transport layer aggregates data from different applications into a single stream before passing it to **a) network layer** b) data link layer c) application layer d) physical layer |  | a |
|  | Which one of the following is a transport layer protocol used in networking? a) TCP b) UDP **c) Both TCP and UDP** d) None of the mentioned |  | c |
|  | User datagram protocol is called connectionless because **a) all UDP packets are treated independently by transport layer** b) it sends data as a stream of related packets c) it is received in the same order as sent order d) none of the mentioned |  | a |
|  | Transmission control protocol is a) connection oriented protocol b) uses a three way handshake to establish a connection c) recievs data from application as a single stream **d) all of the mentioned** |  | d |
|  | An endpoint of an inter-process communication flow across a computer network is called **a) socket** b) pipe c) port d) none of the mentioned |  | a |
|  | Socket-style API for windows is called a) wsock **b) winsock** c) wins d) none of the mentioned |  | b |
|  | Which one of the following is a version of UDP with congestion control? **a) datagram congestion control protocol** b) stream control transmission protocol c) structured stream transport d) none of the mentioned |  | a |
|  | A \_\_\_\_\_ is a TCP name for a transport service access point. **a) port** b) pipe c) node d) none of the mentioned |  | a |
|  | Transport layer protocols deals with a) application to application communication **b) process to process communication** c) node to node communication d) none of the mentioned |  | b |
|  | Which one of the following is a transport layer protocol? **a) stream control transmission protocol** b) internet control message protocol c) neighbor discovery protocol d) dynamic host configuration protocol |  | a |
|  | Which is not a application layer protocol? a) HTTP b) SMTP c) FTP d) TCP |  | d |
|  | Answer: d |  |  |
|  | Explanation: TCP is transport layer protocol. |  |  |
|  | The packet of information at the application layer is called \_\_\_\_\_\_\_\_\_\_ a) Packet b) Message c) Segment d) Frame |  | b |
|  | Answer: b Explanation: For Application, Presentation and Session layers there is no data format for message. Message is message as such in these three layers. But when it comes to Transport, Network, Data and Physical layer they have data in format of segments, packets, frames and bits respectively. |  |  |
|  | Which one of the following is an architecture paradigms? a) Peer to peer b) Client-server c) HTTP d) Both Peer-to-Peer & Client-Server Answer: d Explanation: HTTP is a protocol. |  | d |
|  | Application developer has permission to decide the following on transport layer side a) Transport layer protocol b) Maximum buffer size c) Both Transport layer protocol and Maximum buffer size d) None of the mentioned Answer: c Explanation: Application layer provides the interface between applications and the network. So application developer can decide what transport layer to use and what should be its maximum buffer size. |  | c |
|  | Application layer offers \_\_\_\_\_\_\_ service. a) End to end b) Process to process c) Both End to end and Process to process d) None of the mentioned Answer: a Explanation: End to End service is provided in the application layer. Whereas process to process service is provided at the transport layer. |  | a |
|  | E-mail is \_\_\_\_\_\_\_\_\_ a) Loss-tolerant application b) Bandwidth-sensitive application c) Elastic application d) None of the mentioned Answer: c Explanation: Because it can work with available throughput. |  | c |
|  | Pick the odd one out. a) File transfer b) File download c) E-mail d) Interactive games Answer: d Explanation: File transfer, File download and Email are services provided by the application layer and there are message and data oriented. |  | d |
|  | Which of the following is an application layer service? a) Network virtual terminal b) File transfer, access, and management c) Mail service d) All of the mentioned Answer: d Explanation: The services provided by the application layer are network virtual terminal, file transfer, access and management, mail services, directory services, various file and data operations. |  | d |
|  | To deliver a message to the correct application program running on a host, the \_\_\_\_\_\_\_ address must be consulted. a) IP b) MAC c) Port d) None of the mentioned Answer: c Explanation: IP address lets you know where the network is located. Whereas MAC address is a unique address for every device. Port address identifies a process or service you want to carry on. |  | c |

\*MCQ – Multiple choice question

\* BTL – Blooms Taxonomy Level