

Chapter 01.

Project Udaan and Dosti

01. In March 2009, the Landline customer was
 - a. 2.93 Crores
 - b. 2.39 crores
 - c. 2.93 Lakhs
 - d. None of the above.
02. In March 2009, the Landline revenue was
 - a. Rs. 9172 crores
 - b. Rs. 9173 crores
 - c. Rs. 9174 crores
 - d. None
03. In March 2009, the mobile customer was
 - a. 4.65 crores
 - b. 4.67 crores
 - c. 4.57 crores
 - d. 4.76 crores
04. In March 2009, Mobile revenue was
 - a. Rs. 9828 Crores
 - b. Rs. 9282 crores
 - c. Rs. 9882 crores
 - d. None
05. Share of BB subscription in total internet subscription increased for the period March 2009 to June 2009 was
 - a. 46 % - 47 %
 - b. 47 – 48 %
 - c. 48-49 %
 - d. None
06. Broad band subscribers 86.66% using the technology is
 - a. ADSL
 - b. DSL
 - c. Both a & b
 - d. None
07. The reasons identified for decline of landline customer base are
 - a. Poor customer service
 - b. Un economical landline tariff
 - c. Increased mobile penetration
 - d. All of the above.
08. As part of Project Shikar, a special strategy titled -----has been launched.
 - a. Dosti
 - b. Kuber
 - c. udaan
 - D. None of the above
09. Which of the following is not true in connection with main objectives of udaan project is
 - a. Rapidly expand BB customer base
 - b. Reducing churn of wire line customers
 - c. Increase usage from existing customers
 - d. Increase mobile subscribers.
10. A pilot project was started in three areas of
 - a. Mumbai
 - b. Bangalore Telecom District
 - c. Delhi
 - d. None
11. -----will play a key role in generating leads for LL & BB connection in
 - a. Customer Service Center
 - b. Customer System Center
 - c. Consumer Service center
 - d. None
12. In Service Deliver – Service Assurance team outdoor members will be
 - a. 01 or 02 member per outdoor division
 - b. 02 or 03 members per outdoor division
 - c. 01 or 02 member per indoor division
 - d. None of the above.

13. In Service Deliver – service assurance team indoor members will be
- 1 member per indoor division
 - 2 member per indoor division
 - 3 member per indoor division
 - 4 member per indoor division
14. In service deliver – service assurance team support members will be
- NIB node in charges
 - CITOMS/DOTSOFT incharges
 - A & B
 - None of the above.
15. SD-SA stands for
- Service Deliver – Service Assurance
 - Service Director – Service Assurance
 - Service Deliver – Service Administrator
 - None of the above.
16. In SSA, how many team structure for Project Udaan are
- 3 teams
 - 2 teams
 - 4 teams
 - 5 teams
17. In Product, pricing & analysis Team leader is
- JTOs
 - SDEs
 - TTA
 - All of the above.
18. In Sales & alliances team, the team leader will be
- Mix of JTOs
 - SDEs
 - TTA & Group C/D employees
 - All
19. In Customer service team, the team leader will be
- 10-12 existing call center employee
 - 10-12 CSC employees
 - A & B
 - None of the above.
20. In SD/SA (NOW) team, the team leader will be
- Team of JTOs/SDEs/TTA & Group c and D employees
 - Team of SDEs/Des/DGMS
 - Both A & B
 - None of the above.
21. In Udaan approach implementation, Leads booked by
- All customer interfaces
 - All Sales team leader
 - All SDEs
 - All JTOs
22. In Udaan approach implementation, leads viewed by
- Sales team leader
 - Sales Manager
 - JTO
 - TTA
23. Customer interfaces through which the leads can be booked
- CSC
 - Call centers
 - Commercial section
 - field offices
 - All
24. For feasibility check, the sales team leader raises aand allots it to the concerned JTO O/d
- Ticket
 - Number
 - Book
 - Receipt
25. The software used for Project Udaan is
- Wings
 - DOTSOFT
 - CDR
 - CDR cloud

26. Had developed a lead management software
 a. ITPC, Pune b. ITPC New Delhi c. ITPC, Mumbai D. ITPC, Chennai
27. ITPC had developed and launched a lead management software in
 a. Jan 2010 b. June 2010 c. Jan 2009 d. June 2009
28. The objectives of Project dosti is to
 a. Reduce decline in BSNL's PCO business
 b. Reducing churn of existing PCO operations
 c. Innovating of PCO business
 d. All of the above.
29. The pilot project of Project Dosti was executed in
 a. Bangalore Telecom district
 b. Chandigarh Telecom district
 c. All of the above
 d. None of the above
30. Service providers want that the PCO owners should become
 a. Customer care to BSNL
 b. One stop solution provider of their products
 c. All of the above
 d. None of the above.
31. Market share of BSNL in case of PCOs is
 a. 35% b. 30% c. All of the above d. None of the above.
32. At present BSNL is the market leader in
 a. Fixed Access b. fixed Assets c. Consumer Mobility d. None of the above.
33. At present BSNL has% market share in Fixed access
 a. 75 b.76 c.77 d. None of the above.
34. At present the fixed access contributes to % of operational costs.
 a. 45 b.46 c. a & b d. None
35. The acronym for PRSA is
 a. PCO Relationship Servicing Agency.
 b. PCO Relationship Subscriber Agency.
 C. A & b d. None of the above.
36.create discrete segments of customers based on their usage profile.
 a. Customer Segmentation b. Customer care center c. a&b d. None
37.develop the structure of retail sales force for fixed access services.
 a. Sales force design b. Sales center c. a&b d. None

Answer Key for Core Chapter 01 Project Udaan and Dosti

01. A	02. B	03. B	04. A	05. A	06. B	07. D	08. C	09. D	10. B
11. A	12. A	13. A	14. C	15. A	16. C	17. D	18. D	19. C	20. A
21. A	22. B	23. E	24. A	25. A	26. A	27. A	28. D	29. A	30. B
31. B	32. A	33. A	34. B	35. A	36.A	37. A			

Chapter 02

IP concepts

01. IP stands for
 - a. Internet Programmes
 - b. Internet Protocol
 - c. All of the above
 - d. None of the above.
02. The attaching the header to the received information, received from the higher layer before handing over to the next lower layer is called
 - a. Encryption
 - b. Encoding
 - c. encapsulation
 - d. None of the above.
03. No.of layers in TCP layers are
 - a. 4
 - b.2
 - c.2
 - d.7
04. In TCP layer, the application layer refers to
 - a. Higher level protocols
 - b. Lower level protocols
 - c. a & b
 - d. None
05. From the following which one is an example for application layer?
 - a. FTP
 - b. HTTP
 - c. a &b
 - d. None
06. SMTP is an example for
 - a. Transport layer
 - b. application layer
 - c. a & b
 - d. None
07. FTP stands for
 - a. File Transmission Protocol
 - b. File Transfer Protocol
 - c. File Transmission Programme
 - d. File Transfer Programme
08. SMTP stands for
 - a. Single Mail Transfer Protocol
 - b. Simple Main Transfer Protocol
 - c. a 7 b
 - d. None
09. TCP stands for
 - a. Transfer Control Protocol
 - b. Transmission Common Protocol
 - c. Transfer common Protocol
 - d. Transmission Control Protocol
10. UDP stands for
 - a. User Defined Protocol
 - b. User Datagram Protocol
 - c. A & b
 - d. None
11. layer is responsible for connecting two machines through internet
 - a. Internet layer
 - b. Application layer
 - c. a &b
 - d. None
12. Integrity of packets is guaranteed in
 - a. IPV6
 - b.IPV4
 - c. IPV3
 - d. None

13. Integrity of packets is guaranteed through
 a. IPV4 b. IPV6 c. checksum d. None
14. IN IPV4, range of values is
 a. 0 to 12 b. 0 to 15 c. a & b d. None
15. The value used by IP in IPV4 is
 a. 4 b.5 c. a&b d. None
16. TTL stands for
 a. Transmission Test Live
 b. Time To Live c. a & b d. none
17. In IPV4, total length is
 a. 16 Bytes filed b. 16 Bit field c. 32 bit field d. None
18. In IPV4, the identification is
 a. 16 Bytes field b. 16 bit field c. a & b d. None
19. In IPV4, TTL lengths is
 a. 8 byte field c. 8 bit field c. a & b d. None
20. The current recommended default TTL for the IP is
 a. 64 b. 32 c. a & b d. None
21. In IPV4, protocol is
 a. 8 field b.16 field c. 32 field d. 16 Bit field
22.field is used to identify the next higher layer protocol using the IP.
 a. Protocol b. TCP c. a & b d. None
23. In Protocol field, the value of TCP is
 a. Equal to 6 b. equal to 17 c. a & b d. None
24. The value of UDP in protocol field is
 a. Equal to 6 b. equal to 17 c. a & b d. None
25. In IPV4, checksum filed length is
 a. 16 byte field b. 16 bit field c. a & b d. None
26. In IPV4, the source address field lengths is
 a. 32 byte field b. 32 bit field c. a & b d. None
27. The source address field contains the following;
 a. Network identifier b. Host identifier c. a & b d. None
28. The protocol field is used to identify
 a. The next higher layer protocol using the IP.
 b. The next lower layer protocol using the IP.
 c. a & b d. None
29. The length of destination address is
 a. 16 byte field b. 16 bit field c. 32 bit field d. 32 byte filed
30. The selection by the IP of either UDP or TCP is based on the
 a. Protocol number in the IP header
 b. Protocol number in the TCP header
 c. a & b d. None
31. The source port number is a
 a. 16 bit field b. 16 byte fieldc. 32 bit field d. 32 byte field
32. The destination port number is a
 a. 16 bit field b. 16 byte fieldc. 32 bit field d. 32 byte field
33. The port number for the UDP echo server is

- a. 7 b. 8 c. 69 d. None
34. The Port number for TFTP is
a. 7 b.8 c.69 d. None
35. TFTP stands for
a. Trival File Transmission Protocol
b. Trival File Transfer Protocol c. a & b d. None
36. The UDP message length field is a
a. 16 byte field b. 16 bit field c. 32 bit field d. 32 byte field
37. The UDP message length field contains in the count of the total number ofin the user datagram.
a. Octets b. ones c. binary d. None
38. The minimum size length field of UDP message is
a. 8 b. 8 bit field c. a & b d. None
39. UDP checksum field must be set to.....when not used
a. Zero b. one c. a &b d. None
40. Which one is providing traditional circuit oriented data communications service to programmes?
a. UDP b.TCP c. a & b d. None
41. Which of the following is connection oriented?
a. UDP b. TCP c. a & b d. None
42. Which of the following is connection less oriented?
a. UDP b.TCP c. a & b d. None
43. The sequence numbers in the TCP header is
a. 32 bytes b. 32 bits c. a & b d. None
44. The sequence numbers in the TCP header for first time randomly generated by
a. System integrator b. system c. a & b d. None
45. SN stands for
a. Signal to Noise b. Sequence Number c. Servicing number d. None
46. The second sequence number is called
a. Expected Receive Sequence Number
b. Excepted Receive Sequence Number
c. Expected Remote Sequence Number
d. Excepted Remote Sequence Number
47. ERSN stands for
a. Expected Receive Sequence Number
b. Excepted Receive Sequence Number
c. Expected Remote Sequence Number
d. Excepted Remote Sequence Number
48. SSN stands for
a. Secondary Switching Number
b. Second Sequence Number
c. A 7 b d. None
49. Second Sequence Number is also called as
a. Acknowledgement Number
b. Addressed Number
c. Access Number

- d. None
50. AKN stands for
- Acknowledgement Number
 - Addressed Number
 - Access number
 - None
51. The AKN is a
- 32 bit field
 - 32 byte field
 - 16 bit field
 - 16 byte field
52. In TCP header length is a
- 4 bit field
 - 4 byte field
 - 16 bit field
 - 16 byte field
53. In TCP, the window field is a
- 16 bit field
 - 4 bit field
 - 16 byte field
 - 4 bit field
54. ICMP stands for
- Internet Common Message Protocol
 - Internet Control Message Protocol
 - Internet Consumer Message Protocol
 - Internet Consumer Meeting Protocol
55.is used to report the error message back to the source.
- ICMP
 - IMCP
 - IGMP
 - IPMC
56. From the following which is the correct statement?
- FTP & SMTP are an example of application layer.
 - FTP & SMTP are an example of Transport layer.
 - FTP & SMTP are an example of Internet layer
 - FTP & SMTP are an example of Link layer.
57. The selection by the IP of..... is based on the Protocol number in the IP header.
- UDP
 - TCP
 - UDP or TCP
 - None
58. 16 bit field is the port number of
- Source
 - destination
 - a & b
 - None
59. The port number 7 is for
- UDP echo server
 - TCP
 - a & b
 - TFTP
60. 69 is the port number for
- UDP echo server
 - TCP
 - a & b
 - TFTP
61. The -----message length field contains a count of the total number of octets in the user datagram.
- UDP
 - TCP
 - TFTP
 - None
62.checksum field must be set to zero when not used.
- UDP
 - TCP
 - TFTP
 - None
63.provides traditional circuit oriented data communications service to programs.
- TCP
 - UDP
 - TFTP
 - None
64.in the TCP header is 32 bits long
- SN
 - SSM
 - AKN
 - ERSN
65. The ICMP is used to report
- The error message back to the source.
 - The receipt of the message back to the source.
 - The error correction message back to the source.

- d. None
66.is the process of managing the rate of data transmission between two nodes to prevent a fast sender from out running a slow receiver.
a. Flow control b. flow chart c. a & b d. None
67. To prevent.....the IP datagram contains a time to live that is set by the originator.
a. Routing protocol b. routing loops c. routing table d. None
68. IGMP stands for
a. Internet Group Management Protocol
b. Internet Group Message Protocol
c. Internet Group Membership Protocol d. None
69. is a communications proposal used to manage the membership of internet protocol multicast group.
a. IGMP b. ICMP c. a & b d. None
70. Each host on the internet is assigned a 32 bit integer address called its
a. Internet Address b. IP address c. a & b d. None
71. Every IP address consists ofpairs
a. One b. two c. threed. None
72. The IP address consists of
a. One identifying network b. One identifying the host c. a & b
c. None
73. IP address is referred to as the
a. Dotted decimal notation
b. Dotted decamical notation
c. a & b d. None
74. Type of class of IP address are
a. One b. two c. 5 d. none
75. Class D IP address reserved for
a. IP multicasting b. future use c. Private IP d. Public IP
76. Class E IP address reserved for
a. IP Multicasting b. future use c. Private IP d. Public IP
77. Address beginning with..... are reserved for future use
a. 1010 b.1111 c.1110 d.a & b
78. Determine the class of IP address is by
a. Examining the first 4 bits of the IP address
b. Examining the first 5 bits of the IP address
c. a & b d. None
79. Class A addresses begin with
a. 0XXX or 1 to 126 decimal
b. 10XX or 128 to 191 decimal
c. 110X or 192 to 223 decimal
d. 1110 or 224 to 239 decimal
80. Class B addresses begin with
a. 0XXX or 1 to 126 decimal
b. 10XX or 128 to 191 decimal
c. 110X or 192 to 223 decimal
d. 1110 or 224 to 239 decimal

81. Class C addresses begin with
- 0XXX or 1 to 126 decimal
 - 10XX or 128 to 191 decimal
 - 110X or 192 to 223 decimal
 - 1110 or 224 to 239 decimal
82. Class D addresses begin with
- 0XXX or 1 to 126 decimal
 - 10XX or 128 to 191 decimal
 - 110X or 192 to 223 decimal
 - 1110 or 224 to 239 decimal
83. Class E addresses begin with
- 0XXX or 1 to 126 decimal
 - 10XX or 128 to 191 decimal
 - 110X or 192 to 223 decimal
 - 1111 or 240 to 254 decimal
84. Addresses beginning with 01111111 or 127 decimal are reserved for
- Loop back
 - future use
 - a & b
 - None
85. IP address for internal testing on a local machine is
- 127.0.0.1
 - 127,0,0,1
 - a & b
 - None
86. In class A which part of IP address belongs to the network ?
- NNNNNNNN
 - NNNNHHHH
 - NHNHNHNH
 - None
87. In class A which part of IP address belongs to the host?
- NNNNNNNN
 - b.HHHHHHHH
 - HHHHHHHH.HHHHHHHH.
 - None
88. In class B which part of IP address belongs to the network?
- NNNNNNNN
 - NNNNNNNN.NNNNNNNN.
 - NNNNNNNN.NNNNNNNN.NNNNNNNN.
 - None
89. In class B which part of IP address belongs to the host?
- HHHHHHHH.
 - HHHHHHHH.HHHHHHHH
 - NNNNNNNN.NNNNNNNN.NNNNNNNN.
 - None
90. In class C which part of IP address belongs to the network?
- NNNNNNNN.NNNNNNNN.HHHHHHHH.HHHHHHHH.
 - NNNNNNNN.HHHHHHHH.HHHHHHHH.HHHHHHHH
 - NNNNNNNN.NNNNNNNN.NNNNNNNN.HHHHHHHH
 - None
91. In class C which part of IP address belongs to the host?
- NNNNNNNN.NNNNNNNN.NNNNNNNN.HHHHHHHH
 - NNNNNNNN.NNNNNNNN.HHHHHHHH.NNNNNNNN
 - NNNNNNNN.HHHHHHHH.HHHHHHHH.HHHHHHHH
 - None

92. Tick the IP address reserved for Private Network?
- 10.0.0.0/8
 - 11.0.0.0/8
 - 10.0.0.0/32
 - 10.0.0.0/16
93. Tick the IP address reserved for Private Network?
- 172.16.0.0/12
 - 172.16.0.0/16
 - 172.16.0.0/8
 - 172.16.0.0/32
94. Tick the IP address reserved for Private Network?
- 192.168.0.0/8
 - 192.168.0.0/16
 - 192.168.0.0/32
 - None
95. Reasons for subnetting an IP network is
- Use of different physical media
 - Preservation of address space
 - Security & to control the network traffic. All the above
96. The most common reason for using subnetting is
- To control network traffic
 - To control speed of the bandwidth
 - a&b
 - None
97. Performing a bitwise logical AND operation between the IP address and the subnet mask results in the
- Network Address or Number
 - Network element
 - a&b
 - None
98. In the subnet masking the network bits are represented by the
- "0" s in the mask
 - "1" in the mask
 - a&b
 - None
99. In the subnet masking the host bits are represented by the
- "0" s in the mask
 - "1" in the mask
 - a&b
 - None
100. The reason for using IPV6
- Rapid exhaustion of IPV4 address space
 - Fulfill the future need of IP address
 - a&b
 - None
101. In IPV6, the address size was increased from
- 32 to 126 bits
 - 32 bits to 128 bits
 - a&b
 - None
102. In IPV6 the address size is
- 16 octets
 - 32 octets
 - a&b
 - None
103. The next generation of the internet protocol is
- IPV4
 - IPV6
 - a&b
 - None
104. The replacement of IPV4 to IPV6 is aimed in the year
- 1994
 - 2000
 - 1995
 - 2010
105. VOIP stands for

