EXERCISE

Q.1   **Fill in the blanks:**

1.   Collection of raw facts is called <u>Data</u>.
2.   A receiver is also called a <u>sink or destination</u>.
3.   Two forms of data transmission are <u>Parallel</u> & <u>Serial</u>.
4.   TCP/IP Stand for <u>Transmission Control Protocol and Internet Protocol</u>.
5.   Data in <u>Half-Duplex Transmission</u> can travel in both directions but not at the same time.
6.   <u>Data link layer</u> ensures the data are transmitted without any error.
7.   Data transmission through a medium can be either synchronous or <u>Asynchronous</u>.
8.   WAN stands for <u>Wide Area Network</u>.
9.   A <u>Satellite</u> is a microwave station placed in outer space.
10.   A router is also used as an <u>Intermediate</u> device used for interconnecting different types of networks together.
11.   Information networks or computer networks are the convergence of two technologies; <u>Computing and Telecommunication</u>.
12.   This convergence of networks resulted in <u>LAN, MAN and WAN</u>.
13.   <u>Network</u> is the interconnection of computer systems and/or peripheral devices with transmission medium and data communication devices to share data and resources is called networks.
14.   <u>Network</u> is a distributed data processing system in which multiple computers are linked together for the purpose of data communication and resource sharing.
15.   LAN stands for <u>Local area Network</u>.
16.   <u>LAN</u> is a digital communication system capable of interconnecting a large number of computers, terminals and peripheral devices within a limited geographical area.
17.   <u>LAN</u> spans a small geographical area such as an office or a group of buildings e.g. College Lab etc.
18.   MAN stands for <u>Metropolitan Area Network</u>.
19.   WAN stands for <u>Wide Area Network</u>.
20.   <u>WAN</u> is a digital communication system which interconnects different sites, terminals and also enables different LANs to communicate with each other.
21.   <u>WAN</u> spans a large geographical area such as among cities, countries or continents e.g. Internet.

22. The larger computer in WAN are <u>hosts</u> and hosts are the computers on the network which provides services to other computers on the network.

23. The computers get information from the hosts. This can be made possible using a "<u>Terminal Emulation Software</u>".

24. The process of transferring files from host computers to our computer is called <u>downloading</u>.

25. The process of transferring files from our computer to host computer is called <u>uploading</u>.

26. <u>Internet</u> is a network of connected computers that provides us a facility of exchange data, messages and files with other computers that are connected to the internet.

27. Due to invention of internet the Globe is referred as "<u>Global Village</u>".

28. <u>Internet</u> is an ocean of knowledge.

29. ARPANET was designed in <u>1960 by US-Defense department</u>.

30. DARPA stands for <u>Defense Advance Research Project Agency</u>.

31. ARPANET stands for <u>Advance Research Project Agency Network</u>.

32. <u>ARPANET</u> was a wide area network connecting a small number of users. There were only four hosts.

33. <u>ARPANET</u> was used for military purpose during 1970-1980.

34. In 1989, <u>National Science Foundation</u> established a network of five super computing centers which were available to researchers and academic purposes.

35. NSF stands for <u>National Science Foundation.</u>

36. The network of NSF was known as <u>NSFnet</u>.

37. <u>WWW</u> stands for World Wide Web.

38. <u>WWW</u> is a collection of millions of uploading web pages or web sites.

39. <u>WWW</u> organizes the internet related resources so that we can easily access the information available to the internet.

40. Hyper text transfer protocol (http) protocol is used for <u>WWW</u>.

41. E-mail is a process of sending and receiving messages and files among the internet users.

42. Telnet is a software protocol that allows one computer to connect to another computer and make use of the other computer's information.

43. ftp stands for <u>File Transfer Protocol</u>.

44. <u>ftp</u> is used to transfer files from one computer to another.

45. **Gopher** is an access and retrieval system covering a wide range of information, from reference materials, to magazine articles, to government documents and speeches.

46. **Chat Groups** are the internet users with similar interests form up their forums to have online real-time discussions over internet.

47. **Intranet** is a privately-owned secure, business network base on internet technology (using TCP/IP) not necessarily connected to the internet.

48. **Extranet** is a combination of multiple intranets.

49. **E-Mail** stands for electronic mail.

