UNIT I (NETWORKING AND OPEN STANDARDS)
(From this unit: 7 Questions - 10 Marks)

One Mark Questions

1. What is the purpose of Modem in network?

2. Write one example of IP Address.

3. Define 'Domain Name Resolution'.

4. Gandharav is confused about Wi-Fi. Whether it is a
   (i) type of network
   (ii) type of network cable
   (iii) set of popular technologies and standards for wireless computer networking
   (iv) set of computer programs that help people log in to internet.

5. It is a technology on computer networks whose purpose is to prevent unwanted networking connection according to filtering/blocking rules. What is it?

6. Name these
   (i) It is protocol/technology used to exchange files on internet
   (ii) It provides a set of rules to transfer files,videos,images etc. over the world wide web

7. Identify the topologies from the following:
   (i) In it the nodes form a circular path for data to travel and each node is connected to two neighboring nodes.
   (ii)In it devices are connected through hub and the central hub is responsible for receiving and transmitting data from each node to destination

8. Smith is confused as he is unable to find the name of a network of computers and other devices that is confined to a relatively small space – an office or a school campus etc. Help him to do that.

9. Name the most common communication protocol on internet that ensures end-to-end communication.

10. Name the protocol used for sending and receiving e-mails.

11. A web server has started receiving endless messages. What is this situation like?

12. What is the unique name given to site that becomes site's identification

13. Draw a network layout of bus topology to connect 5 client computers and 1 server computer.

14. Mr. John wants to prevent unauthorized access to/from his company's

local area network. Write the name of a system (software/ hardware),
which he should install to do the same.

15.   Which of the following are open source softwares : GNU, MS-Office, BOSS, Windows OS

16.   Name the government organization that contributes to the growth of FOSS in India.

17.   Tara Nathini wants to upload and download files from/ to a remote Internet server, write
the name of the relevant communication protocol, which will let her do the same.

18.   Two doctors in the same room have connected their Palm Tops using Bluetooth for working
        on a group presentation, Out of the following, what type of Network they have formed?
                            LAN, MAN, PAN, WAN

19.   Arrange the following communication channels in ascending order of their data
        transmission rates
                    Ethernet Cable, Optical Fibre, Telephone Cable, Co-Axial Cable

20.   Which of the following is not a characteristic of Open Source Software?
o   Its source code is available for modification.
o   It is owned by a company or an individual.
o   It can be downloaded from internet.

21.   Which protocol is used for the transfer of hypertext documents on the internet?

22.   Which transmission medium should be used to transfer data across two continents at very
        high speed?

23.   Two neighborhood schools at a distance of 120 meters from each other decide to join their
        LANs using UTP cable so that they can share their e-learning resources. But after joining
        their LANs they are not able to share the resources due to loss of signal in-between. Which
        device should they use so that signal is amplified in-between.

24.   Which of the following softwares are Open Source:
                    Linux, MS Windows 7, Photoshop, MySQL

25.   Kant Sengupta wants to prevent unauthorized access to/from his company's local area
        network. Write the name of a system (software/hardware), which he should install to do
        the same.

26.   Seven Brother Fashion Inc. is a fashion company with design unit and market unit 130
meters away from each other. The company recently connected their LANs using Ethernet cable to
share the stock related information. But, after joining their LANs, they are not able to share the
information due to loss of signal in between. Which device out of the following should you suggest
to be installed for a smooth communication?
(i) Modem

(ii) Repeater
(iii) UPS

27.   Which of the following is not a feature of Networking?
(i) Resource sharing
(ii) Reliability
(iii) Uninterrupted power supply
(iv) Reduced cost

28.   Name some Indian scripts included in Unicode.

29.   Identify the type of topology from the following:
         (i) In it, each node is connected with the help of a single co-axial cable.
         (ii) In it, each node is connected with the help of independent cable with the help of a
         central switching (communication controller).

30.   Raj kamal International school is planning to connect all computers, each spread over
distance within 45 meters. Suggest an economical cable type having high-speed data transfer,
which can be used to connect these computers.

31.   Write examples of one Proprietary and one Open Source Software.

32.   Name any two most popularly used internet browsers.

33.   Ms. Rani Sen, General Manager of Global Nations Corporate recently discovered that the
communication between her company's accounts office and HR office is extremely slow and signals
drop quite frequently. These offices are 125 meters away from each other and connected by an
Ethernet cable.
(i)   Suggest her a device, which can be installed in between the offices for smooth
communication.
(ii)   What type of network is formed by having this kind of connectivity out of LAN,MAN and
WAN?

34.   Mr. Chandervardhan is not able to identify the Domain Name in the given URL. Identify and
write it for him http://www.cbse.nic.in/aboutus.html

35.   Why is a switch called an intelligent hub?

36.   What was the objective behind developing UNICODE?

37. Expand the following terms:
         (i)OSS   (ii)ODF

38.   What is the use of Repeater in a Network?

39.   Identify the following device:

(i) A device that is used to connect different types of networks. It performs the necessary translation so that connected networks can communicate properly.