- a. *Voice Over Internet Protocol*
 b. *Value Over Internet Protocol*
 c. *a&b* d. *None*
106. *The function of physical layer is*
 a. *Binary transmission*
 b. *b. Access to media*
 c. *c.Address and Best path*
 d. *End to end connections.*
107. *The function of Data Link layer is*
 a. *Binary transmission*
 b. *b. Access to media*
 c. *c.Address and Best path*
 d. *End to end connections*
108. *The function of Network layer is*
 a. *Binary transmission*
 b. *b. Access to media*
 c. *c.Address and Best path*
 d. *End to end connections*
109. *The function of Transport Layer is*
 a. *Binary transmission*
 b. *b. Access to media*
 c. *c.Address and Best path*
 d. *End to end connections*
110. *The function of Session layer is*
 a. *Internet communication*
 b. *Data presentation*
 c. *Network process to application*
 d. *None*
111. *The function of presentation layer is*
 a. *Inter host communication*
 b. *Data presentation*
 c. *Network process to application*
 d. *None*
112. *The function of application layer is*
 a. *Internet communication*
 b. *Data presentation*
 c. *Network process to application*
 d. *None*
113. *In TCP/IP model total no.of layers are*
 a. *5* b. *7* c. *a&b* d. *None*
114. *Flow control is the process of*
 a. *Managing the rate of data transmission between two nodes to prevent a fast sender from out running a slow receiver.*
 b. *Managing the network elements*
 c. *a&b* d. *None*
115. *To prevent routing loops, the IP datagram contains a*

- a. TTL b. FTP c. Routing table d. None
116. IGMP is a communication protocol used to manage
- a. The membership of internet protocol multicast group
b. Run the routing table c. a&b d. None
117. To prevent routing loops, the -----contains a time to live that is set by a
Originator.
- a. IP datagram b. UDP c. TCP/IP d. None
118. Class D IP address reserved for
- a. IP Multicasting b. future use c. a & b d. None
119. Class E IP address reserved for
- a. IP Multicasting b. future use c. a&b d. None
120. 0xxx or 1 to 126 decimal IP address belongs to
- a. Class A address b. class b address c. class c address d. None
121. 10xx or 128 to 191 decimal address belongs to
- a. Class A address b. class b address c. Class c address d. None
122. 110x, or 192 to 223 decimal IP address belongs to
- a. Class A address b. class c d. Class E d. None
123. 1110 or 224 to 239 decimal IP address belongs to
- a. Class A b. Class c c. class D d. class E
124. 1111 or 240 to 254 decimal IP address belongs to
- a. Class A b. Class E c. class D d. Class E
125. 01111111 or 127 decimal are reserved for
- a. Loop back b. Internal testing c. a & b d. None
126. 127.0.0.1 IP address belongs to
- a. Loop back b. Internal testing c. a & b d. None
127. 10.0.0.0/8 IP address belongs to
- a. Public network b. Private network c. a & b d. None
128. 172.16.0.0/12 IP address belongs to
- a. Public network b. Private network c. a & b d. None
129. 192.168.0.0/16 IP address belongs to
- a. Public network b. Private network c. a&b d. None
130. State which statement is correct.:
- a. In the subnet masking, the network bits are represented by the 1s in host bits and
0s in the mask
- b. In the subnet masking the network bits are represented by the 1s in the mask and
the host bits are represented by 0s.
- c. a &b d. None
131. Binary transmission function belongs to
- a. Network layer b. Data layer c. Physical layer d. presentation layer
132. Access to media function belongs to
- a. Network layer b. data layer c. Physical layer d. Session layer
133. Address & best path function belongs to
- a. Network layer b. Data line layer c. transport layer d. Session layer
134. End to end connection function belongs to
- a. Physical layer c. Network layer c. Transport layer d. Session layer
135. Interhost communication function belongs to

- a. Data link layer b. Session layer c. Data presentation d. None
136. Data presentation function belongs to
a. Network layer b. Data link layer c. Presentation layer d. None
137. Network Process to applications function belongs to
a. Application layer b. network layer c. Physical layer d. None
138. 5 layers belongs to
a. TCP b/TCP/IP c. OSI d. None
-
139. Internet layer isfor reliable transmission
a. Responsible b. Not responsible c. a&b d. None
140. The function of providing reliability of service is the duty ofprotocols.
a. Lower level b. Higher level c. a&b d. None
141. The function of providing reliability of service is done by thein the transport layer.
a. TCP b. IP c. Network d. None
142. The datagram consists of.....
a. Header b. data c. a&b d. None
143. In IPV4, theis used to identify the number of octets in entire datagram
a. Total length field b. Protocol c. a&b d. None
144. In IPV4, the range of total length field is between
a. 0&65,535 octets b. 0&65535 octets c. a&b d. None
145. In IPV4, the datagram typically is contained in Frame
a. Ethernet b. EI c.a&b d. None
146. In IPV4, the size of the datagram usually will be less than.....octets.
a. 1500 b.1600 c. 1700 d. None

Answer Key for the Chapter 02 IP concepts

01. B	02. C	03. A	04. A	05. A	06. B	07. A	08. B	09. D	10. B
11. A	12. B	13. C	14. B	15. A	16. B	17. B	18. B	19. C	20. A
21. A	22. A	23. A	24. B	25. B	26. B	27. C	28.	29. C	30. A
31. A	32. A	33. A	34. C	35. B	36. B	37.A	38.A	39.A	40.B
41.B	42.A	43.B	44.B	45.B	46.A	47.A	48.B	49.A	50.A
51.A	52.A	53.A	54.B	55.A	56. A	57.C	58. C	59.A	60.D
61.A	62.A	63.A	64.A	65.A	66.A	67.B	68.A	69.A	70.C
71.B	72. C	73. A	74. C	75. A	76. B	77. B	78. A	79. A	80. B
81. C	82. D	83.D	84.A	85. A	86. A	87. C	88. B	89. B	90. C
91.A	92. A	93.A	94.B	95.D	96. A	97. A	98. B	99.A	100. C
101.B	102.A	103. B	104.C	105. A	106. A	107. B	108. C	109. D	110. A
111. B	112. C	113. A	114. A	115. A	116. A	117. A	118. A	119. B	120. A
121. B	122. B	123. C	124. D	125. A	126. B	127. B	129. B	129. B	130. B
131. C	132.B	133. A	134. C	135. B	136. C	137. A	138. B	139. B	140. B
141. A	142.C	143. A	144. A	145. A	146.A	147.	148.		

Chapter 04

Rural Broad Band & Multiply

01. Core of BSNL's broadband service is
 - a. National Internet Backup
 - b. National Internet Backbone
 - c. National Internet Backhaul
 - d. None
02. NIB stands for
 - a. National Internet Backbone
 - b. National Internet Backhaul
 - c. National Internet Back up
 - d. None
03. QOS stands for
 - a. Quality of supply
 - b. Quality of service
 - c. Quality of subscriber
 - d. None
04. NAT stands for
 - a. Network Address Transmission
 - b. Network Address Translation
 - c. Network Address Transfer
 - d. None
05.service that will enable private users to access public network
 - a. Network Address Transmission
 - b. Network Address Translation
 - c. Network Address Transfer
 - d. None
06. Internet DATA centre services at
 - a. Bangalore, Delhi & Calcutta
 - b. Bangalore, Delhi & Pune
 - c. Bangalore, Delhi & Mumbai
 - d. None of the above
07. NIB –II has been implemented in -----projects
 - a. One
 - b. two
 - c. three
 - d. four
08. In the NIB –II project 1, the IP infrastructure is
 - a. Internet backbone
 - b. MPLS based IP Infrastructure
 - c. b&c . None
09. In the NIB –II project 1, the backbone consisting of
 - a. Routers
 - b. Core router
 - c. Edge routers
 - d. None
10. Which one belongs to NIB-II, Project 2.1
 - a. Narrow band access
 - b. broadband access
 - c. a&b
 - d. None
11. Which one belongs to NIB-II, Project 2.2
 - a. Dial up remote access
 - b. Broadband access DSL access
 - c. a&b
 - d. None
12. The cities in India have been classified in -----types
 - a. 5 core cities
 - b. 9 level cities
 - c. six
 - d. none
13. In the classification of cities, A1 type belongs to
 - a. Level cities
 - b. Major cities
 - c. core cities
 - d. a & b
14. In the classification of cities, A2 type belongs to
 - a. Next Level core cities
 - b. Major cities
 - c. core cities
 - d. a & b

15. In the classification of cities, A3 type belongs to
 a. Next Level core cities b. Major cities c. core cities d. a & b
16. In the classification of cities, A4 belongs to
 a. Level cities b. Major cities c. core cities d. a & b
17. All city core routers are fully meshed between locations on.....
 a. STM-01 b. STM-04 c. STM-16 d. None
18. IGW stands for
 a. International Gateway Routine
 b. International Gateway Router c. a & b d. None
19. IXP stands for
 a. Internet Exchange Point
 b. International Exchange Point
 c. a&b d. None
20. IDC stands for
 a. Internet DATA center b. Internet Digital center c. a&b d. None
21. B1 & B2 cities have only
 a. Core routers b. PE routers c. Edge routes d. None
22. All core locations also have
 a. Core routers b. PE routers c. Edge routes d. None
23. ISP connect each other through
 a. IXE b. IXP c. IXD d. None
24. NOC stands for
 a. Network Operating Circle b. Network Operating center c. a & b d. None
25. Primary Network operating center available at....
 a. Pune b. Bangalore c. Delhi d. None
26. Disaster recovery Network Operating center available at
 a. Pune b. Bangalore c. Delhi d. None
27. DSLAM stands for
 a. Digital Subscriber Line Access Multiplexers
 b. Digital Subscriber Line Access Mixer
 c. Digital subscriber Line Admits Multiplexers
 d. None
28. SSSS stands for
 a. Subscriber Service Setting System
 b. Subscriber Service Selection System
 c. A&b
 d. Service Selection subscriber System
29. SSSC stands for
 a. Subscriber Service Selection Course
 b. Subscriber Service Selection Center
 c. Subscriber Servicing Selection club
 d. None
30. The DSLAMs will provide last mile access to customers over copper wire upto average span lengths of
 a. 5 kms b. 2 Kms c. 3 Kms d. 7 Kms
31. All DSLAMs will be aggregated through ainterface except 480 Port DSLAM

- a. FX b.E1 c.FE d. None
32. The 240 ports DSLAMs will have
a. 2 numbers of FX interface b. Two numbers of FE interface c.a &b d.
33. The FX or GBIC module in DSLAM and LAN switch capable of driving upto
a. 20 Km b. 5 km c. 10 km d. none
34. The SX of GBIC module in LAN switch used for connecting
a. Tier 1 to Tier 2 b. tier 2 to tier 1 c. tier
35. In bigger cities like A1,A2,A3 & A4 -----per city will be deployed initially.
a. Two BBRAS per city
b. One BBRAS per city c. Two core routers per city d. None
36. There will beat B1 & B2
a. Two BBRAS b. No BBRAS c. Three BBRAS d. None
37. The DSLAMs in B1 and B2 and other lower hierarchical cities will be aggregated through
a. Layer 1 switches b. Layer 3 switches c. Layer 2 switches d. None
38. The DSLAMs in B1 and B2 and other lower hierarchical cities will be connected to the nearest of A cities
a. PE router b. Core router c. MPLS router d. BBRAS
39. The DSLAMs in B1 and B2 cities and lower hierarchical cities will be connected to the nearest A cities on
a. E1 over SDH b. Ethernet c. Ethernet over SDH d. None
40. The BBRAS shall terminate the initiated by the customer
a. PPA session b. PPP session c. a & b d. None
41. CPE stands for
a. Consumer Premises Equipment
b. Customer Premises Equipment c. a & b d. None
42. GBIC stands for
a. Giga Bit Internet Converter
b. Giga Byte Interface converter
c. Giga Bit Interface converter
d. None
43. BNG stands for
a. Broadband Network Gateway
b. Broadband National Gateway
c. A & b d. None
44. The optical power range for transceivers in OCLAN switch in case of GE interface is
a. Tx power Min -5 max 3
b. Tx power Min -2 max 2
c. Tx power Min -5 max 2
d. None
45. The optical power range for transceivers in OCLAN switch in case of GE interface is
a. Rx power Min -22 max -4
b. Rx power Min -22 max -3
c. Rx power min -3 max -22
d. None
46. The optical power range for transceivers in OCLAN switch in case of FE interface is

- a. Tx power -9.5 max -2
 - b. Tx power -9.5 max -3
 - c. Tx power -9.5 max -4
 - d. None
47. The optical power range for transceivers in OCLAN switch in case of FE interface is
- a. Rx power min -17 max 0
 - b. Rx power min -17 max -3
 - c. Rx power min 0 max -17
 - d. None
48. High speed internet access speed ranging from
- a. 256 Kbps
 - b. 128 Kbps
 - c. 256 kbps to 8 Mbps
 - d. None
49. STB stands for
- a. Set Transmission Box
 - b. Set Top Box
 - c. Service Top Box
 - d. a & b
50. VOD stands for
- a. Video On Distance
 - b. Video on Degree
 - c. Video on Demand
 - d. None
51. WICE stands for
- a. Window for Information, Communication and Entertainment
 - b. Window for Intimation, Customer and Entertainment
 - c. A & b
 - d. None
52. VOI stands for
- a. Voice Over the Information
 - b. b. Voice overtime Internet
 - c. Voice over internet
 - d. None
53. DSL stands for
- a. Digital Subscriber Link
 - b. Digital Subscriber loop
 - c. a & b
 - d. None
54. Data signal is sent at a frequency higher that the voice frequency of
- a. 3.4 Khz
 - b. 3.4 Ghz
 - c. a & bd.
 - d. None
55. SDSL stands for
- a. Subscriber Line Digital Single Line
 - b. Single Line Digital Subscriber Line
 - c. Symmetric Digital subscriber Line
 - d. None
56. ADSL stands for
- a. Asymmetric Digital single Line
 - b. Asymmetric Digital Subscriber Line
 - c. Asymmetric Digital Single Link
 - d. None
57. HDSL stands for
- a. High Data rate Digital subscriber Line
 - b. Heavy Data rate Digital subscriber Line
 - c. A & b
 - d. None
58. VDSL stands for
- a. Very Data rate Digital subscriber Line
 - b. Very High Data rate digital single line
 - c. A & b
 - d. None
59. IDSL stands for

- a. ISDN digital subscriber Line
 - b. Integrated Digital Line subscriber Line
 - c. a & b
 - d. None
60. Cisco 12410 router is
- a. Edge router
 - b. router
 - c. Core router
 - d. None
61. Cisco 7613 router is
- a. Edge router
 - b. PE router
 - c. Core router
 - d. None
62. Cisco 12416 router is
- a. Edge router
 - b. PE router
 - c. Core router
 - d. None
63. When customer logs in he will be welcome withcustomized screen
- a. SSSA
 - b. SSSC
 - c. SSSS
 - d. None
64.upload the customer profile in the SSSS
- a. SSSA
 - b. BBRAS
 - c. BBRAD
 - d. RADIUS
65.keeps track and billing of the customer
- a. SSSA
 - b. BBRAS
 - c. BBRAD
 - d. RADIUS
66. Stores customer data base viz user name, password and the default services
- a. SSSA
 - b. LADP
 - c. a & b
 - d. None
67. BRAS, SSSS & tier I LAN switch will be in
- a. All A cities
 - b. All A1 cities
 - c. a & b
 - d. None
68. The DSLAMs and switch Ethernet Interface are
- a. Optical, single mode at 1550 nm
 - b. Optical, single mode at 1310 nm
 - c. Electrical, 10 Mbps
 - d. Electrical, 100 Mbps
69. The maximum distance between DSLAM and LAN switch will be
- a. Shall not exceed 20 km
 - b. Shall not exceed 10 km
 - c. 10 Km
 - d. 40 Km
70. The FX or GBIC module in DSLAM and LAN switch should be capable of
- a. Driving upto 20 Km
 - b. Driving upto 10 Km
 - c. Driving upto 30 Km
 - d. None of the abover
71. The maximum distance between Tier 2 LAN switch and Tier I LAN switch
- a. Shall not exceed 10 Km
 - b. Shall not exceed 20 Km
 - c. Shall not exceed 30 Km
 - d. Shall not exceed 40 Km
72. The SX or GBIC module in LAN switch used for connecting tier 2 to Tier I will
- a. Support 20 Km
 - b. Support 30 Km
 - c. Support 40 Km
 - d. a & b
73. The Tier 2 LAN switch in B cities and other cities will be connected to the nearest A city using
- a. Fast Ethernet over SDH FEOSDH

- b. Fast Ethernet over E1
c. a & b d. None
74. The Tier I LAN switch in A city and Noida is connected to BRAS on
a. Gigabit Ethernet Interface
b. Fast Ethernet 100 Mbps
c. Fast ethernet 10 Mbps
d. a & b
75. The broadband network will have network operation centre NOC with Main NOC at..... And Diaster Recovery NOC at
- a. Pune and Bangalore
b. Bangalore and Pune
c. Bangalore and Calcutta
d. Pune and Delhi
76. FEOSDH stands for
a. Fast Electrical Over SDH
b. Fast Ethernet Over SDH
c. a & b d. None
77. The FX or GBIC module in DSLAM and LAN switch should be capable of driving upto 10 km on a
a. Single mode fiber
b. Multimode fiber c. a & b d. None
78. The SX or GBIC module in LAN switch used for connecting.....
a. Tier 1 b. tier 2 c. Tier 2 and Tier 1 d. none
79. The tier 2 LAN switch in B cities and other cities will be connected to the nearest
a. B1 cities b. A cities c. a&b d. None
80. The Tier I LAN switch in A city and Noida is connected to
a. SSSA b.LADP c. BRAS d. a&b
81. NOC stands for
a. Network Operation center
b. Network Optimization center
c. A & b
d. None
82. Main NOC at
a. Bangalore b. Pune c. Noida d. Calcutta
83. DRNOC stands for
a. Director Radius NOC b. Disaster Recovery NOC c. Deputy Recovery NOC d. None
84. DRNOC at
a. Bangalore b. Pune c. Noida d. Calcutta
85.regional POPs are available
a. Two b. Three c. four d. five
86. In broadband, allotment of IP address to the customer is done by
a. SSSA b. RADIUS c. BRAS d. LADP
87. The protocol in BRAS are
a. OSPF b. BGP c. MP-BGP d. All the above
88. BRAS can handleconcurrent sessions (A1 cities)