50. **E-Mail** facility is provided by some special websites called email servers.

51. **Workgroup Computing** is also known as collaborative computing.

52. **Workgroup Computing** enables the individuals and teams of certain projects to use computer networks for the purpose of cooperation, consultation and information sharing.

53. **Workgroup Computing** permits the individuals to collaborate with their colleagues to work on the company information over the network. At the same time they can also link to other important contacts outside their organization.

54. A technique to share information in which many users or researchers can work on their projects by sharing the same domain of information online is called **groupware**.

55. Groupware is software used for **workgroup computing**.

56. In **Client-Server Model**; one or more computers are dedicated servers and the remaining computers work as clients. The server cannot play the role of the client and vice-versa.

57. **Server** is a computer that controls the network. It has the disks, containing database files and shared devices like printer, which can be used by other computers.

58. In **Peer-to-Peer Network Model**; every computer plays a role of server or client depending on the nature of communication. There is no clear distinction between the server and client machines.

59. In **Peer-to-Peer Network Model**; all computers have equal status.

60. **Lack of Speed and Security** is the disadvantages in Peer to Peer Networks.

61. **Hybrid Network Modal** has the combined features of both client-server and peer to peer networks.

62. **Network Standards** are the precise documents containing technical and physical specifications about the network being designed.

63. De-Facto Standard means "by tradition" or "by facts".

64. De-Facto Standard are developed informally and came into existence of historical development.

65. De-Jure Standard means "According to Law or Regulation".

66. De-Jure Standard are properly researched, developed and approved by some networks governing bodies.

67. ANSI stands for American National Standard Institute.

68. IEEE stands for Institute of Electrical and Electronics Engineers.

69. ISO stands for The International Standard Organization.

70. ITU-T stands for The International Telecommunication union-Telecommunication Standards Sector (formally CCITT).

71. EIA stands for The Electronics Industries Association.

72. Topology refers to the layout of connected devices on a network or

73. The scheme of joining computers in a network is called topology or

74. Arrangement of computer nodes in a computer network is called topology.

75. In Bus Topology; all the computers are connected in series with a common communication medium.

76. The communication medium in bus topology is called BUS.

77. A terminator is used at both ends of the series to absorb the signals in bus topology.

78. Ethernet is used in bus topology because it is relatively easy to install.

79. The number of computers in bus topology should be limited.

80. 10 Base-2 ("ThinNet") and 10 Base-5 ("ThickNet") cables are used in bus topology.

81. In a ring network, every device has exactly two neighbors for communication purpose and the last computer is connected to the first computer.

82. Token passing scheme is used in ring topology.

83. All the computers are connected through a central device (Hub or Switch) in Star Topology.

84. Twisted pair (UTP) cable is used in star topology.

85. If the HUB fails then the entire network also fails in star topology.

86. Tree topology integrates multiple star topologies together on to a bus.

87. Tree topology has the combined features of star and bus topology.

88. In <u>Mesh topology;</u> every computer is directly connected to every other computer on the network.

89. There are several possible paths from source to destination in Mesh topology.

90. <u>Protocols</u> are the rules to exchange data between two devices.

91. <u>Ethernet</u> is most commonly used LAN protocol.

92. <u>Token Ring</u> protocol is used in ring topology.

93. A <u>token</u> is an electronic signal.

94. The token ring is associated with IBM.

95. IBM stands for <u>International Business Machines</u>.

96. The method of controlling access to the shared network cable is called <u>token passing</u>.

97. ARCnet stands for <u>Attached Resource Computer Network</u>.

98. Fast ARCnet increased the transmission rate to <u>100</u>Mbps.

99. TCP/IP stands for <u>Transmission Control Protocol/Internet Protocol</u>.

100. <u>TCP/IP</u> is a WAN protocol.

101. Every computer is identified separately over internet using <u>TCP/IP protocol</u>.

102. <u>TCP/IP</u> ensures the reliable connection between the computers over internet.

103. ISDN stands for <u>integrated services digital network</u>.

104. <u>ISDN</u> transmits data voice and video simultaneously at a very high speed over telephone lines.

105. <u>ISDN</u> provides reliable digital connection at higher speeds than those offered by analog connection.