(ii)A device that converts data from digital bit stream into an analog signal and vice Versa.

40.   What do you understand by Domain Name Resolution?

41.   Which transmission medium should be used to transfer data across two continents at very high speed?

42. Two neighbourhood schools, at a distance of 120 meters from each other, decide to join their LANs using UTP cable so that they can share their e-learning resources. But after joining their LANs they are not able to share the resources due to loss of signal in-between. Which device should they use so that signal is amplified in-between?

43. What is wrong with the following IP address:
        308:77:188:166

44.   Tarun wants to upload and download files from/to a remote internet server. Write the name of relevant communication protocol, which will let her do the same.

45.   A software company develops gaming software and sells it without providing its source code. For promotional purpose the company provides demo versions of its games free of cost through the internet. Are these demo versions examples of open source software? Justify your answer.

46. Expand the following terms:
                (i) WAN   (ii) OSS

47. Expand the terms GNU and W3C.

48.   Name the platforms on which MySQL can run.

49.   Expand the terms   (i) WAMP   (ii) LAMP

50.   What is the purpose of switch in a network?

51.   How is Trojan Horse program harmful to a network?

52.   Show a network layout of star topology to connect 5 computers.

53.   Write the name of the most suitable wireless communication channels for each of the following situations:
        (i) Communication between two offices in two different countries.
        (ii) To transfer data from one mobile phone to another.

54. Gyan Deep International School is planning to connect all computers, each spread over a distance within 40m. Suggest an economical cable type having high speed data transfer, which can be used to connect these computers.

55. Name any two most popularly used search engines.
56. Given below two addresses
     (i) 59.181.154.88   (ii) http://www.w3schools.com/home.htm
     Identify which one of the above is an IP address and which one is a URL?

57. What is MAC address?

58. How would you extract manufacturer-id and card number from a MAC address?

59. On a network, this is your computer's unique hardware number. What is it?

60. Name the mechanism that obtains IP address using a URL of a website.

61. What do you understand by firewall?

62. Expand the terms: FSF and GPL.

63. What is a standard? Name the different types of standards.

64. Name two encodings used for Indian language computing.

65. In how many different ways can you type Indian Script on a computer?

66. How many bytes does an IP address consume?

67. How many bytes does a MAC address consume?

68. Expand the following abbreviations: (i) GSM   (ii) ARPANET

69. What is modem?

70. How is a hacker different from a cracker?

71. What is the significance of cyber law?

72. Name any two guided transmission media for networking.

73. Name any two unguided transmission media for networking.

74. What do you understand by terms cookies?

75. Write briefly about Mesh Topology.

76.   Identify the following devices:
        (i) A device that is used to connect different types of networks. It performs the necessary translation so that the connected networks can communicate properly.
        (ii) A device that converts data from digital signals to analog vice versa.

77.   Identify the following devices:
        (i) An intelligent device that connects several nodes to form a network and redirects the received information only to intended node(s).
        (ii) A device that regenerates (amplifies) the received signals and re-transmits it to its destination.

78.   What is the name of the network topology in which each node is connected independently using a switch?

79.   What is meant by "Denial of Service" with reference to internet service?

80.   List two measures to secure a computer network.

Two Marks Questions

1.   Mr. Kavye Shastri, General manager of Unit Nations corporate recently discovered that the communication between his company's accounts office and HR office is extremely slow and signals drop quite frequently. These offices are 120 m away from each other and connected by an Ethernet cable.
        (i) Suggest him a device which can be installed in between the offices for smooth communication.
        (ii) What type of network is formed by having this kind of connectivity out of LAN, MAN and WAN?

2.   A school with 20 stand-alone computers is considering networking them together and adding a server. State four advantages of doing this.

3.   Distinguish between LAN and WAN.

4.   Name two threats to security in a network. What is the role of Firewall in Network security?

5.   Write one advantage and one disadvantage of Open Source software over Proprietary software.

6.   Which of the following are open standards and which are proprietary standards?
     (i) OGG   (ii) RM   (iii) DOC   (iv) PNG

7. How is bandwidth measured on analog circuits and digital circuits?

8.   What type of address is the following? Also define it.
       22:B6:F3:88:2A:AB

9.   When would you prefer hubs over repeaters?

10.   Which protocol lets you log onto remote machine and run specific application there?

11.   Mention two advantages of Open Source Software over proprietary software.

12.   Define the term Font and write briefly about its categories.

13.   Write any two methods to prevent/counter threats to network security?

14.   Read the given activities carefully and mention in front of the activity whether that activity is snooping or eavesdropping:
(i)   Getting someone's login information by casually watching what he/she is typing.
(ii)   Setting up unauthorized parallel telephone lines
(iii)   Installing some software/hardware which captures the data while on its way.
(iv) Reading the files on someone's computer in an unauthorized manner.