- a. 4,80,000 b.48,000 c. 48,00,000 d. none
89. In DSLAM downstream bit rate is 6 Mbps then the maximum distance will be
a. 1.5 Km b. 3.5 Km c. 4 Km d. None
90. In DLSAM downstream bit rate is 2 Mbps the maximum distance will be
a. 1.5 Km b. 3.5 Km c. 4 Km d. None
91. In DSLAM downstream bit rate is 1 Mbps then the maximum distance will be
a. 1.5 Km b. 4 Km b. 3.5 Km d. None
92. The DSLAM will provide Access from
a. 128 kbps b. 8 Mbps c. 128 Kbps to 8 Mbps d. None
93. The uplink bandwidth of DSLAMs will be
a. Maximum 1 +1 GE
b. Minimum 1+1 FE
c. Minimum 1+1 GE
d. Maximum 1+1 FE
94. RPR stands for
a. Ring Protection Ring
b. Resilient Protection ring
c. Resilient Packet Ring
d. None
95. In RPR the switch over time is
a. 50 sec b. 50 ms c.50 Microseconds d. None
96. In A cities the tier 2 switches are interconnected on
a. 10 Mbps b. 10 Gpbs c. a&b d. 1 Gpbs
97. In B cities, the tier 2 switch are interconnected on
a. Mbps b. 10 Gpbs c. a&b d. 1 Gpbs
98. BAP stands for
a. Broadband Aggregation Presence
b. Broadband Arithmetic Point
c. Broadband Aggregation Point
d. None
99. The cities with BNG(total 69) are referred as
a. BAP b.PBA c.PAB d. None
100. The DSLAM with 480 port will be aggregated through
a. Fast Ethernet interface
b. Gigabit Ethernet interface
c. 10 Mbps d. None
101. A1 cities are.....
a. 5 b.9 c.10 d.47
102. A2 cities are.....
a. 5 b.9 c.10 d.47
103. A3 cities are.....
a. 5 b.9 c.10 d.47
104. A4 cities are.....
a. 5 b.9 c.10 d.47
105. B1 cities are.....
a. 5 b.9 c.10 d.47

106. B2 cities are.....
- a. 5 b.9 c.10 d.47
107. Connectivity to Internet is through
- a. IGW b. IXP c. IDC d. None
108. The function of IGW is
- a. To connect Internet b. Connect each other ISP through this c. a&b d. None
109. The function of IXP is
- a. To connect Internet
- b. ISP's connect each other through this
- c. Connect to BSNL DATA center
- d. None
110.will connect to BSNL DATA center.
- a. IGW b. IXP c. IDC d. None
111. BBRAS stands for
- a. Broad Band Remote Access Server
- b. Broad Band Remote Authentication Server
- c. Broad band Remote Authorization Server
- d. Broad Band Remote Admission Server
112. 480 Ports DSLAM will be aggregated throughInterface
- a. FE b. GE c. a&b d. None
113.connects Multiply Network to NIB 2 backbone through L3PE.
- a. BNG b. BBRAS c. a&b d. None
114. BNG connects multiply network to NIB 2 backbone through.....
- a. L2PE b.L3PE c. a&b d. None
115.provides connectivity from BNG to Tier 2 Network
- a. RPR tier 1 switch b. RPR tier 2 switch c. OC LAN tier 2 switch
116. RPR tier 1 switch provides connectivity from.....
- a. BNG to Tier 2 Network b. OCLAN tier 2 switch c. a&b d. None
117. In OCLAN switch -----is the core.
- a. Control Switching board b. Common switching board c. a&b d. None
118. In OCLAN switch the availableinterface is not being used in BSNL currently.
- a. 10 Gb Ethernet b. 10 Mbps Ethernet c. 100 Mbps Ethernet
119.delivers television programming to household via Broadband connection using internet protocols.
- a. IPTV b. TVOIP c. a&b d. None
120.will connect to the home DSL line and is responsible for reassembly the packets into a video stream and then decoding the contents.
- a. Set up box b. set box top c. a&b d. none
121.allows the user the luxury of watching the movie of his/her choice at his/her convenience.
- a. VOIP b. VOD c. IPTV d. None
122. BSNL franchisee in Pne has named the set up box as..... box
- a. WIFE b. WICE c. KWIFE d. KWICE
123. The BSNL franchisee for set top box is in
- a. Pune b. Bangalore c. Chennai d. New delhi

124. The tender done for NIB II Project 2.2 throughstage process.
a. 2 b.3 c.4 d.5
125. For project 2.2 of NIB II , NIT floated bycircle on 22-01-2004.
a. Karnataka b. Kerala c. Andhra c. Tamilnadu
126.is to provide video multicast services for application in distance education, telemedicine etc.
a. Multicasting b. Dial VPN service c. a&b d. None
127. Dial VPN user connects to NIB – II through the
a. Broadband RAS b. Narrowband RAS c. a&b d. None
128.tunnel is established between narrowband RAS and Broadband RAS.
a. L3TP b. L2TP c. a&b d. None
129.In Broad band regional POPs are planned.
a. 4 b.5 c.3 d.2
130. All A cities : tier 1 switch + BNG
131. In A cities, the tier 2 switch are interconnected on 10 Gbps.
132. 47 B cities have tier 1 switch + BNG
133. Remaining B cities have tier 1 switch only.
134. In B cities, the tier 2 switch are interconnected on 1 Gbps.
135. The cities with BNG(total 69) are referred as Broadband Aggregation Point.
136. The STM -01 link from OCLAN is to be aggregated to the nearest tier 1 switch.

Answer Key for the Chapter 04

Rural Broad Band & Multiply

01. B	02. A	03. B	04. B	05. B	06. C	07. D	08. B	09. D	10. A
11. B	12. C	13. C	14. A	15. A	16. B	17. C	18. B	19. A	20. A
21. C	22. C	23. B	24. B	25. B	26. A	27. A	28. B	29. B	30. C
31. C	32. B	33. C	34. B	35. B	36. B	37. C	38. D	39. C	40. B
41. B	42. A	43. A	44. C	45. B	46. B	47. A	48. C	49. B	50. C
51. A	52. C	53. C	54. B	55. B	56. B	57. A	58. B	59. A	60. C
61. A	62. C	63. C	64. D	65. D	66. B	67. A	68. A	69. B	70. B
71. D	72. C	73. A	74. A	75. B	76. A	77. A	78. C	79. B	80. C
81. A	82. A	83. B	84. B	85. D	86. C	87. D	88. A	89. A	90. B
91. B	92. C	93. C	94. C	95. B	96. B	97. D	98. B	99. A	100. B
101. A	102. B	103. B	104. C	105. D	106. D	107. A	108. A	109. B	110. C
111. A	112. B	113. A	114. B	115. A	116. A	117. A	118. A	119. C	120. A
121. B	122. A	123. A	124. A	125. A	126. A	127. B	128. B	129.	

Chapter 4.1

Rural Broadband and Multiply LAB

01. We can initiate an From the smart edge OS command line interface
- a. On demand diagnostics session
 - b. Password
 - c. user name
 - d. none
02. ODD stands for
- a. On Demand Direction
 - b. On Demand Diagnostics
 - c. on demand Dimension
 - d. None
03. CLI stands for
- a. Clip Line Interface
 - b. Called Line Interface
 - c. Command Line Interface
04. We can initiate an On Demand Diagnostic session from the.....OS command line interface.
- a. Smart Edge
 - b. Edge
 - c. Softswitch
 - d. BBRAS

Answer Key for the Chapter 04.01

Rural Broad Band & Multiply LAB

01. A	02. B	03. C	04. A
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Chapter 05

Overview of SDH

01. SDH stands for
- a. Synchronous Digital hierarchy
 - b. Synchronous Digital Height
 - c. Synchronous Demand Hierarchy
 - d. None
02. ITU stands for
- a. International Telecommunication Union
 - b. International Transmission Union
 - c. International Transport Union
 - d. None
03. SDH was first introduced into the telecom network in
- a. 1991
 - b. 1992
 - c. 1993
 - d. None
04. STM stands for
- a. Synchronous Transmission module

- b. Synchronous Transport Module
 - c. Synchronous Transmission Medium
 - d. None
05. VC stands for
- a. Vice chairman
 - b. Virtual Complex
 - c. Virtual Container
 - d. None
06. SDH support the transport of signals based on
- a. 2 Mbps hierarchies
 - b. 1.5 Mbps hierarchies
 - c. A&b
 - d. None
07. The frame structure of SDH is
- a. Square
 - b. rectangular
 - c. Circle
 - d. a&b
08. The frame structure of SDH is based on
- a. Bit structure
 - b. 2 Mbps
 - c. Byte structure
 - d. a &b
09. The frame structure of SDH is
- a. 270 rows and 9 columns bytes
 - b. 270 rows and 9 columns bits
 - c. 270 columns and 9 row bytes
 - d. 270 columns and 9 rows bits
10. The bytes in SDH frame are transmitted row by row from
- a. Left to right
 - b. right to left
 - c. a&b
 - d. None
11. The bytes in SDH frame are transmitted by beginning with the
- a. First bit at the left top of the figure.
 - b. Last bit at the left top of the figure
 - c. First byte at the left top of the figure.
 - d. Last byte at the left top of the figure.
12. Frame length of SDH is
- a. 125 ms
 - b. 125 Se
 - c. 125 Microseconds
 - d. None
13. The frame frequency of SDH is
- a. 8000 bits/second
 - b. 8000 frames/second
 - c. a&b
 - d. None
14. STM -01 is
- a. 155.520 mbits
 - b. 155.520 Gb/s
 - c. 155.420 mbit/s
 - d. None
15. The frame structure of STM N is made up of
- a. Two parts
 - b. four parts
 - c. three parts
 - d. None
16. SOH stands for
- a. Section Over Head
 - b. Section Optimum head
 - c. Section Octogen Head
 - d. None
17. RSOH stands for
- a. Regenerator Section Over Head
 - b. Regenerator Section Optimum Head
 - c. Receiver Section Over Head
 - d. Receiver Section Optimum Head
18. MSOH stands for
- a. Mixing Section Over Head
 - b. Multiplexing Section Optimum Head

- c. *Multiplex Section Over Head*
 - d. *None*
19. *AU – PTR stands for*
- a. *Administrative Uniform Pointer*
 - b. *Administrative Unit Pointer*
 - c. *Adaptive Unit Pointer*
 - d. *Adaptive Uniform Pointer*
20. *In SDH frame 1-3 rows & 5-9 rows allocated to*
- a. *SOH* b. *MSOH* c. *RSOH* d. *None*
21. *SOH can be further categorized into*
- a. *RSOH* b. *MSOH* c. *a&b* d. *None*
22. *In the SDH frame 1-3 rows are allocated to*
- a. *RSOH* b. *MSOH* c. *a&b* d. *None*
23. *In the SDH frame 5-9 rows are allocated to*
- a. *RSOH* b. *MSOH* c. *a&b* d. *None*
24. *RSOH can be accessed at the*
- a. *Regenerator* b. *terminal equpt* c. *a&b* d. *None*
25.is the place where information about various services is stored in the SDH frame structure.
- a. *MSOH* b. *RSOH* c. *Information payload* d. *None*
26. *Horizontal columns 10X270XN and vertical rows 1-9 belong to the*
- a. *MSOH* b. *RSOH* c. *Information payload* d. *None*
27.bytes are mainly used for the monitor management and control of the path performance.
- a. *MSOH* b. *SOH* c. *POH* d. *None*
28. *POH stands for*
- a. *Path Over Head* b. *Pay Over Head* c. *Path optimum Headd.* d. *None*
29.is a kind of indicator
- a. *AUPTR* b. *MSOH* c. *POH* d. *None*
30. -----is used to indicate the accurate position of first byte of information payload in the STM –n frame.
- a. *AUPTR* b. *MSOH* c. *POH* d. *RSOH*
31. -----is located at the fourth row of 1-9XN columns in the STM –n frame.
- a. *AUPTR* b. *MSOH* c. *POH* d. *RSOH*
32. *TM stands for*
- a. *Terminal Mixer* b. *Test Multiplexer* c. *Terminal Multiplexer* d. *None*
33. *ADM stands for*
- a. *Additional Developing Multiplexer*
 - b. *Add –developer Multiplexer*
 - c. *Add – Drop Multiplexer* d. *None*
34. *REG stands for*
- a. *Regulator* b. *Receive Energy Giver* c. *Regenerator* d. *None*
35. *DXC stands for*
- a. *Digital Cross Conversion system*
 - b. *Digital Conversion cross system*

- c. Digital Cross connection system
d. Digital connection cross system
36. The function of ais to multiplex low speed signals of a tributary port to high speed signal STM – N of a line port or to de multiplex low speed tributary signals from STM – N signals.
a. ADM b. TM c. DXC d. Reg
37.is used at the middle node of a line or a node in a ring.
a. ADM b. TM c. DXC d. REG.
38. ADM may be equivalent to
a. 1 TM b. 2 TMs c. 3 TMs d. a&b
39. There are ----- of regenerators in an optical transmission network.
a. Three Kinds b. Four kids c. Two kinds d. None
40. -----is mainly used to amplify the optical power so as to extend the optical transmission distance.
a. Pure Optical Regenerator b. Electric Regenerator c. a&b d. None
41.is used for pulse regeneration shaping.
a. Pure Optical Regenerator b. Electric Regenerator c. a&b d. None
42.needs to process RSOH
a. TM b. ADM c. Reg d. DXC
43.needs no cross connection function.
a. TM b. ADM c. Reg d. DXC
44.is mainly responsible for the cross connection of STM – N signal.
a. TM b. ADM c. Reg d. DXC
45. For backbone network with heavy traffic , topology is suitable.
a. Ring b. Star c. Line d. Mesh
46.types of protection are available in linear protection.
a. Two b. Three c. Four. d. None
47. A network can automatically recover the carried services from a failure fault in a very short period of time without making users be aware of any network fault is called a
a. Ring network b. Self Healing Network c. a&b d. None
48. SNC stands for
a. Sub Network Connection
b. Service Network Connection
c. Subscriber Network connection d. None
49.switching can be performed either via a line switching or a path switching scheme.
a. Prevention b. Protection c. a&b d. None
50. If the operating signals can travel clockwise, it is called
a. Uni directional ring b. Bi directional ring c. a&b d. None
51. If the operating signals can travel both directions, it is called
a. Uni directional ring b. Bi directional ring c. a&b d. None
52.moves all the single channel of an entire STM – N channel to a protection fiber
a. Path switching b. Line switching c. a&b d. None

53.can move individual payload channels within an STM – N channel to another path.
 a. Path switching b. Line switching c. a&b d. None
54. USHR stands for
 a. Two fiber Unidirectional Self Healing Ring
 b. Two fiber Bi directional Self Healing ring
 c. Bi directional line switching self healing ring 2 fibers
 d. a&b
55. BSHR stands for
 a. Uni directional Self Healing Ring
 b. Bi directional Self Healing Ring
 c. a&b d. None
56. MS shared protection ring can be categorized into
 a. Two fiber b. four fiber c. a&b d. None
57. BSHR may be on
 a. Two fiber b. four fiber c. a&b d. None
58. In synchronization network, all the clock are traceable toderived from a Cesium atomic clock.
 a. Internal clock b. Recovered clock c. PRC d. a&b
59. In SDH frame structure number of rows
 a. 270 b. 9 c. a&b d. None
60. In SDH number of columns
 a. 270 b.9 c. a&b d.none
61. In SDH no. of bytes
 a. 9X270 b.9X270X8 c.a&b d. none
62. In SDH no.of bits
 a. 9X270 b.9X270X8 c. a&b d. None
63. In SDH no.of bits /second
 a. 9X270X8X8000 b. 155520000 c. a&b d. None
64. Bit rate of STM –N is
 a. 1X155.520 Mbps b. NX155.520 Mbps c. a&b d. None
65. Sub Network connection protection is a
 a. Line protection b. Path protection c. a&b d. None
66. In BSNL onlyfiber ring mechanism is being adopted.
 a. Two b.four c. a&b d. None
67. In USHR in normal condition, the traffic flows indirections in one fiber.
 a. Clockwise b. anticlockwise c. a&b d. None
68. In USHR, in failure condition, the traffic flows indirection path.
 a. Clockwise b. counterclockwise c. a&b d. None
69. Which statement is correct
 a. MS shared protection rings scheme is supported by USHR only.
 b. MS shared protection rings scheme is supported by BSHR only.
 c. a&b d. None
70. In MS shared protection rings, maximum station may not be more than.....
 The excluding regnertor.
 a. 6 b.16 c. 8 d. None

71. The rectangular structure belongs to
 a. PDH b. SDH c. a&b d. None
72. 125 Microseconds is the frame length of
 a. PDH b. SDH c. a&b d. None
73. In SDH frame, the rows allotted to SOH is
 a. 1-3 columns & 5-9 rows
 b. 1-3 rows & 5-9 columns
 c. 1-3 rows & 5-9 rows d. None
74. RSOH and MSOH combined called as
 a. SOH b. AUPRT c. a&b d. None
75. In SDH, the rows 1-3 allotted to
 a. RSOH b. MSOH c. a&b d. None
76. In SDH, 5-9 rows allotted to
 a. RSOH b. MSOH c. a&b d. None
77.can be accessed either at the regenerator or at the terminal equipment.
 a. RSOH b. MSOH c. Payload d. None
78. The frame structure of Information Pay load area is
 a. Horizontal columns $10 \times N-270 \times N$ & vertical rows 1-9
 b. Vertical columns $10 \times N-270 \times N$ & horizontal rows 1-9
 c. Vertical rows $10 \times N-270 \times N$ & horizontal columns 1-9
 d. None
79. AUPTR is located at the
 a. Fourth column of $1-9 \times N$ rows in the STM – N frame.
 b. Fourth row of $1-9 \times N$ columns in the STM –N frame
 c. a&b d. None
80. ADM is used at the
 a. Middle node of a link b. a node in a ring c. a&b d. None
81. Pure Optical regenerator is mainly used to
 a. Amplify the optical power so as to extend the optical transmission distance.
 b. Pulse regenerator shaping
 c. a&b d. None
82. Electric regenerator is used for
 a. Amplify the optical power so as to extend the optical transmission distance.
 b. Pulse regenerator shaping
 c. a&b d. None
83. A Regenerator in real sense only needs to process
 a. RSOH b. MSOH c. payload d. a&b
84. Protection switching can be performed either via
 a. Line switching b. path switching c. a&b d. None
85. In Uni directional ring, the operating signals can traveldirection
 a. Clockwise b. counterclockwise c. a&b d. None
86. In Bi direcrtrional ring, the operating signals can tranvel -----direction.
 a. Clockwise b. counterclockwise c. a&b d. None
87. Line switching moves all the single channel of an entire STM –N channel to a
 a. Unprotected fiber b. Protected fiber c. Individual payload channels
 within an STM –N channel to another path d. None