106. DSL stands for <u>digital subscriber line</u>.

107. It provides high speed digital data transmission over telephone lines.

108. <u>DSL</u> is an alternative to ISDN.

109. <u>Communication Media</u> is a pathway that is used for transmitting data from sender to receiver.

110. <u>Communication Channels</u> is a pathway that is used for transmitting data from sender to receiver.

111. <u>Guided media</u> refers to those channels that allow the transmission of data through a physical media.

112. <u>Guided media</u> are also called bounded media.

113. <u>Unguided media</u> refers to those channels that transmit data and information in the form of wave.

114. <u>Unguided media</u> are the communication channels in which data is transmitted through the air instead of cables.

115. In <u>Unguided media;</u> there is no physical path between two devices for the transmission of data.

116. <u>Unguided media</u> is also known as unbounded media.

117. <u>NIC</u> is a printed circuit board that inserted into expansion slots.

118. <u>NIC</u> provides a port to connect to the network.

119. <u>NIC</u> It provides network communication capabilities to and from a computer.

120. <u>NIC</u> is also called LAN adapter.

121. The maximum length for a UTP cable in a network is <u>100 meters</u>.

122. A <u>repeater</u> cleans, amplifies and resends the signal that is weakened by a long cable length.

123. <u>Hub</u> is used in star topology as central device.

124. <u>Hub</u> is a multi-port repeater.

125. <u>Bridge</u> is used to connect similar types of network and it recognizes the message on the network and passes on the address to computer in other networks.

126. <u>Switch</u> It is a multi-port bridge and it is more intelligent device than a hub.

127. <u>Gateway</u> is a collection of hardware and software resources that enable a computer to communicate with a computer on a different network.

128. <u>Router</u> is a combination of hardware and software resources and it connects two or more networks.

129. High-speed routers serve as <u>internet backbone</u> and handling the excessive data traffic.

130. The purpose of <u>router</u> is to examine incoming packets, choose the best path and sends them to the proper outgoing port.

131. <u>Router</u> uses the routing protocols, operating system and management software.

132. CSMA/CD stands for <u>Carrier Sense Multiple Access with Collision Detection.</u>

133. CSMA/CS stands for <u>Carrier Sense Multiple Access with Carrier Sense.</u>

134. CSMA/CR stands for <u>Carrier Sense Multiple Access with Collision Resolution</u>

135. OSI stands for <u>Open System Interconnection.</u>

136. OSI was presented by <u>ISO (International Standard Organization)</u>.

137. <u>OSI</u> provides a logical framework how data communication processes should take place across networks.

138. There are 7 layers in OSI model.

139. <u>Upper</u> layers focus on user applications and how files are represented on computers before transmission.

140. <u>Lower</u> layers concentrates on how communication occurs across the network.

141. <u>Application Layer</u> provides network services to user application.

142. <u>Application Layer</u> is responsible for exchanging information between programs running on the computer.

143. <u>Presentation Layer</u> is concerned with how data is converted and formatted for data transfer.

144. <u>Presentation Layer</u> performs code conversion, data translation, compression and encryption.

145. <u>Session Layer</u> determines how two devices establish, maintain and manage connection.

146. <u>Session Layer</u> determines how two devices talk to each other.

147. <u>Transport Layer</u> is responsible for breaking the data into segments.

148. <u>Transport Layer</u> establishes a logical connection between two devices and provides error handling.

149. <u>Transport Layer</u> controls the message flow between the systems.

150. <u>Network Layer</u> is responsible for determining the address on the network.

151. <u>Network Layer</u> determines the route from source to destination.

152. <u>Network Layer</u> manages the network traffic.

153. Segments are converted into packets at <u>Network Layer</u>.

154. <u>Data Link Layer</u> is responsible for the reliability of the physical connection established at physical layer.

155. <u>Data Link Layer</u> provides an error free transmission of data from one computer to another.

156. Packets are converted into frames at <u>Data Link Layer</u>.

157. <u>Physical Layer</u> determines how data is converted into bits.

158. <u>Physical Layer</u> defines the physical characteristics of the network such as connections, voltage levels, timing and physical medium.

159. <u>Physical Layer</u> deals with the physical transmission of bits over transmission medium.

160. <u>Physical Layer</u> is responsible for activating and maintaining the physical link between systems.