15. Kristen has typed the following text in the address bar:
        http://www.cbse-international.com/help.html

Explain to her the main concept of URL and Domain name with reference to the example given above.

16.   Chanakya has to write a paragraph in English on nobel laureates as a part of his holiday homework. He is using a software in which he types the text in Hindi and the software automatically converts the text into English. For example, if he types
"नोबेल प्राइज़ इस गवेन इन सक्स कैटेगरीज" the software converts it into "Nobel Prize is given in six categories". What kind of text entry is it – phonetic text entry OR keymap based text entry? How is it different from the other kind of text entry?

17.   Jai Khanna is confused between the terms Domain Name and URL. Explain the difference with help of appropriate example of each.

18. Define various threats to Network Security.

19.   Differentiate between Star and Bus Topology of networks.

20.   Distinguish between Open Source software and Proprietary software with reference to customizability of the software.

21.   Name any four Indian scripts included in Unicode.

22.   Sujata says that the following numbers indicate an address:
                208.77.188.166

What is the above address called? To which object/device is it assigned?

23.   Mr.Vidya Chauhan is confused betweenProprietary and Open source software. Mention at least two points of differences to help her understand the same.

24.   Define the following with reference to Threats to network security.
(i)   Worm   (ii)   Trojan Horse

25.   Give an advantage of using Star topology over Bus topology. Show a network layout of star topology to connect 5 computers.

26.   Give suitable example of URL and Domain name.

27.   Write the name of the most suitable wireless communication channels for each of the following situations.
(i) Communication between two offices in different countries.
(ii) To transfer the data from one mobile phone to another.

28. Expand the following terms:
        (i) FLOSS (ii) HTTP

29.   What do you understand by Network Security? Name some common threats to it.

30.   Write one advantage of Star Topology over Bus Topology and one advantage of Bus Topology Over Star Topology.

31.   What is MAC address? What is the difference between MAC address and an IP address?

32.   Write one advantage and one disadvantage of using Optical fiber cable.

33.   Distinguish between Open Source Software and Proprietary Software with reference to customization.

34.   What is the difference between Star Topology and Bus Topology of network?

35.   What is the full form of the following
(i) FTP (ii) TTF (iii)OSI (iv) FLOSS

36.   What are the facilities provided by the SERVER in a network environment?

37.   Explain the following terms:
(i) Linux   (ii) FSF

38. Distinguish between Open Source software and Proprietary software with reference to customizability of the software

39.   Define any two threats to Network Security.

40.   With the help of a diagram give one point of difference between Star and Bus topologies.

41.   What is common in all of the following software(s)? Firefox, Perl, PHP, OpenOffice.org
Write one feature of the above category of software.

42.   What is UNICODE? Name one Indian language, which is supported by UNICODE.

43. Expand the following terms:
      (i) FLOSS   (ii) HTTP   (iii) BOSS   (iv) ISP

44. Mr. Jayanto Das is confused between shareware and open source software. Mention at least two points of differences to help him understand the same.

45. Ms. Vidya Chauhan is confused between Proprietary software and Open Source Software. Mention at least two points of difference to help her understand the same.

46. What are the following software used for?
      (i) PHP (ii) MySQL

47. Write briefly about (i) Apache (ii) Python

48. Write one point of difference between a freeware and free software.

49.   Define the terms: (i) Freeware   (ii) Shareware

50.   State two advantages of networking computers instead of standalone computers.

51.   Giving suitable examples explain the concept of open standards?

52. Name an open standard for the following
(i) Web Page   (ii) Office Document   (iii) Audio Compression
(iv) Any image type   (v) Vector images

53. Giving suitable examples explain the concept of proprietary standards?

54.   What is protocol? Which protocol is used to copy a file from(download) / to (upload) a remotely located server?

55. What is difference between LAN and WAN?

56. How is co-axial cable different from optical fiber cable?

57. What do you mean by term topology? Name any four topologies of networking

58. Write two advantages and two disadvantages of Star (Radial) topology.

59. Write two advantages and two disadvantages of Tree topology.

60. Write two advantages and two disadvantages of Bus(Linear) topology.

61. Write two advantages and two disadvantages of Ring (Circular) topology.

62. What do you understand by the term e-mail and SMS?

63. Write one advantage and one disadvantage of using optical fiber cable.

64. Expand the following abbreviations: (i) GSM   (ii) CDMA   (iii) WLL   (iv) TCP/IP

65. Expand the following abbreviations:

66. Define the following (i) Server   (ii) NIU

67. Define the following (i) Bps   (ii) bps

68. Define (i) Baud Rate   (ii) Bandwidth

69. Differentiate between Bridge and Gateway.

70. What do the following protocols do: (i) SMTP   (ii) TCP/IP

71. Explain (i) DNS   (ii) FTP