88. Path switching can move individual payload channels
 a. Unprotected fiber b. Protected fiber c. Individual payload channels within an STM –N channel to another path d. None
89. In synchronizations network, all the clock are traceable to one PRC derived from a
 a. Cesium atomic clock b. External clock c. a&b d. None
90. Inin normal condition, the traffic flows in the clockwise directions.
 a. USHR b. BSHR c. a&b d. None
91. Inin failure condition, the traffic flows in counterclockwise direction path.
 a. USHR b. BSHR c. a&b d. None
92. MS shared protection rings scheme is supported by
 a. USHR b. BSHR c. a&b d. None
93.is a standard for telecommunications transport formulated by the International Telecommunications Union.
 a. PDH b. SDH c. a&b d. None
94. SDH is a standard for telecommunication transport formulated by the
 a. ITU –T b. CCITT c. a&b d. None
95. In PDH systems the timingfrom equipment to equipment because they are synchronized from different network clocks.
 a. May vary b. does not vary c. remains d. None
96. In PDH , in order to multiplex varying time signal a process knows asis used.
 a. Coding b. decoding c. Bit stuffing d. None
97.adds extra bits to bring all input varying timing signals upto some common bit rates.
 a. Bit stuffing b. coding c. encoding d. None
98. SDH makes individual channels And they can be easily added and dropped.
 a. Visible b. invisible c. controls d. None
99. The bytes in SDH frame are transmitted by
 a. Row by row b. column by column c. row by column d. column by row
100. The transmission row by row continuous untilare all transmitted.
 a. 9X270XN bytes b. 9X270XN bits c. a&b d. None
101. A specific byte in a signal frame is transmitted.....
 a. 8000 times/second b. 800 times/second c, 8000 times/minutes d. None
102. Bit rate of a specific byte is
 a. 8000 X8 bits b. 64 Kbits/s c. a&b d. None
103. What is the transmission rate of one channel digital telephone?
 a. 64 Kbits/s b. 64 Kbytes/s c. 2 Mbps d. 155.52Mbp/s
104. Which of the following is the part of frame structure of STM –N?
 a. SOH b. Pay load c. AU-PTR d. all the above.
105.is needed for normal and flexible transmission of information payload.
 a. SOH b. Payload c. AU-PTR d. none
106.bytes are mainly used for the running management and maintenance of network.
 a. SOH b. payload c. a&b d. None
107.passes a regenerator transparently and is terminated at the multiplexer equipment.
 a. RSOH b. MSOH c. a&b d. None

108. In SDH, SOH bytes are mainly used for
 a. Running management and maintenance of a network.
 b. Monitor and control of the path performance
 c. A&b d. None
109. In SDH, POH bytes are mainly used for
 a. Running management and maintenance of a network.
 b. Monitor and control of the path performance
 c. A&b d. None
110. In SDH frame structure 1-3 rows allocated to
 a. MSOH b. RSOH c. a&b d. None
111. In SDH frame structure 5-9 rows allocated to
 a. MSOH b. RSOH c. a&b d. None
112. In SDH frame structure AUPTR is located at
 a. Fourth row of 1-9X N columns
 b. Fifth row of 1-9 XN columns
 c. A&b d. None
113. ADM has
 a. Two line ports b. one tributary ports c. a&b d. None
114.is having two line ports and one tributary ports.
 a. ADM b. TM c. Regenerator d. None
115.is most important NE in an SDH network.
 a. ADM b. TM c. Regenerator d. None
116. In SDH.....ADM & TM need to process
 a. RSOH b. MSOH c. A&b d. None
117. There are.....kinds of network physical topology structures are available.
 a. 4 b.5 c.6 d.7
118. The topology suitable for local network is.....
 a. Ring b. Star c.mesh d. none
119. The topology suitable for access network is
 a. Ring b. star c. meshd. None
120. The topology suitable for user network is
 a. Ring b. star c. mesh d. None
121. The strong survivability is the best advantage oftopology
 a. Ring b. star c. meshd. None
122.is not influenced by the problems of node bottleneck and failure.
 a. Ring b. star c. meshd. None
123. Innetwork multiple optional routes between two nodes.
 a. Ring b. star c. mesh d. None
124. There aredifferent protection schemes in linear protection.
 a. 2 b.3 c.4 d.5
125. The simplest form of line protection is.....
 a. 1+1 b. 1:1 c. 1:n d. None
126. In Protection scheme each working line is protected by one protection line.
 a. 1+1 b.1:1 c.1:N d. none
127. In 1+1 line protection schemesignals transmitted on both lines.

- a. Same b. different c. a&b d. None
128.protection scheme is used to directly replace the working line when it fails.
a. 1+1 b. 1:1 c. 1:N d. None
129. In 1:1 protection scheme, protection path can only be used if a switch over taken place whether this statement is true or false?
a. True b. False
130. In 1:1 protection scheme switch over takes place at
a. Only in the transmitting end
b. Only in the receiving end c. a&b d. None
131. In 1:1 protection, switching at the far end is initiated by the.....
a. Return message in the backward channel
b. Return message in the forward channel c. a&b d. None
132. In 1:n protection N working channels are protected by Protection channel.
a. One b.N c. a&b d. None
133. In 1:N protection scheme if there are no defects in the network, this protection channel can be
a. Used to transport low priority traffic
b. Used to transport heavy priority traffic
c. A&b d. None
134.protection is a dedicted protection mechanism that can be used on any physically structure.
a. SNC b. 1:1 c. 1+1 d. None
135.protection is used to protect a portion of a path or the full end to ene path.
a. SNC b.1:N c. 1+1 d. None
136. SDH is normally configured as.....architecture.
a. Ring b. Mesh c. Star d. line
137. SDH rings are commonly called as.....
a. Self Healing Ring b. No self healing ringc. a&b d. None
138. The traffic flowing along a certain path can automatically be switched to an alternate or standby path, following a failure or degradation or link failure is called
a. Self healing ring b.no self healing ring c. star d. None
139. The digital transitions in the signals occurs exactly at the same rate is called.....
a. Synchronous b. Plesiochronous c. a&b d. None
140. The digital signal transitions occur at almost same rate is called.....
a. Synchronous b. Plesiochronous c. a&b d. None
141. In PDH the digital signal transitions variation remains within the limit as per ITU – T recommendations is
a. CCITT b. G.984 X series b. G.811 d. G.703
142. Intransitions of the signal does not necessarily occur at the same nominal rate.
a. Synchronous b. plesiochronous c. asynchronous d. None
143. Self healing rings work in.....different type of way.
a. 2 b.3 c.4 d.5

144. State true or false: the USHR mechanism itself does not remain aware which fiber is carrying traffic.
 a. True b. false
145. In USHR, in case traffic is switched over to alternate path, the traffic ison normal path after restoration.
 a. Returned b. Not returned c. remains the same d. None
146. BSHR scheme requiresprotocol to make it operative.
 a. APS b. MPCP c. TCP/IP d. None
147.rings are characterized by dividing the total payload per multiplex section equally into working and protection capacity.
 a. USHR b. 1:1 c. MS shared protection d. None
148. In MS shared protection rings for normal workingpath is Preferable.
 a. Shortest b. Longest c. any path d. None
149. State True or False: In MS shared protection the sum of the tributaries that transverse a span can exceed the maximum capacity of the particaulr span.
 a. True b. False

Answer key for the Chapter -05

Overview of SDH

01. A	02. A	03. B	04. B	05. C	06. B	07. B	08. C	09. C	10. A
11. A	12. C	13. B	14. A	15. C	16. A	17. A	18. C	19. B	20. A
21. C	22. A	23. B	24. C	25. C	26. C	27. C	28. A	29. A	30. A
31. A	32. C	33. B	34. C	35. C	36. B	37. A	38. B	39. C	40. A
41. B	42. C	43. C	44. D	45. D	46. B	47. B	48. B	49. B	50. A
51. B	52. B	53. A	54. A	55. B	56. C	57. C	58. C	59. B	60. A
61. A	62. B	63. B	64. B	65. B	66. A	67. A	68. B	69. B	70. B
71. B	72. B	73. C	74. A	75. A	76. B	77. A	78. A	79. B	80. A
81. A	82. B	83. A	84. C	85. A	86. C	87. B	88. C	89. A	90. A
91. A	92. B	93. B	94. A	95. A	96. C	97. C	98. B	99. A	100. A
101. A	102. C	103. A	104. D	105. B	106. A	107. A	108. A	109. B	110. B
111. A	112. A	113. C	114. B	115. B	116. C	117.	118. A	119. A	120. A
121. A	122.	123. B	124. B	125. A	126. A	127. A	128.	129. A	130. C
131. A	132. A	133. A	134. A	135. A	136. A	137. A	138. A	139. B	140. B
141. B	142. A	143. A	144. B	145. A	146. C	147. A	148. B		

Chapter 06

EPON & GPON

01. PON stands for
 - a. Passive Ordinary Network
 - b. Passive Optical Network
 - c. Primary Optical Network
 - d. None
02. PONS are called as
 - a. Active
 - b. Passive
 - c. a&b
 - d. None
03. EPON is based on the
 - a. Ethernet in the last mile standard of IEEE.
 - b. Ethernet in the first mile standard of IEEE.
 - c. E1 in the first mile standard of IEEE.
 - d. E1 in the last mile standard of IEEE.
04. GPON is based on the
 - a. G.984.X series
 - b. G.985 .X series
 - c. G.986.X series
 - d. None
05. EPON is called as
 - a. Passive
 - b. Active
 - c. Gigabit Ethernet Passive optical Network.
06. OLT stands for
 - a. Optical Line Testing
 - b. Ordinary Line Terminal
 - c. Optical Line Terminal
 - d. None
07. Optical Line terminal resides in the
 - a. Remote office
 - b. Central office
 - c. Head end
 - d. b&c
08. ONT stands for
 - a. Ordinary Network Terminal
 - b. Optical Network testing
 - c. optical Network Terminal
 - d. None
09. Optical Network terminal terminates the signal at the
 - a. Exchange Premises
 - b. Customer premises
 - c. a&b
 - d. None
10. -----technology allows the service provider to share the fiber cost of running fiber from the Central office to the premise among may users –usually upto 32 locations.
 - a. SDH
 - b. PDH
 - c. POND
 - d. None
11. The distance maximum between OLT and ONT is typically...
 - a. 10 Km
 - b. 2om
 - c. 20 km
 - d. None
12. ONU stands for
 - a. Outdoor Network Unit
 - b. Optical Network Universaal
 - c. Optical Network unit
 - d. None

13. Point to point fiber might use
 a. Either N or 2N fiber b. One fiber c. a&b d. None
14. Point to Point fiber have
 a. 1N optical transceiver b. 2N optical transceiver c. a&b d. None
15. Curb switched connection uses
 a. One trunk fiber b. two trunk fiber c. a&b d. none
16. Curb switched connection would have
 a. 1N+1 Optical transceiver
 b. 2N+1 Optical transceiver
 c. 2N+2 optical transceiver
 d. None
17. PON is typically deployed as a
 a. Tree
 b. Tree and Branch c. a&b d. None
18. PON using
 a. 1:N optical splitters
 b. 2:N optical splitters c. a&b d. None
19. A PON network includes an
 a. OLT b. ONU c. a&b d. None
20. The ONU resides
 a. at the customer premises
 b. Near the customer premises
 c. A&b d. None
21. P2MP stands for
 a. Fiber Point to multipoint
 b. Fiber Point to single point
 c. Fiber point to Multiplex point d. None
22. PON is configured in
 a. Single duplex mode b. Full Duplex mode c. a&b d. None
23. PON is configured in
 a. A single fiber point to multipoint
 b. Double fiber point to multipoint
 c. A multiple point to single point
 d. Double point to single point
24. The OLT allows..... At a time to transmit using TDMA protocol.
 a. Only one subscriber b. More than one subscriber c. 1000 subscriber d.
 None
25. TDMA stands for
 a. Transmission De Multiplexing Access
 b. Time De Multiplexing Access
 c. Time Division Multiplex Access
 d. None
26. In PON, wavelength of downstream is
 a. 1310 nm b. 1550nm c. a&b d. 1490nm
27. In PON, wavelengths of upstream is
 a. 1310 nm b. 1550nm c. a&b d. 1490nm

28. PON systems use.....architecture multiplexing signals with different wavelengths for downstream and upstream.
 a. Electrical splitter b. Optical splitter c. a&b d. None
29. To control P2 MP fiber network, EPON uses the
 a. MCPP b.MPCP c.PMCP d. None
30. MPCP stands for
 a. Multi Point Control Protocol
 b. Multiplex Point Control Protocol
 c. Multiple controlling Protocol
 d. None
31. MPCP implemented in the
 a. MAC layer b. Transport layer c. Network layer d. none
32. In MPCP, andare used to assign and request bandwidth.
 a. Gate and Receive b. Gate and Reception c. Gate and Report d. None
33. In MPCP,andare used to control the auto discovery process.
 a. Register b. Register_request c. a&b d. None
34. DBA stands for
 a. Dynamic Bandwidth Aversion
 b. Dynamic Bandwidth Advertisement
 c. Dynamic Bandwidth Allocation
 d. None
35. In EPON downstream, it handles the physical broadcast of
 a. 802.1 frames b.802.2 frames c. 802.3 frames d. None
36. OLT works at
 a. 230 v AC supply b. 48 V DC power supply c. a&b d. None
37. ONU, power input for ONT is
 a. 230 v AC supply b. 48 V DC power supply c. a&b d. None
38. The power back for ONT is
 a. 2 hours b. 20 minutes c. 4 hours d. None
39. At the customer end, the ONT shall be of
 a. Set up box type b. pizza box type c. a&b d. None
40. NGPN stands for
 a. Next Generation Planning Network
 b. Next Generation Play Network
 c. Next Generation Previous Network d. None
41. EPL stands for
 a. Ethernet Planning Leased Lines
 b. Ethernet Private Local Lines
 c. Ethernet private Leased Line
 d. None
42. EPLAN stands for
 a. Ethernet Private Leased Area Network
 b. Ethernet Private Local Area Network
 c. A&b d. None
43. SLA stands for
 a. Service Level Agreement

- b. Supply Level Agreement c. a&b d. None
44. Higher bandwidth broadband connections can be given upto.....using PON technology.
a. 2 Km b. 4 Km c. 20 Km d. None
45. Higher bandwidth broadband connections can be given to the customers using
a. WiMAX b. 3G DATA c. PON Technology d. None
46. In case of GE-PON, the voice service can be extended to using
a. Voice Over Internet Protocol
b. Value Over Internet Protocol
c. A&b d. None
47. GE –PON offer
a. 1.25 Mbps capable b. 155 Mbps capable c. 1.25 Gb/s capable d. None
48. GPON supportsmethods of encapsulation
a. One b. Two c. three d. None
49. GEM stands for
a. Gentle energy Man
b. GPON Encapsulation Method
c. GPON Encapsulation Measurement d. None
50. GFP stands for
a. GPON Framing Procedure
b. GPON First Procedure c. a&b d. None
51. GPON supports downstream rates as high as
a. 2.5 Mbp/sec b. 2.5 Mhz/s c. 2.5 Gbits/s d. None
52. GPON supports upstream rates from
a. 155 Mb/s to 1.25 Gb/se b. 155 Mbps to 2.5 Gb/s c. a&b d. None
53. BSNL are procuring the GPON that will support downstream rate & upstream rate are
a. 2.5 Mb/s & 1.25 Gb/s b. 2.5 Gb/s & 1,25 Gb/s c. a&b d. None
54. EPON has a nominal bit rate of
a. 1.25 Gb/s b. 1.25 Mb/s c. a&b d. None
55. EPON utilizing
a. Wavelength Division Multiplexing
b. Time division Multiplexing
c. Code Division Multiplexing
d. A&b
56. EPON reaches a range of
a. 10 Km b. 10 m c. 100 Km d. 20 KM
57. Dial up modem speed stops at about.....on copper infrastructure.
a. 56 Mbps b. 56 Gbps c. 56 Kbps d. 64 Kbps
58. POS stands for
a. Passive Optical Splitter
b. Performance Optical splitter
c. A&b d. None
59. ODN stands for
a. Optical Determination Network
b. Optical Distribution Network
c. A&b d. None
60. APON stands for

- a. *Advanced Passive Optical Network*
 - b. *ATM Passive Optical Network*
 - c. *A&b* d. *None*
61. *EPON stands for*
- a. *Ethernet Passive Optical Network*
 - b. *Ethernet Performance Optical Network* c. *a&b* d. *None*
62. *GPON stands for*
- a. *Gigabit capable Passive Optical Network*
 - b. *Gigabit capable Performance Optical Network* c. *a&b* d. *None*
63. *Split ratio of EPON is*
- a. *1:64* b. *1:128* c. *1:32* d. *None*
64. *Split ratio of GPON is*
- a. *1:64* b. *1:128* c. *a&b* d. *None*
65. *In GPON transmission over optical fibers the maximum is*
- a. *20 m* b. *200 km* c. *20 Km* d. *None*
66. *The length of any downstream GPON frame is fixed to*
- a. *125 Microseconds* b. *125 Milliseconds* c. *125 seconds* d. *None*
67. *The upstream GPON data is transmitted in the*
- a. *PCM Mode* b. *CDMA Mode* c. *TDMA Mode* d. *a&b*
68. *PON is typically deployed as a*
- a. *Tree* b. *tree and branch* c. *a&b* d. *None*
69. *Both GPON and GE-PON can also be roll out broadcast cable TV services using the*
- a. *First wavelength* b. *second wavelength* c. *third wavelength* d. *None*
70. *Ethernet in the first mile standard of IEEE belongs to*
- a. *GPON* b. *EPON* c. *a&b* d. *None*
71. *G.984.X. series belongs to*
- a. *GPON* b. *EPON* c. *a&b* d. *None*
72. *Gigabit Ethernet Passive Optical Network is called as*
- a. *EPON* b. *GPON* c. *a&b* d. *Noe*
73. *.....resides in the Central Office or Head end.*
- a. *OLT* b. *ONU* c. *a&b* d. *None*
74. *.....terminates the signal at the customer premises.*
- a. *OLT* b. *ONT* c. *ONU* d. *a&b*
75. *PON technology allows the service provider to share the fiber cost of running fiber from the Central Office to the premises among many users usually upto*
- a. *42 locations* b. *31 locations* c. *32 locations* d. *None*
76. *The distance maximum between is typically 20 km*
- a. *OLT& OLT* b. *ONT&ONT* c. *OLT and ONT* d. *None*
77. *The OLT allows only one subscriber at a time to transmit using*
- a. *PCM protocol* b. *TDMA protocol* c. *a&b* d. *None*
78. *In PON, wavelength ofis 1490nm*
- a. *Upstream* b. *downstream* c. *a&b* d. *None*
79. *In PON, wavelength ofis 1310 nm*
- a. *Upstream* b. *downstream* c. *a&b* d. *None*
80. *PON systems use optical splitter architecture multiplexing signals with.....*
For downstream and upstream

- a. Same wavelength b. different wavelength c. a&b d. None
81. EPON uses the Multi Point control Protocl.
a. To control MPCP b. To control P2MP fiber network c. a&b d. None
82. MPCP implemented in the MAC layer, introducing new.....control message.
a. 32 bit b.64 byte c. 64 bit d. None
83. GPON supports Rates as high as 2.5 Gbits/sec.
a. Downstream b.upstream c. a&b d. none
84. GPON supports.....rates from 155 Mbps to 2.5 Gbits/sec.
a. Downstream b. upstream c. a&b d. None
85. BSNL are procuring the GPON that will supportrate 2.5 Gbps and
..... 1.25 Gbps respectively.
a. Downstream,upstream b. upstream,downstream c.None of the above.
86. The length of any.....GPON frame is fixed to 125microseconds.
a. Downstream b.upstream c. a&b d.None
87. GPON data is transmitted in the TDMA Mode.
a. Upstream b.downstream c. a&b d. None
88. PON is typically deployed as a tree or tree and branch topology using passive
a. Optical splitters b. N splitters c. 1:N optical splitters d. None
89. Both GPON and GE –PON can also roll out broadcast cable TV services using the third
wavelength at.....using RF video.
a. 1310 nm b.1550nm c. a&b d. none
-
90. DSL and cable modem technologies commonly dubbed as.....
a. Internet access b. Broadband access c. a&b d. None
91. PON is a new access technology names as.....
a. EPON b. GPON c. a&b d. None
92. A..... is a single, shared optical fiber that uses inexpensive optical splitters to
divide the single fiber into separate strands.
a. SDH b. PDH c. PON d. None
93. State whether the statement is true or false? Other than at the CO and subscriber end
points there are no active electronics within the access network.
a. True b. False
94. The standard of EPON is
a. IEEE b. IETE c. ITU – T d. None
95. The standard of GPON is
a. IEEE b. ITU – T c. G.984 seriesd. a&b
96. PONs do not require any power in the outside plant to power the filters or splitters,
whether this statement is true or false?
a. True b. False
97. The protocol used byh EPON is
a. MPCP b. TCP/IP c. a&b d. None
98. In EPON protocol,are used to assign and request bandwidth.
a. GATE b. REQUEST c. a&b d. None
99. In EPON protocol,&.....are used to control the auto discovery process.
a. REGISTER b. REGISTER_REQUEST c. a&b d. None
100. In EPONperforms an auto discovery process.
a. OLT b. ONT c.ONU d. None

101.connection uses one trunk fiber and thus would save fiber.
 a. Curb switched b. ONT c. ONU d. None
- 102.....connection would use $2N+2$ optical transceivers.
 a. Curb switched b. ONT c. ONU d. None
- 103.State true or false The optical transceiver in curb switched connection does not require electrical power in the field.
 a. True b. false
104. State true or false: The optical transceiver in PON require electrical power in the field.
 a. True b. False
105. The OLT system would typically be
 a. an Ethernet switch b. media converter c. a&b d. None
106. In PON, Optical losseswith both split count and fiber length.
 a. decreases b. Increases c. remains d. none
107. In PON, the optical loss increase with
 a. split count b. fiber length c. a&b d. None
108. TNF stands for
 a. Technically Not Feasible
 b. Transmission Not Feasible
 c. Traditionally Not Feasible
 d. None
109. In GPON, extension of PSTN lines to the customer is using
 a. 64 Kbps b. 1.25 Gbps c. 2.5 Gbps d. None
110. In GPON to cover a group of customer's PSTN lines, we may use..
 a. ISDN b. EPABX c. V.%2 d. None
- 111.GPON isbased technology.
 a. TDM b. PCM c. CDMA d. GSM
112. TDM switches and NGN are to coexist for uptoas per the NGN vision plan.
 a. 2015 b. 2025 c. 2020d d. None
- 113.PMD stands for
 a. Physical Media Dependent
 b. Physical Minimum Dependent
 c. Physical Minimum Diploma
 d. None
114. The XDSL technology cannot solve the contradiction between
 a. distance & bandwidth \ d. None
 b. distance & quality c. bandwidth & quality
115. In GPON, downstream data streams usetechnology.
 a. TDM b. Broadcast c. a&b d. None
116. In GPON upstream data streams use thetechnology.
 a. TDM b. broadcast c. a&b d. None

Answer Key for the Chapter -06 EPON & GPON

01. B	02. B	03. B	04. A	05. C	06. C	07. D	08. C	09. B	10. C
--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------

11. C	12. C	13. A	14.	15. A	16. C	17. B	18.A	19.C	20.C
21.A	22.B	23. A	24.A	25. C	26. D	27.A	28.B	29.B	30. A
31. A	32.C	33.C	34.C	35.C	36.B	37.A	38.C	39.B	40.B
41. C	42.B	43.A	44. C	45.C	46.A	47. C	48.B	49.B	50.A
51. C	52.A	53.B	54.A	55.A	56. D	57.C	58. A	59.B	60.B
61. A	62.A	63.C	64. C	65.C	66. A	67. C	68.B	69.C	70. B
71. A	72. A	73.A	74. B	75. C	76. C	77. B	78. B	79.A	80. B
81.	82.B	83.A	84. B	85. A	86. B	87. B	88. C	89.B	90. B
91.A	92.C	93.A	94.A	95.C	96.A	97.A	98.C	99.C	100.
101. A	102.A	103.A	104.B	105.C	106.B	107.C	108.A	109.A	110. C
111.A	112.A	113.A	114.A	115. B	116. A				

Chapter 7

Operation and Maintenance of switching system

01. In BSNL, there are approximatelytelephone exchanges as on 30th September 2010.
 - a. 5000
 - b.50000
 - c.50081
 - d. None of the above.
02. MDD stands for
 - a. Magnetic Disk Drive
 - b. Magnetic Drive Disk
 - c. Magnetic Drive detachable
 - d. Magnetic Detachable Drive .
03. MTD stands for
 - a. Magnetic Test Drive .
 - b. Magnetic Transmission Drive
 - c. Magnetic Tape Drive
 - d. None of the above.
04. MOD stands for
 - a. Magnetic Optical Disk Drive
 - b. Magnetic Onward Disk Drive
 - c. Magnetic Optical Drive Disk
 - d. None of the above.
05. OMT stands for
 - a. Optical and Maintenance Terminal
 - b. Operation and Maintenance Transmission
 - c. Operation and Maintenance Terminal
 - d. None of the above.
06. MDD is used for
 - a. For storing data
 - b. For back up and regeneration of exchange.
 - C. a&b
 - d.None
07. MTD is used for
 - a. For storing data
 - b. For back up and regeneration of exchange
 - c. a&b
 - d. None
08. MOD is used for
 - a. For storing data
 - b. For back up and regeneration of exchange
 - c. a&b
 - d. None
09. Resistance of exchange earth must be
 - a. 0.5 ohm
 - b. less than 0.5 ohm
 - c. more than 0.5 ohm
 - d. none

10. The exchange earth should be measured
- Atleast thrice in a year
 - atleast once in a year
 - atleast twice in a year
 - None of the above.
11. To neutralize the electrostatic charge generated by the staff working in the exchangemust be done.
- Fire extinguishers
 - Insulators
 - antistatic floor
 - None
12. For early detection of fire hazard.....should be ensured.
- Automatic fire extinguisher
 - Automatic fire detection system
 - A&b
 - None
13. BRA ISDN subscriber, the channel is
- 2B+D
 - 30B+D
 - 2B+2D
 - 30B+30 D
14. PRA ISDN subscriber, the channel is
- 2B+D
 - 30B+D
 - 2B+2D
 - 30B+30 D
15. Normally billing is done on
- Fortnightly basis
 - bimonthly basis
 - monthly basis
 - none
16. Which is the following statement is true?
- For efficient & fast signaling , all the NT switches use CCA 7 signalling.
 - For efficient & fast signaling, all the NT switches use inbound singalling.
 - For efficient & fast signaling, all the NT switches use CCS 7 signalling.
 - None of the above.
17. Traffic administration may be conducted at
- Centralized Network Maintenance Center.
 - Centralized Network Management Circle.
 - Centralized Network Management Center.
 - None of the above.
18. CNMC stands for
- Centralized Network Maintenance Center.
 - Centralized Network Management Circle.
 - Centralized Network Management Center.
 - None of the above.
19. Subscriber lines are tested on regular basis during
- Slack hour
 - off peak hours
 - a&b
 - none
20. Trunk lies are tested on regular basis during
- Slack hour
 - off peak hours
 - a&b
 - none
21. Metering can be taken during
- Fortnightly
 - monthly
 - fortnightly or monthly
 - none
22. MOD/Tapes are prepared for
- Storing the data of the exchange
 - backup
 - billing
 - none
23. In BSNL, there are approximately 50081 telephone exchanges as on
- 01st October 2010
 - 01st October 2000
 - 30th September 2010
 - none
24. For storing data we are using
- MDD & MOD
 - MDD &MTD
 - a&b
 - None
25. For back up and regeneration of exchange, we are using

- a. MDD b. MOD c. MTD d. OMT
26.generated by the staff working in the exchange , antistatic flooring must be done.
a. To charge the current
b. To neutralize the electromagnetic charge
c. A&b d. To neutralize the electrostatic charge.
27. 2B + D channel belongs to
a. BRA b. PRA c. a&b d. None
28. 30 B + D channel belongs to
a. BRA b. PRA c. a&b d. None
29. For efficient and fast signaling all the NT switches use
a. CCA 7 signalling b. CCS 7 signalling c. a&b d. none
30.are prepared for billing.
a. MOD b. Tapes c. a&b d. MDD
31. Apart from CDOT & E-10 B there are.....main types of NT switches.
a. 2 b.3 c.4 d. None
32. For preventive maintenance subscriber lines are tested on regular basis during slack/off peak hours. This type of testing is called.....
a. Demand testing b. routine testing c. a&b d. None
33. If any complaint is received by the maintenance staff they will issue a command over the terminal and test the faulty lines, this type of testing is called as
a. Routine testing b. Demand testing c. a&b d. None
34. Business hours can be provided with PRA which is connected to
a. BRA b. PRA c. ISDN PRA d. a&b

Answer Key for Chapter 07 Operation and Maintenance

01. C	02. A	03. C	04. A	05. C	06. A	07. B	08. A	09. B	10. C
11. C	12. B	13. A	14. B	15. C	16. C	17. C	18. C	19. C	20. C
21. C	22. C	23. C	24. A	25. B	26. B	27.A	28. B	29. B	30. C
31. C	32. B	33.B	34.C						

Chapter -08 Switching Lab EWSD architecture

01. DLU stands for
a. Digital Line Unit b. Digital Light Unit c. a&b d. None
02. LTG stands for

- a. Line Trunk Group b. Line Test Group c. a&b d. None
03. SN stands for
a. Switching Network b. Signal to Noise c. a&b d. None
04. MB stands for
a. Message Buffer b. Message Byte c. a&b d. None
05. SYPD stands for
a. System Panel display b. Signal Panel Display c. a&b d. None
06. CCG stands for
a. Central Clock Generator b. Clock Control Generator c. a&b d. None
07. CP stands for
a. Communication processor
b. Coordination processor c. a&b d. None
08. CCNC stands for
a. Common Channel Network Control
b. Channel Common Network Control c. a&b d. None
09. Analog or digital subscribers, PBX lines are terminated on
a. DLSus b. LTG c. a&b d. None
10. There can be approximately Subscriber per DLU.
a. 1000 b. 2000 c. 1000 to 2000 d. None
11. In Line Trunk Group connected.
a. ISDN PRI V.5.2 b. trunk c. a&b d. None
12. MTP stands for
a. Message Transfer Part
b. Message Transmission Protocol
c. A&b d. None
13. Common channel Network channel can handle
a. 254 Signaling link b. 245 Signaling link c. 245 Subs line d. None
14. SE stands for
a. Special Equipment b. Special Emission c. Signaling Equipment d. None
15. DEVD stands for
a. Device Rack b. Digital Enriched Video DATA c. a&b d. None
16. DDF stands for
a. Digital Distribution Frame b. Distribution Digital Frame c. a&b d. None
17. CP113 D stands for
a. Common Processor 113
b. Coordination Processor 113
c. Cooperation Processor 113
d. None
18. There can be approximately 1000 to 2000 subscriber per
a. DLU b. LTG c. CP d. None
19. ISDN PRI V..2 and trunk are connected in
a. LTG b. DLU c. CP d. None
20.can handle 254 signaling link.
a. LTG b. CCNC c. a&b d. None
-
21. EWSD switches are working in BSNL's networks as
a. Local b. TAX c. A&b d. none
-

22. DLUs can be used locally within theor remotely as.....
 a. Exchange, Remote switch unit b. Remote switch unit, exchange
 c. a&b d. None
23. LTG is thein EWSD exchange.
 a. Subsystem b. System c. a&b d. None
24.is the interface btween DLU and SN.
 a. CP b. LTG c. CCG d. None
25.performs the switching function for speech as well as for messages in EWSD exchange.
 a. DLU b. LTG c. CP d. SN
26. In EWSD exchange, SN is
 a. Time Switching b. Space switching c. combination of Time and Space
 d. None
27. In EWSD exchange, routing and zoning etc will be done by
 a. CP b. SN c. LTG d. DLU
28. In EWSD exchange which unit performs internal message traffic?
 a. CP b. Message buffer c. LTG d. SN
29. In EWSD switch, which part displays external alarms like fire & air conditioning system failure?
 a. CP b. SN c. SYPD d. MB
30. In EWSD exchange which part generates very accurate clock?
 a. SN b. CP c. CCG d. None
31. Two OMTS withas operating system
 a. Linux b. Unix c. windows NT d. None
32. Four X 25 terminals withas operating system.
 a. Linux b. Unix c. Windows NT d. None
33. Three X.25 terminals withas operating system.
 a. Linux b. Unix c. windows NT d. None
34. In EWSD the maintenance schedule of filter cleaning will be.....times.
 a. 1 b.2 c. 3 d. 4
35. In EWSD the maintenance schedule of filter cleaning will be.....
 a. 30th June b. 31st December c. a&b d. None

Answer Key for Chapter 08

Switching lab EWSD architecture.

01. A	02. B	03. A	04. A	05. A	06. A	07. B	08. A	09. A	10. C
11. C	12. A	13. A	14. A	15. A	16. A	17.B	18. A	19. A	20. B
21. C	22. A	23. A	24. B	25. A	26. C	27. A	28. B	29. C	30. C
31. A	32. A	33.C	34.B	35. C					

Chapter -09

CDR Project

01. TRA stands for
 - a. Telecom Revenue Accounting
 - b. Telecom Reading Accounting
 - c. Telecom Receiving Accounting
 - d. None
02. FRS stand sor
 - a. Fault Repair Service
 - b. Fault Repair System
 - c. Fault Receiving Service
 - d. Fault Receiving system
03. DQ stands for
 - a. Directory Enquiry
 - b. District Enquiry
 - c. Distant Enquiry
 - d. None
04. CRM stand for
 - a. Customer Relationship Management
 - b. Consumer Relationship Management
 - c. Customer Ready Management
 - d. Consumer Ready Management
05. BSNL is having state of artsoftware.
 - a. CDR b. DOTSOFT c. CRM d. None
06.software also provide a web self care module
 - a. CRM b. CDR c. DOTSOFT d. None
07. WSC stands for
 - a. Web Self care b. Web Support Care c. Web Self Customer d. None
08. BSNL is proposing to have zonal printing systems with probablyprinting centers across the country.
 - a. 5 b.6 c.4 d.3
09. The CDR Project is going to be implemented withdata centers
 - a. 4 b.5 c.3 d.2
10. In CDR Project, South zone andconsidered as one project.
 - a. East zone b. West zone c. North zone d. None
11. In CDR Projecct, North zone andconsidered as second project.
 - a. East zone b. West zone c. South zone d. None
12. The billing system for south east is going to be from
 - a. M/s Comverse b. M/s Sathyam c. M/s Converges d. None
13. The contract for the billing system for south ease is for.....
 - a. 10 years b. One year c. 2 years d. None
14. The billing system for North west is going to be from
 - a. M/s Comverse b. M/s Sathyam c. M/s Converges d. None

15. Hyderabad data centre alone will haveDC class servers.
a. 18 b.200 c. a7b d. None
16. Hyderabad data centre alone will havelow end servers.
a. 18 b.200 c. a&b d. None
17. In CDR, each exchange is connected to a local exchange router. This statement is
a. True b.False
18. LE stands for
a. Local Exchange b. Least Exchange c. a&b d. None
19. All new technology switches shall be connected using
a. X.25 cards b. V.35 cards c. X.21 cards d. None
20. All CDOT exchanges will be connected to the LE router usingequipment.
a. CES b. CSE c. ECS d. None
21. MTE stands for
a. Magnetic Tape Emulator
b. Magnetic Transmission Emulator
c. Magnetic Transmission Emitter
d. Magnetic Tape Emitter
22. Each LE router is connected to the AR through
a. E1 Links b. STM c. Dark fiber d. None
23. AR stands for
a. Aggregation Router
b. Aggressive Router
c. Angry Router d. None
24. Each AR is installed in each
a. SSA d. Circle c. Exchange d. None
25. Each AR shall be connected overlink to the nerarest MPLS node.
a. STM -01 b. STM -04 c. STM -16 d. None
26. Each AR shall be connected to the nearestnode.
a. MLLN b. MPLS VPN c. a&b d. None
27. For CDR project, a PC withoperating system should need.
a. Windows XP b. Windows Vista c. a&b d. None
28. CTI stands for
a. Computer Telephony Interface.
b. Computer Telephony Information
c. Computer Transmit Interface
d. Computer Telephony Information
29. RA stands for
a. Revenue Assurance b. Receive Assurance c. Revenue Asset d. None
30. IOBAS stands for
a. Inter Operator Billing and Accounting System
b. Inter Operator Bimonthly and Accounting system
c. International operator Billing and Accounting system
d. International Operator Bimonthly and Accounting System
31. FMS stands for
a. Fraud Management System
b. Free Management System

- c. *Fraud Material System*
 - d. *Free Material System*
32. *EMS stands for*
- a. *Enterprise Management System*
 - b. *Engineering Management system*
 - c. *Enterprise Material System*
 - d. *Enterprise Management Service*
33. *EAI stands for*
- a. *Enterprise Application Interface*
 - b. *Enterprise Application Information*
 - c. *Engineering Application Interface*
 - d. *Engineering Application Information*
34. *Deposit amount for local connection is*
- a. *Rs. 500* b. *Rs. 1000* c. *Rs. 2000* d. *a&b*
35. *Deposit amount for STD is*
- a. *Rs. 500* b. *Rs. 1000* c. *Rs. 2000* d. *a&b*
36. *Deposit amount for ISD is*
- a. *Rs. 500* b. *Rs. 1000* c. *Rs. 2000* d. *a&b*
37. *The existing tariff is based on*
- a. *MCUs* b. *MUCs* c. *MOU* d. *None*
38. *The existing tariff based on MCUs will be get migrated to*
- a. *MCUs* b. *MUCs* c. *MOU* d. *None*
39. *MOU stands for*
- a. *Minutes of usage* b. *Minutes of Unused* c. *a&b* d. *None*
40.was the first SSA to shift to CDR based billing.
- a. *Hyderabad* b. *Kolkatta* c. *New Delhi* d. *Chennai*
41. *The data centre of CDR for North is*
- a. *Chandigarh* b. *Hyderabad* c. *Kolkatta* d. *Pune*
42. *The data centre of CDR for South is*
- a. *Chandigarh* b. *Hyderabad* c. *Kolkatta* d. *Pune*
43. *The data centre of CDR for East is*
- a. *Chandigarh* b. *Hyderabad* c. *Kolkatta* d. *Pune*
44. *The data centre of CDR for West is*
- a. *Chandigarh* b. *Hyderabad* c. *Kolkatta* d. *Pune*
45. *The system integrator for CDR in case of south & East Zone is*
- a. *M/s HCL* b. *M/s TCS* c. *a&b* d. *None*
46. *The system integrator for CDR in case of North & West zone is*
- a. *M/s HCL* b. *M/s TCS* c. *a&b* d. *None*
47. *The software used in CDR Project is -----*
- a. *E – stapling* b. *B – stapling* c. *C- stapling* d. *None*
48. *The software used in CDR installed at*
- a. *Hyderabad* b. *Chandigrah* c. *kolkatta* d. *Pune*
49. *PMS stands for*
- a. *Payment management Software*
 - b. *Payment management System*
 - c. *Payment Material software*

- d. *Payment management System*
50. An event that makes continuation of normal functions of a data can be impossible is known as.....
 a. Disaster b. Confusion b. Conclusion d. None
51. Hyderabad is configured as the DR site for.....
 a. Kolkatta b. Chandigrah c. New Delhi None
52. Pune is configured as DR for....
 a. Kolkatta b. Chandigrah c. New Delhi None
53. The degradation of performance for the applications failing over to the DR site is Permitted upto
 a. 50% b. 75% c. 40% d. None.
-
54. CDR project envisages installation of provisioning and mediation systems which will interface with aroundPSTN switches.
 a. 1000 b. 2000 c. 3000 d. None
55. In CDR project, the sub management shall be done through
 a. provisioning system b. Order management system c. Billing system d. None
56. The CDRs generated for all the calls will be pulled by thesystem.
 a. provisioning system b. Billing c. Mediation d. None
57. Payment management system is specially designed and developed by
 a. TCS b. HCL c. a&b d. None
58. Payment management systems will becomefor all the circles in BSNL.
 a. common b. different c. a&b d. None.
59. CDR project shall implement abilling system.
 a. convergent b. converse c. a&b d. None
60. In CCDR project, it enables us to issue a single bill for a customer taking any type of service from BSNL. State this statement is true or false.
 a. True b. False
61. Data center class servers are.....
 a. High end servers b. Low end server c. a&b d. None
62. Data center is having.....in each machine.
 a. 64 cores/CPUs b. 54 cores/CPUs c. a&b d. None
63. High end servers are using for.....
 a. Main applications b. small applications c. a&b d. None
64. High end machines are using for
 a. Billing b. CRM c. a&b d. None
65. Low end servers are having.....CPU servers.
 a. One b. Two c. Three d. Four
66. Low end servers are using for.....
 a. antivirus, HTTP b. Web servers, authentication c. a&b d. None
67. CDR Project is giving to integrate all the networks and provide a countrywide IP network with.....as a backbone.
 a. NIB b. MPLS c. a&b d. None
68. DATA center is also connected to MPLS Network presently through.....links.
 a. E1 b. STM-01 c. a&b d. None
69. Lateron, the DATA center has to be connected to MPLS through.....
 a. 1mbps b. 1Gbps c. a&b d. None
-

70. For CDR project, if the old PCs are used then its minimum RAM should be upgraded into
 a. 256 Mb b. 512 mb c. 1Gb d. None
71. For CDR project, if new PCs are used, then the minimum Ram should be
 a. 256 Mb b. 512 mb c. 1Gbps d. None
72. If the call centers are connected to the data centers, the call agent will have one.....phone.
 a. ISDN b. IP c. Digital phone d. None
73. The customer care & billing & other related operations ofSSAs are going to be migrated into 4 DATA centers.
 a. 334 b. 1000 c. 5000 d. None
74. In CDR Project every customer will be identified by.....
 a. Account Number b. NE number c. cable pair number d. None
75. In CDR Project, the number of billing cycles may even go uptoonce the project is rolled out in all the SSAs.
 a. 15 b. 25 c. 10 d. None
76. In CDR based billing, the discounts may be given not in terms of.....
 a. Free calls b. Free talk time c. a&b d. None
77. In CDR based billing system, the discounts will be given in terms of.....
 a. Free calls b. Free talk time c. a&b d. None
78. After CDR project,in revenue accounting method shall be used instead of invoice based.
 a. Brought Forward b. Adjusted c. A&b d. None
79. After CDR Project, surcharge will be treated as.....
 a. late fee b. VAT c. a&b d. None
80. After CDR project, the late fee will be a % of the outstanding instead of at the slab rate. State it is true or false.
 a. True b. False.
81. After CDR project, for PCO billing, minimum guarantee will be as per theinstead of on a monthly basis.
 a. Billing cycle b. Bimonthly c. a&b d. None
82. After CDR Project, PCO operators will be eligible for.....intead of commission.
 a. discount b. incentive c. a&b d. None
83. In CDR project, all the E-10 B exchanges are connected to the LE router through.....
 a. MTE b. MET c. TEM d. X.25
84. In CDR project, all the CDOT exchanges will be connected to the LE router using CES equipment which will be supplied bythrough HCL.
 a. ITI b. TCS c. CDOT d. None
85. In CDR project, all the CDOT exchanges will be connected to the LE router using CES equipment which will be supplied by CDOT through
 a. HCL b. TCS c. ITI d. None
86. X.25 cards are using to connectexchanges to LE router
 a. NE b. CDOT c. E-10 B d. a&b

87. CES equipment is using to connect.....exchange to LE router
 a. CDOT b. NE c. E-10B d. None
88. MTE equipment is using to connect.....exchange to LE router
 a. CDOT b. NE c. E-10B d. None

Answer Key for Chapter 09 CDR project

01. A	02. A	03. A	04. A	05. C	06. A	07. A	08. A	09. A	10. A
11.B	12. A	13. A	14. A	15.A	16. B	17. A	18. A	19. A	20. A
21 .A	22. A	23. A	24. A	25. A	26. B	27. C	28. A	29. A	30. A
31.A	32. A	33.A	34.A	35.B	36.C	37.A	38.C	39.A	40.A
41.A	42.B	43.C	44.D	45.A	46.B	47.A	48.A	49,A	50.A
51.A	52.B	53.A	54.C	55.A	56.C	57.A	58.A	59.A	60.A
61.A	62.A	63.A	64.C	65.B	66.C	67.B	68.B	69.B	70.A
71.B	72.B	73.A	74.A	75.A	76.A	77.B	78.A	79. A	80.A
81.A	82.A	83.A	84.C	85.A	86.A	87.A	88. C		

Chapter -10 Information Security

01. Information Security ensures
 a. Availability b. Integrity c. Confidentiality of information d. All
02. The general solution to security design problems lies in.....
 a. Authentication b. authorization c. a&b d. None
03. Authentication and authorization model which is collectively known as
 a. Access control b. Access communication c. a&b d. None
04.does not provide enough security
 a. Access control b. Access communication c. a&b d. None
05. Security incidents are mainly due to
 a. Malicious code attacks
 b. Known vulnerabilities
 c. Configuration errors
 d. All the above.
06. Crashing of applications is a symptom of
 a. Malicious code b. Error c. a&b d. None
07. Virus is a type of.....
 a. Malicious code b. configuration error c. a&b d. None

08. Worms is a type of.....
 a. Malicious code b. configuration error c. a&b d. None
09. Trojan Horses is a type of.....
 a. Malicious code b. configuration error c. a&b d. None
10. Bots is a type of.....
 a. Malicious code b. configuration error c. a&b d. None
11. Key loggers is a type of.....
 a. Malicious code b. configuration error c. a&b d. None
12. Spyware is a type of
 a. Malicious code b. configuration error c. a&b d. None
13. Adware is a type of
 a. Malicious code b. configuration error c. a&b d. None
14. Firewalls are used for.....
 a. Perimeter defense of networks
 b. Perimeter offense of networks c. a&b d. None
15. BSNL circulated the Information Security Policy for its implementation during
 a. Dec 2000 b. Dec 2008 c. Dec 2010 D. None
16. BISP stands for
 a. BSNL Information Security Policy
 b. BSNL Integration Security Policy
 c. BSNL Information Servicing Policy
 d. BSNL Integration Servicing Policy
17. The BISP containssections.
 a. 2 b.3 c.4 5. None
18. The BISP containssections.
 a. Section A&B b. Section I&IIc. a&b d. None
19. MTBF stands for
 a. Mean Time Between Failures
 b. Medium Time Between Failures
 c. Mean Transmit Between Failures
 d. Medium Transmit Between Failures
-
20. Access control does not provide enough security because
 a. It ignore the potential threat from insiders.
 b. Not able to filter malicious code
 c. a&b d. None
21.is a symptom of malicious code.
 a. Crashing of applications b. Not responding c. A&b d. None
22.are used for perimeter defense networks.
 a. Virus b. Malicious code c. firewall d. None
23. BSNL circulated thefor its implementation during Dec 2008.
 a. BISP b. BSIP c. National Telecom Policy d. None
24. For sharing of information among the intended users, the systems have to be
 a. Networked b. Separated c. a&b d. None
25. In BISP which section provides the directives and policies that would be followed in ICT facilities within BSNL to provide secure computing environment for BSNL employees and business to run?
-

- a. Section A b. Section B c. a&b d. None
26. In Section A of BISP, the policies are formulated arounddomains of security.
a. 10 b.11 c. 12 d. None
27. In BISP which section provides the technical solution support to the policies mentioned within the policy document?
a. Section A b. Section B c. a&b d. None

Answer Key for Chapter 10 Information Security

01. C	02. C	03. A	04. A	05. D	06. A	07. A	08. A	09. A	10. A
11. A	12.A	13. A	14. A	15. B	16. A	17. A	18. A	19. A	20. A
21. A	22. C	23. A	24. C	25. A	26. B	27.B			

Chapter -11 IT Security (LAB)

01. BSNL mail service URL address is
a. <http://mail.bsnl.co.in>
b. <http://mail.bsnl.org>
c. a&b d. None
02. BSNL own intranet url address is
a. <http://intranet.bsnl.co.in>
b. <http://internet.bsnl.co.in>
c. A&b d. None
03. PDF stands for
a. Portable Document Format
b. Portable Document Framing
c. Portable Driven format
d. Portable Driven Framing
04. PDF is the file format created by
a. Adobe systems b. Arihand systems c. Aloebe systems d. None
05. PDF is the file format created in
a. 1993 b. 1995 c. 1996 d. None
06. PDF takes a major step towards becoming the
a. ISO 3200 b. ISO 9001: 2000 c. ISO 2300 d. None
07.is one of freeware to convert document in PDF.
a. PDF 995 b. PDF 1000 c. PDF 100 d. PDF 994
08. For file compression two of the most popular utilities are
a. WINZIP&WINRAR b. WINZIP& MS word c. WINRAR&Excel d. None

09.is a computer maintenance utility included in Microsoft windows designed to free up disk space on a computer's hard drive.
a. Disk clean up b. Disk free up c. formatting d. None
10.is a process that reduces the amount of fragmentation in file systems.
a. Defragmentation b. Formatting c. A&b d. None
-
11. PDF 965 application works as a
a. Printer b. hard drive c. a&b d. None
12. The latest version in Acrobat Reader is
a. 9.4 b. 9.3 c. 9.2 d. None
13.is a software which is installed on the computer to protect PC from different forms of malicious codes.
a. antivirus b. antisign c. a&b d. None
14.is very important for smooth working of the PC and protection of file from corruption.
a. antivirus b, winzip c. winrar d. None
15.to control access to the resources of the PC.
a. User management b. disk clean up c.a&b d. None
- 16.....are important to protect PC from different forms of intrusion
a. antivirus b, windows update c. a&b d. None
17.Physically reorganizing the contents of the disk to store the pieces of each file close together and contiguously.
a. disk fragmentation b. antivirus c. a&b d. None
- 18.....attempts to create a larger regions of the free space using compaction to impede the return of fragmentation.
a. disk fragmentation b. antivirus c. a&b d. None
19.is used to compress the data.
a. disk clean up b. defragmentation c. file compression d. None
-

Answer Key for Chapter 11 IT Security (LAB)

01. A	02. A	03. A	04. A	05. A	06. A	07. A	08. A	09. A	10. A
11. A	12.A	13.A	14. A	15. A	16. B	17. A	18. A	19. C	

Chapter 12

SSTP architecture & Network

01. SSTP stands for
 - a. Standalone Signal Transfer Point
 - b. Signal Standalone Transfer Point
 - c. Standalone System Transfer Point
 - d. Signal System Transfer Point
02. SSTPs are actually adatabase.
 - a. Centralized routing
 - b. Non centralized routing
 - c. a&b
 - d. None
03. SSTPs are not a for SS7 Packet.
 - a. Switching system
 - b. Transmission System
 - c. a&b
 - d. None
04. DPC stands for
 - a. Destination Point code
 - b. Designation Point code
 - c. Determination Point code
 - d. Designation Programm code
05. GTT stands for
 - a. Global Title Translation
 - b. Global Translation Title
 - c. Global Transmission Title
 - d. Global Title Transmission
06. The routing database is able to make the routing decision based o the routing keys.
 - a. DPC
 - b. GTT
 - c. a&b
 - d. None
07. BSNL awarded a contract tofor the supply of SSTP nodes.
 - a. M/s HCL
 - b. M/s ITI
 - c. M/s ZTE
 - d. None
08. BSNL awarded to installSSTP nodes
 - a. 10
 - b.15
 - c.20
 - d. None
09. BSNL asked to install the SSTP nodes in
 - a. September 2005
 - b. September 2008
 - c. October 2005
 - d. None
10. Later on, the scope of the SSTP project was further expanded to provide..... nodes.
 - a. 24
 - b. 26
 - c. 23
 - d. None
11. InTAX locations, SSTP has to be installed.
 - a. 11
 - b. 21
 - c. 41
 - D. None
12. In Phase I,SSTP nodes have to be installed.
 - a. 10
 - b.11
 - c.12
 - d. 24
13. In Phase II,SSTP nodes have to installed.
 - a. 10
 - b.11
 - c. 12
 - d/ 24
14. 6 SSTPs are designated as
 - a. ANSI – ITU MTP gateway
 - b. ANSI – UTI MTP gateway
 - c. A&b
 - d. None

15. SSTPs interconnected using BSNL's Ip/MPLS network on
 a. M2PA b. M3PA c. M2AP d. M2PA
16. Later onfunctionally is also included to connect the access nodes
 a. M3UA b. M2UA c. a&b d. None
17. Selection of SSTP sites is preferably whereequipment is already working.
 a. MPLS VPN b. DWDM c. RPR d. B&G
18. MNP stands for
 a. Mobile Number portability
 b. Multiple Number Portability
 c. Mobile Number Programmiability
 d. Multiple Number Programmiability
19. All PSTN traffic to be connected to SSTP via.....
 a. Level1/Level 2 – TAX b. MSC b. GMSC d. None
20. Number of links to SSTP need to be increased to cater to
 a. Direct call routing method
 b. Indirect call routing method
 c. A&b d. None
21. SS7 stands for
 a. Signalling System 7
 b. System Signalling 7
 c. System Sensing 7
 d. None
22. STP stands for
 a. Signalling Transfer Point
 b. Signalling Transmission Point
 c. System Transfer Point
 d. System Transmission Point
23. MAP stands for
 a. Mobile Application Part
 b. Mobile Adaption Programme
 c. Mobile Application Punctuallity
 d. Mobile Application Portability
24. INAP stands for
 a. Intelligent Network Application Part
 b. Intelligent Network Adaptation Part
 c. Intelligent Network Application Programme
 d. None
25. SMSC stands for
 a. Short Message Service Centre
 b. Service Message Short Centre
 c. Short Mobile Service Center
 d. None
26. SSP stands for
 a. Service Switching Point
 b. Service Switching Port

- c. *Switching Service Point*
 - d. *Switching Service Port*
27. *SP/SEP stands for*
- a. *Signalling Point/Signalling End Point*
 - b. *Signalling Point/Servicing End Point*
 - c. *Servicing Point/Signalling End Point*
 - d. *Servicing Point/Servicing End Point*
28. *M2PA stands for*
- a. *MTP 2 Peer – to – peer Adaptation Layer*
 - b. *MTP 3 Peer – to – Peer Adaptation Layer*
 - c. *MTP 2 peer – to Peer Application Layer*
 - d. *MTP 3 Peer – to – peer Application Layer*
29. *M3UA stands for*
- a. *MTP 3 User Adaptation Layer*
 - b. *MTP 3 User Authentication Layer*
 - c. *MTP 3 User Application Layer*
 - d. *None*
30. *HLR stands for*
- a. *Home Location Register*
 - b. *House Location Register*
 - c. *Home Location Reminder*
 - d. *House location Register*
31. *GGSN stands for*
- a. *Gateway GPRS Support Network*
 - b. *Gateway GPRS Support Node*
 - c. *Gateway GPRS Service Network*
 - d. *Gateway GPRS Service Node*
32. *SGSN stands for*
- a. *Serving GPRS Support Node*
 - b. *Systematic GPRS support Network*
 - c. *Serving GPRS System Node*
 - d. *Serving GPRS system Network*
33. *SSTP handle themessages efficiently.*
- a. *Non call related*
 - b. *No call related*
 - c. *a&b*
 - d. *None*
34. *SSTP became the vantage point in the network because of thewas common.*
- a. *Signaling protocol*
 - b. *System protocol*
 - c. *Network Protocol*
 - d. *None*
35. *The SSTP provided adatabase by enabling the uniform signaling in SS7 domain.*
- a. *Single routing*
 - b. *double routing*
 - c. *a&b*
 - d. *None*
36. *Pair of SSTPs are designated as.....*
- a. *Mated pair*
 - b. *Twisted pair*
 - c. *a&b*
 - d. *None*
37. *Connect multiple SS7 nodes to mated pair using*
- a. *SS7 E1 links*
 - b. *SS7 STM 1 Links*
 - c. *a&b*
 - d. *None*
38. *Centralized network management with*
- a. *An active site*
 - b. *a DR standby*
 - c. *a&b*
 - d. *None*
39. *Central billing Server for billing intercarrier Usage.*

- a. SS7 b. SS8 c. SS9 d. SS10
40. The SSTPs shall form primary and secondary signaling path through the designatedonly.
a. Mated pair b. Secondary SSTP c. a&b d. None
41. In case of emergencies the direct routes between two level -1 taxes will carry the signaling traffic. This statement is
a. True b. false c. a7b d. None
42. SSTP connectivity of TAXs will be governed by instructions issued by
a. NM branch b. MN branch c. OMCR d. None
43. If the installation of SSTP equipment is not technically feasible in MPLS buildings, then the location whereis available between MPLS VPN building site & SSTP equipment buildings onrings working oncable paths.
a. Spare STM 1, two, same
b. Spare STM 1, two, different
c. Spare STM 4, two, same
d. Spare STM 4, one, different
44. There areways for MNP
a. One b. two c. three d. four
-
45. In Phase 2, the 11 additional locations was later changed tolocations to take care of the connectivity issues.
a. 24 b. 22 c. 23 d. 25
46. In Phase 3 expansion of all 24 nodes to about capacity ofper node.
a. 1800 low speed link b. 1800 high speed link c. a&b d. None
47.for billing inter carrier SS7 usage.
a. central billing server b. individual billing server c. a&b d. None

Answer Key for Chapter 12

SSTP architecture & Network

01. A	02. A	03. B	04. A	05. A	06. C	07. B	08. A	09. A	10. A
11. B	12.A	13. B	14. A	15. A	16. A	17. A	18. A	19. A	20. A
21.A	22.A	23.A	24.A	25.A	26.A	27.A	28.A	29.A	30.A
31.A	32.A	33.A	34.A	35.A	36.A	37.A	38.C	39.A	40.A
41.A	42.A	43.B	44.B	45.A	46.A	47.A			

Chapter – 13

NGN concept & Architecture

01. PSTN is mainly abased network.
a. Circuit b. packet c. a&b d. None
02. In NGNnetwork is used for all types of services
a. Single converged b. Multiple c. a&b d. None

03. A single converged network is called as
 a. NGN b.MGN c. NGMNT d. None
04. NGN stands for
 a. Next Generation Network
 b. Next Generation Number
 c. Next Grid Network
 d. Number Generation Network
05. NGN is abased network.
 a. Packet b. circuit c. a&b d. None
06. NGN ITU – T recommendation
 a. Y.2001 (12/2004)
 b. Y.2000
 c. Y 2010
 d. Y2009
07. As per ETSI's definition, NGN uses.....
 a. Open interface b. closed interface c. a&b d. None
08. The general NGN functional reference architecture has mainly
 a. 2 layers/stratum b.3 layers/ stratum c. a&b d. None
09. There are stratum.
 a. 2 numbers b. 3 numbers c. 4 numbers d. one number
10.is dealing with the service application and call control functions of call.
 a. Service stratum b. Transport Stratum c. a&b d. None
11.is dealing with the transport or switching and access functions of the call.
 a. Service stratum b. transport stratum c. a&b d. None
12. NAAF stands for
 a. Network Access and Attachment Function
 b. Number Access and Attachment Function
 c. Network Access and Authentication Function
 d. Number Access and Authentication Function
13. The NAAF is used for
 a. Authentication of the user b. authorization of user c. a&b d. None
14. RACP stands for
 a. Resource Admission and Control Function
 b. Reliable Admission and Control Function
 c. Resource Attachment and Control Function
 d. Reliable Attachment and Control Function
15. RACP is used for ensuring
 a. Quality of service b. Quantity of service c. a&b d. None
16. Soft switch is also called as
 a. Call agent b. Agent call c. Call finder d. None
17. Media Gateway controller is known as
 a. Softswitch b. hardswitch c. a&b d. None
18. Telephone Server is called as
 a. Softswitch b. hardswitch c. a&b d. None

19. In NGNperforms call control, signaling and interworking, providing address analysis, routing and charging facilities.
 a. Softswitch b. hardswitch c. a&b d. None
20. In NGN voice encoding and compression function will be performed by
 a. TMG b. softswitch c. a&b d. None
21. TMG stands for
 a. Trunk Media Gateway
 b. Transmission Media Gateway
 c. Testing Medium Gateway
 d. Trunk Medium Gateway
22. In NGN,provides interworking function between SS7 network and IP network.
 a. Signalling gateway b. TMG c. Access gateway d. None
23. In NGN Performs the function of providing interface to an access network like DLC, ANRAX, RSUs ISDN PRI
 a. Signalling gateway b. TMG c. Access gateway d. None
24. The interface of access gateway is based on
 a. E1 b. STM 1 c. a&b d. None
25. Theprovides the interface to a single subscriber line.
 a. Line Access gateway b. Signalling gateway c. Access gateway d. None
26. The interface of Line access gateway is
 a. 2 wire b. 4 wire c. E1 d. STM1
27. The protocols used between softswitch and media gateway is
 a. H.248/MGCP
 b. H.248/NGCP
 c. H.247/MGCP
 d. H.247/NGVP
28. The protocol between two softswitch is
 a. SIP(T) or BICC
 b. SIP(I) or BICC
 c. STP/BICC
 d. None
29. The protocol between softswitch and signaling gateway is
 a. Sigtran suite of protocols.
 b. Signalling suite of protocols
 c. Sip parley d. RTCP
30. The protocol between softswitch and application server is
 a. Sigtran suite of protocols.
 b. Signalling suite of protocols
 c. Sip parley d. RTCP
31. The protocol between two media gateways for actual packet transfer is
 a. Sigtran suite of protocols.
 b. Signalling suite of protocols
 c. Sip parley d. RP/RTCP
32. The operations and management of the softswitch require
 a. OSS – BSS systems
 b. OSS – DSS systems

- c. BSS – OSD systems
d. None
33. Media gateway can be broadly classified into
a. 2 b.3 c.4 d. None
34.gateway provides connectivity to the local switches through standard SDH interface typically ove E1 or STM 1
a. Trunk b. Signalling c. Access d. None
35.gateway provides interfaces to customer over TDM links.
a. Trunk b. Signalling c. Access d. None
36.gateway connects the SS7 signalling system in a PSTN switch to the softswitch.
a. Trunk b. Signalling c. Access d. None
37. The trunk gateway provide connectivity to the
a. Local switch b. TAX switch c. a&b d. None
38. The trunk gateway provide connectivity through standardinterface.
a. Open b. closed c. SDH d. PDH
-
39. The circuit switching is in.....
a. PSTN b. NGN c. a&b d. None
40. Packet switching is in.....
a. PSTN b. NGN c. a&b d. None
41. In NGN architecture which function ensuring QOS?
a. NAAF b. RACF c. a&b d. None
42. in NGN architecture which functioin is used for authentication and authorization?
a. NAAF b. RACF c. a&b d. None
43. in NGN architecture which is doing the voice encoding, compression function ?
a. Softswitch b. Trunk Media Gateway c. Line access gateway
44. Signalling gateway that connects the SS7 signalling system in a PSTN switch to the
a. softswitch b. TMG c. Line access gateway
45. Signalling gateway that connects the SS7 signalling system in aswitch to the softswitch.
a. PSTN b. softswitch c. a&b d. None
46. The PSTN network is mainly optimized for
a. voice calls b. data services c. a&b d. None
47. In NGN basically the call control (signaling)& the switching is..... out inlayers.
a. separate, same b. separate, different c. not separate ,same
d. Not separate , different.
48. NGN I/F to the existing PSTN switches is done with the help of.....for voice transport.
a. Media gateway b. signaling gateway c. Access gateway d. TMG
49. NGN I/F to the existing PSTN switches is done with the help of.....for signaling transport.
a. Media gateway b. signaling gateway c. Access gateway d. TMG
50. In NGN, for switching and transport of the packets existingbackbone is used.
a. NIB b. IP/MPLS c. a&b d. None
-

51. As per ETSI NGN is a concept for defining and deploying networks, which due to their formal separation into.....layers.

- a. same b. different c. a&b d. None

52. NGN is based on:

- a) Open architecture. b) Network based c) Both d) None of these.

53. Current generation network based upon:

- a) Mainly voice based b) Purely video based c) Purely text based d) None

54. PSTN is mainly:

- a) Circuit switching n/w b) Packet switching network c) Both d) None .

55. NGN is a

- a) Packet based network b) Circuit switching network c) Both d) None .

Answer Key for Chapter 13

NGN concept & architecture

01. A	02. A	03. A	04. A	05. A	06. A	07. A	08. A	09.A	10. A
11. B	12.A	13. C	14. A	15. A	16. A	17. A	18. A	19. A	20. A
21.A	22.A	23.C	24.C	25.A	26.A	27.A	28.A	29.A	30.C
31.D	32.A	33.A	34.A	35. C	36.B	37.A	38. C	39.A	40.B
41.B	42.A	43.B	44.A	45. A	46.A	47. B	48. A	49. B	50.B
51. B	52. A	53.A	54. A	55. A					

Chapter -14

IP TAX Project in BSNL

01.is the first step towards the evolution of current generation network to NGN.

- a. IP TAX b. OP TAX c. a&b d. None

02.is the replacement of existing level 1 TAX exchanges to IP based network.

- a. IP TAX b. Op TAX c. a&b d. None

03. IP TAX is aswitching network.

- a. Packet b. circuit c. a&b d. None

04. IP TAX comes under

- a. Class 4 NGN b. Class 5 NGN c. class 6 NGN d. None

05. CNF stands for

- a. Comfort Noise Generation
b. Current Noise Generation
c. Comfort Noise Gap
d. Current Noise Gap

06. VAD stands for
- Voice Activity Detection
 - Voice Activity Device
 - Virus Activity Detection
 - Virus Authentication Device
07. In BSNL there was an initial plan ofIP TAX pilot project.
- 200 K
 - 20K
 - 2000 k
 - None
08.capacity of IP TAX was installed at New Delhi.
- 40 K
 - 16 K
 - 200 K
 - None
09.capacity of IP TAX was installed at Chennai.
- 40 K
 - 16 K
 - 200K
 - None
10. The IP TAX equipments was supplied by
- M/s STE
 - M/s ZTE
 - M/s HCL
 - M/s ITI
11. The IP TX equipments was supplied through
- M/s SOTL
 - M/s ZTE
 - M/s ITI
 - None
12. Chennai and New Delhi sites are.....sites.
- Test
 - A/T
 - Validation
 - None
13. Till date....capacity of IP TAX equipment has been supplied and installed in BSNL aboutlocations.
- 2212 K, 119
 - 2112 K, 119
 - 2212 K, 117
 - 2212 K, 210
14. In IP TAX Project, in BSNL it has been decided thatgateways will not be purchased.
- Stand alone signaling
 - Stand alone Trunk media gateway
 - a&b
 - None
15. The available SSTP network will be used as
- Signalling gateway
 - Trunk media gateway
 - a&b
 - None
16. NMS has been installed at.....
- Kolkattai
 - Bangalore
 - Chennai
 - New Delhi
17. FCAPS stnds for
- Fault, Configuration, Accounting, Performance, Security
 - Fault, Correction, Accounting, Performance, Security
 - Failure, Configuration, Accounting ,Performance, Security
 - Failure, Correction, Accounting, performance, Security
18. In IPTAX Project,no separateis being used.
- NTP server
 - Signalling gateway
 - TMG
 - None
19. In IP TAX project, the existingof our data network will be used for synchronization.
- NTP server
 - Signalling gateway
 - TMG
 - None
-
20. In IP project the ll bidder is.....
- M/s ZTE
 - M/s HCL
 - M/s TCS
 - None
-
21. In IPTAX, for large network M3UA may be used for transporting MTP level 3 user part signaling messages.(ISUP & SCCP).
22. A big project of 6476 k IP TAX lines project was planned by BSNL.

23. Functions of softswitch based on Open architecture.
24. Functions of Trunk Media gateway
- voice encoding & compression
 - packetization of voice channels
 - echo cancellation
25. Functions of softswitch:
- perform call control
 - traffic measurement
 - recording singling
 - interworking
 - provides addressing
 - analysis routing
 - routing and charging facilities.
26. Functions of signaling gateway:
- Provides interworking function between SS7 network and IP network.
 - provides various user adaptations.

Answer Key for the chapter 14

IP TAX project in BSNL

01. A	02.A	03. A	04.A	05.A	06.A	07.A	08.A	09.B	10.B
11.A	12.C	13.A	14.A	15.A	16.C	17.A	18.A	19.A	20. A

Chapter – 15

Landline VAS

01. VAS stands for
- Value Added Services
 - Volve Added Services
 - Valve Address Services
 - Valve Added System
02. ISDN stands for
- Integrated Service Digital Network
 - Integrated System Digital Network
 - Intelligent Service Digital Network
 - Intelligent System Digital Network
03. An ISDN subscriber can establish ...in basic rate ISDN, except when the terminal equipment is such that it occupie 2B channels for one call itself.
- Two simultaneous independent calls
 - Two simultaneous dependent calls
 - Three simultaneous dependent calls
 - None
04. ISDN supports a whole new set of additional facilities called.....

- a. *Supplementary services*
 b. *Secondary services* c. *a&b* d. *None*
05. There aretypes of accesses in ISDN
 a. 2 b.3 c.6 d.7
06. BRA stands for
 a. *Basic Rate Access*
 b. *Basic Reception Access*
 c. *Basic Rate Address*
 d. *Basic Rate Adaption*
07. PRA stands for
 a. *Primary Rate Access*
 b. *Preliminary Rate Access*
 c. *Primary Random Access*
 d. *Primary Random Adaption*
08. In BRA, the channels are...
 a. 2B+D b. 30B +D c. a&b d. None
09. In PRA the channels are
 a. 2B+D b. 30 B +D c. a&b d. None
10. In BRA, the bandwidth for speech of each channels are
 a. 64 Kbps b. 16 kbps c. 128 Kbps d. None
11. In BRA, the bandwidth for signaling is
 a. 64 Kbps b. 16 Kbps c. a&b d. None
12. In PRA, the bandwidth for speech of each channels are
 a. 64 Kbps b. 16 kbps c. a&b d. None
13. In PRA, the bandwidth for signaling is
 a. 64 Kbps b. 128 Kbps c. a&b d. None
14. BSNL is providing Internet service throughout the entire country except in.....
 a. New Delhi b. Mumbai c. a&b d. None
15. BSNL is providing Internet service under the brand name of
 a. Sancharnet b. Sancharmail c. a&b d. None
16. For accessing sancharnet through PSTN dial up, the access code is
 a. 172233 b.172222 c.a&b d. None
17. In order to make Internet available throughout the countryare being commissioned at the
- a. *Internet dhabas, Block Head quarters*
 b. *Internet Maal, Block Head quarters*
 c. *Internet dhabas, District Head Quarters*
 d. *Internet mall, district head quarters*
18. For internet accessing through ISDN, the access code is
 a. 172225 b. 172233 c. 172222 d. None
19. The access number of account free Internet dial up access based on CLI is
 a. 172225 b. 172233 c. 172222 d. None
20. The speed of Internet in ISDN connection is
 a. 64 kbps b. 128 kbps c. a&b d. None
21. The speed of Internet in Broadband ranging from
 a. 256 Kbps to 2 Mbps

- b. 256Kbps to 8 Mbps c. a&b d. None
22. Sancharnet card is a..... internet access card.
a. Pre paid b. Post paid c. a&b d. None
23.is an internet telephony service through which a sub can make ISD calls over Internet to any fixed or mobile phone or an PC in a foreign country.
a. Web Fone Service b. Web Internet Service c. a&b d. None
24. FPH stands for
a. Free Phone Service
b. Free Pulse Service
c. Free Phone System
d. Free Pulse System
25. The Access code of FPH is
a. 1800 b.1008 c. 1098d. 1095
26.gives service users the opportunity of calling the service subscriber free of charge via the PSTN by dialing a universal directory number from any part of the country.
a. FPH b. FHP c. PFH d. HFP
27. UDN stands for
a. Universal Directory Number
b. Uniform Directory Number
c. Universal Dictionary Number
d. Uniform Dictionary Number
28. In FPH, the call fee is charged to the.....
a. Service subscriber
b. Service user
c. A&b d. None
29. FPH is anbased service
a. Access code b. Directory code c. Dictionary code d.b&c
30. The access procedure of FPH is
a. 1800+SCP code +XXXX
b. 1800+SCP code+ XXXXX
c. 1802+SCP code+ XXXX
d. 1804+SCP code+ XXXXX
31. In FPH, SCP code is adigit code of the concerned SCP from where free phone service has been provided to the service subscriber.
a. 3 b.4 c.5 d.6
32. In FPH, XXXX isdigit free phone number allotted to a service subscriber.
a. 3 b.4 c.5 d.6
33. VCC stands for
a. Virtual Card Calling Services
b. Virtual Calling Card Services
c. Vital Card Calling Services
d. Vital Calling Card Services
34. The Access code for VCC is
a. 1800 b.1802 c. 1804 d. None
35.service allows a customer to make calls without cash.
a. VCC b. FPH c. a&b d. None

36. In VCC service, the account number comprisingdigit.
 a. 4 b.8 c.16 d. None
37. access code based service.
 a. VCC b. FPHc. a&b d. None
38. VCC are preceded by the access code.....
 a. 1802+SCP code
 b. 1800+SCP code
 c. 1800+XXXX+SCP code
 d. 1804 +XXXX+SCpcode
39. ACC stands for
 a. Account Card Calling
 b. Account Calling Card
 c. Amount Card Calling
 d. Amount Calling Card
40. The Access code of ACC is
 a. 1800 b.1802 c.1804 d.1803
41. The ACC is having
 a. Renewability b. dynamic PIN c. a&b d. None
42. In call charges will be debited to subscriber account.
 a. FPH b. ACC c. VCC d. a&b
43. In ACC, the originating telephone number
 a. Will be charged b. will not be chargedc. a&b d. None
44. In ACC, the registration fee is
 a. Rs. 5000 b. Rs. 5000+ST c. Rs. 6000/ d. Rs. 6000+St
45. In ACC, the card can be renewed by paying additional installment in multiples of
 a. Rs. 500 b. Rs. 1000 c. Rs. 250 d. None
46. In ACC, the account number isdigits and PIN isdigits.
 a. 8,4 b.4,8 c. 8,6 d. 6,8
47. VPN stands for
 a. Virtual Private Network
 b. Vital Private Number
 c. Virtual Public Network
 d. Vital Public Number
48. The Access code for VPN is.....
 a. 1800 b.1801 c. 1802 d. 1804
49. Theservice allows public network operators to provide private network features
 a. VPN b. VCC c. FPH d. ACC
50. In VPN, the service subscriber can directly manage and administer his VPN via the.....feature.
 a. Customer Control b. Customer Service centre c. a&b d. None
51.is typically used to interconnect geographically distributed PBXs.
 a. VPN b. ACC c. VCC d. FPH
52. PNP stands for
 a. Premium Numbering Plan
 b. Private Numbering Plan
 c. Platinum Numbering Plan

- d. *Premium Numbering Progress*
53. *PRM stands for*
- Premium Rate Services*
 - Premium Rate Messages*
 - Platinum Rate Services*
 - Platinum Receive Services*
54. *The access code for PRM is.....*
- 1800*
 - 1807*
 - 1867*
 - 1860*
55. *.....enables service users to access the information offered by the service subscribers against payment of fee.*
- VPN*
 - PRM*
 - ACC*
 - VCC*
56. *The service subscriber is given adigit PRM Number.*
- 4*
 - 5*
 - 6*
 - 7*
57. *UAN stands for*
- Universal Number*
 - Universal Access Number*
 - Uniform Access Number*
 - Uniform Number*
58. *The access code for UAN is.....*
- 1860*
 - 1807*
 - 1802*
 - 1804*
59. *Based on the network involved in routing the call,service is divided into*
- ACC, 2 categories*
 - VCC, 2 categories*
 - UAN, 2 categories*
 - UAN, 3 categories*
60. *The dialing plan for UAN local is*
- 1860 + SCP code + 4 digit UAN No*
 - 1800 + 4 digit UAN No + SCP code*
 - 1807 + SCP code + 4 digit UAN No*
 - 1803 + 4 digit UAN No + SCP code*
61. *When the calling party and the destination number of UAN are in same city i.e. they have same STD code, the UAN calls are called*
- Local*
 - STD*
 - National*
 - None*
62. *When the calling party and the destination number of UAN are in different cities i.e. they have different STD codes, the UAN calls are called as*
- long distance calls*
 - Local*
 - STD*
 - None*
63. *UAN calls can be charged on*
- Full charge basis to calling party or on split basis to calling & called party also.*
 - Half charge basis to calling party or on split basis to calling & called party also.*
 - Full charge basis to called party or on split basis to calling & called party also.*
 - Full charges basis to called party or full basis to calling & called party also.*
64. *PNS stands for*
- Personal Number System*
 - Personal Number Services*
 - Private Number System*
 - Private Number Services*

65. The access code for PNS is
 a. 1860 b.1867 c. 1868 d. None
66. The dialing plan for the follow me function universal personal number service is
 a. 1868+SCP code+4 digit UPN No
 b. 1868+SCP code+4 digit Number
 c. 1867+SCP code+4 digit UPN No
 d. 1876+SCP code + 4 digit Number
67. UPNS stands for
 a. Universal Personal Number Services
 b. Uniform Personal Number Services
 c. Universal Permanent Number Services
 d. Uniform Permanent Number Services
68. VOT stands for
 a. Televoting services
 b. Telegraphing Services
 c. Transmission Services
 d. Transportation services
69. The access code for VOT is
 a. 1803,1802 b.1803,1861 c.1861,1862 d. None
70. The dialing plan for televoting services in which subscriber of televoting services pays the charges for incoming calls is
 a. 1803+SCP code +XXYY
 b. 1861+SCP code+XXYY
 c. A&b d. None
71. The dialing plan for the calling party pays for the all charges for participating in the televoting is
 a. 1803+SCP code +XXYY
 b. 1861+SCP code+XXYY
 c. A&b d. None
72. FLPP stands for
 a. Fixed Line Pre- Paid Telephone
 b. Fixed Line Post Paid Telephone
 c. Fixed Leased Pre – Paid Telephone
 d. Fixed Leased Post Paid Telephone
73.service enables a subscriber to make calls from a prepaid account linked to his telephone number.
 a. FLPP b. FPLP c. FPPL d. None
74. In FLPP , it is linked to his telephone line & the user is to dial the account number/PIN for authentication.
 a. Not required b. required c. a&b d. None
75. There aretypes of FLPP accounts.
 a. 3 b.5 c.4 d.10
76. PRBT stands for
 a. Personalized Ring Back Tone Service
 b. Personalized Receive Back Tone Service

- c. *Personalized Ring Back up Tone Service*
d. *None*
77. *In video conferencing, personal computer user can download the software calledfrom BSNL's video conferencing portal.*
a. *PUX* b. *PVX* c. *PCX* d. *None*
78. *.....card is a normal ITC card but specifically designed tariff.*
a. *Call Now* b. *Now call* c. *Call immediately* d. *Call urgent.*
-
79. *1800: FPH* : *Free Phone Service: 1800 + SCP code +XXXX*
80. *1801: VPN* : *Virtual Private Network*
81. *1802: VCC* : *virtual Card Calling : 1802+SCP code*
82. *1803: VOT* : *Televoting* : *1803+SCP code+XXYY*
83. *1804: ACC* : *Account Card Calling*
84. *1860: UAN* : *Universal Number* : *1860+SCP code+ 4 digital UAN*
85. *1861:VOT* : *Televoting services* : *1861+SCP code+XXYY*
86. *1867: PRM* : *Premium Rate Services*
87. *1868: PNS* : *Personal Number Services*
-

Answer Key for the chapter 15

Value Added Services

<i>01.A</i>	<i>02.A</i>	<i>03.A</i>	<i>04.A</i>	<i>05.A</i>	<i>06.A</i>	<i>07.A</i>	<i>08.A</i>	<i>09.B</i>	<i>10.A</i>
<i>11.A</i>	<i>12.A</i>	<i>13.A</i>	<i>14.C</i>	<i>15.A</i>	<i>16.A</i>	<i>17.A</i>	<i>18.A</i>	<i>19.C</i>	<i>20.C</i>
<i>21.B</i>	<i>22.A</i>	<i>23.A</i>	<i>24.A</i>	<i>25.A</i>	<i>26.A</i>	<i>27.A</i>	<i>28.A</i>	<i>29.A</i>	<i>30.A</i>
<i>31.A</i>	<i>32.B</i>	<i>33.A</i>	<i>34.B</i>	<i>35.A</i>	<i>36.C</i>	<i>37.C</i>	<i>38.A</i>	<i>39.A</i>	<i>40.C</i>
<i>41.C</i>	<i>42.B</i>	<i>43.B</i>	<i>44.A</i>	<i>45.B</i>	<i>46.A</i>	<i>47.A</i>	<i>48.B</i>	<i>49.A</i>	<i>50.A</i>
<i>51.A</i>	<i>52.B</i>	<i>53.A</i>	<i>54.C</i>	<i>55.B</i>	<i>56.A</i>	<i>57.A</i>	<i>58.A</i>	<i>59.C</i>	<i>60.A</i>
<i>61.A</i>	<i>62.A</i>	<i>63.A</i>	<i>64.A</i>	<i>65.C</i>	<i>66.A</i>	<i>67.A</i>	<i>68.A</i>	<i>69.B</i>	<i>70.A</i>
<i>71.B</i>	<i>72.A</i>	<i>73.A</i>	<i>74.A</i>	<i>75.C</i>	<i>76.A</i>	<i>77.A</i>	<i>78.A</i>	<i>79.</i>	<i>80.</i>

Acronyms

I. Core

<i>Sl.No.</i>		
01.	<i>DSL</i>	<i>Digital Subscriber Line</i>
02.	<i>SD/SA</i>	<i>Service Deliver – Service Assurance</i>
03.	<i>PRSA</i>	<i>PCO Relationship Servicing Agency</i>
04.	<i>IP</i>	<i>Internet Protocol</i>
05.	<i>FTP</i>	<i>File Transfer Protocol</i>
06.	<i>SMTP</i>	<i>Simple Mail Transfer Protocol</i>
07.	<i>TCP</i>	<i>Transmission Control Panel</i>
08.	<i>UDP</i>	<i>User Datagram Protocol</i>
09.	<i>TTL</i>	<i>Time To Live</i>
10.	<i>TFTP</i>	<i>Trivial File Transfer Protocol</i>
11.	<i>SN</i>	<i>Sequence Number</i>
12.	<i>SSN</i>	<i>Second Sequence Number</i>
13.	<i>AKN</i>	<i>Acknowledgement Number</i>
14.	<i>ICMP</i>	<i>Internet Control Message Protocol</i>
15.	<i>IGMP</i>	<i>Internet Group Management Protocol</i>
16.	<i>VOIP</i>	<i>Voice Over Internet Protocol</i>
17.	<i>NIB</i>	<i>National Internet Backbone</i>
18.	<i>QOS</i>	<i>Quality of Service</i>
19.	<i>NAT</i>	<i>Network Address Translation</i>
20.	<i>IGW</i>	<i>International Gateway Router</i>
21.	<i>IXP</i>	<i>Internet Exchange Point</i>
22.	<i>IDC</i>	<i>Internet Data Center</i>
23.	<i>NOC</i>	<i>Network Operating Center</i>
24.	<i>SSSS</i>	<i>Subscriber Service Selection System</i>
25.	<i>SSSC</i>	<i>Subscriber Service Selection Center</i>
26.	<i>CPE</i>	<i>Customer Premises Equipment</i>
27.	<i>GBIC</i>	<i>Giga Bit Interface Converter</i>
28.	<i>BNG</i>	<i>Broadband Network Gateway</i>
29.	<i>STB</i>	<i>Set Top Box</i>
30.	<i>VOD</i>	<i>Video On Demand</i>
31.	<i>WICE</i>	<i>Window for Information Communication and Entertainment</i>
32.	<i>VOI</i>	<i>Voice Over Internet</i>
33.	<i>DSL</i>	<i>Digital Subscriber Loop</i>
34.	<i>FEOSDH</i>	<i>Fast Ethernet Over SDH</i>
35.	<i>NOC</i>	<i>Network Operation Center</i>
36.	<i>DR</i>	<i>Disaster Recovery</i>

37.	<i>RPR</i>	<i>Resilient Packet Ring</i>
38.	<i>BAP</i>	<i>Broadband Aggregation Point</i>
39.	<i>ODD</i>	<i>On Demand Diagnostic</i>
40.	<i>CLI</i>	<i>Command Line Interface</i>
41.	<i>ITU</i>	<i>International Telecommunication Union</i>
42.	<i>STM</i>	<i>Synchronous Transport Module</i>
43.	<i>VC</i>	<i>Virtual Container</i>
44.	<i>SDH</i>	<i>Synchronous Digital Hierarchy</i>
45.	<i>RSOH</i>	<i>Regenerator Section Over Head</i>
46.	<i>MSOH</i>	<i>Multiplex Section Over Head</i>
47.	<i>AU – PTR</i>	<i>Administrative Unit Pointer</i>
48.	<i>SOH</i>	<i>Section OverHead</i>
49.	<i>POH</i>	<i>Path Over Head</i>
50.	<i>TM</i>	<i>Terminal Multiplexer</i>
51.	<i>ADM</i>	<i>Add Drop Multiplexer</i>
52.	<i>REG</i>	<i>Regenerator</i>
53.	<i>DXC</i>	<i>Digital Cross Connection</i>
54.	<i>SNC</i>	<i>Sub Network Connection</i>
55.	<i>USHR</i>	<i>Uni directional Self Healing Ring</i>
56.	<i>BSHR</i>	<i>Bi directional Self Healing Ring</i>
57.	<i>PON</i>	<i>Passive Optical Network</i>
58.	<i>GEPON</i>	<i>Gigabit Ethernet Passive Optical Network</i>
59.	<i>OLT</i>	<i>Optical Line Terminal</i>
60.	<i>ONT</i>	<i>Optical Network Terminal</i>
61.	<i>ONU</i>	<i>Optical Network Unit</i>
62.	<i>P2MP</i>	<i>Point To Multi Point</i>
63.	<i>TDMA</i>	<i>Time Division Multiplexer Access</i>
64.	<i>MPCP</i>	<i>Multi Point Control Protocol</i>
65.	<i>DBA</i>	<i>Dynamic Bandwidth Allocation</i>
66.	<i>NGPN</i>	<i>Next Generation Play Network</i>
67.	<i>EPL</i>	<i>Ethernet Private Leased Line</i>
68.	<i>EPLAN</i>	<i>Ethernet Private Local Area Network</i>
69.	<i>SLA</i>	<i>Service Level Agreement</i>
70.	<i>GEM</i>	<i>GPON Encapsulation Method</i>
71.	<i>GFP</i>	<i>GPON Framing Procedure</i>
72.	<i>POS</i>	<i>Passive Optical Splitter</i>
73.	<i>ODN</i>	<i>Optical Distribution Network</i>
74.	<i>APON</i>	<i>ATM Passive Optical Network</i>
75.	<i>EPON</i>	<i>Ethernet Passive Optical Network</i>
76.	<i>GPON</i>	<i>Gigabit capable Passive Optical Network</i>
77.	<i>MDD</i>	<i>Magnetic Disk Drive for storing data</i>
78.	<i>MOD</i>	<i>Magnetic Optical Drive</i>
79.	<i>MTD</i>	<i>Magnetic Tape Drive for back up and regeneration of exchange</i>
80.	<i>OMT</i>	<i>Operation & Maintenance Terminal</i>
81.	<i>CNMC</i>	<i>Centralized Network Managed Centers.</i>

82.	<i>DLU</i>	<i>Digital Line Unit</i>
83.	<i>LTG</i>	<i>Line Trunk Group</i>
84.	<i>SN</i>	<i>Switching Network</i>
85.	<i>MB</i>	<i>Message Buffer</i>
86.	<i>SYPD</i>	<i>System Panel Display</i>
87.	<i>CCG</i>	<i>Central Clock Generator</i>
88.	<i>CP</i>	<i>Coordination Processor</i>
89.	<i>CCNC</i>	<i>Common Channel Network Control</i>
90.	<i>MTP</i>	<i>Message Transfer Part</i>
91.	<i>SE</i>	<i>Special Equipment</i>
92.	<i>DEV</i>	<i>Device Rack</i>
93.	<i>DDF</i>	<i>Digital Distribution Frame</i>
94.	<i>CP113D</i>	<i>Coordination Process 113</i>
95.	<i>TRA</i>	<i>Telecom Revenue Accounting</i>
96.	<i>FRS</i>	<i>Fault Repair Service</i>
97.	<i>DQ</i>	<i>Directory Enquiry</i>
98.	<i>CRM</i>	<i>Customer Relationship Management</i>
99.	<i>WSC</i>	<i>Web Self Care</i>
100.	<i>LE</i>	<i>Local Exchange</i>
101.	<i>MTE</i>	<i>Magnetic Tape Emulator</i>
102.	<i>AR</i>	<i>Aggregation Router</i>
103.	<i>RA</i>	<i>Revenue Assurance</i>
104.	<i>CTI</i>	<i>Computer Telephony Interface</i>
105.	<i>IOBAS</i>	<i>Inter Operator Billing and Accounting System</i>
106.	<i>FMS</i>	<i>Fraud Management System</i>
107.	<i>EMS</i>	<i>Enterprise Management System</i>
108.	<i>EAI</i>	<i>Enterprise Application Interface</i>
109.	<i>MOU</i>	<i>Minutes of Usage</i>
110.	<i>PMS</i>	<i>Payment Management system</i>
111.	<i>MTBF</i>	<i>Mean Time Between Failure</i>
112.	<i>PDF</i>	<i>Portable Document format</i>
113.	<i>SSTP</i>	<i>Standalone Signal Transfer Point</i>
114.	<i>DPC</i>	<i>Destination Point Code</i>
115.	<i>GTT</i>	<i>Global Title Translation</i>
116.	<i>MNP</i>	<i>Mobile number Portability</i>
117.	<i>SS7</i>	<i>Signalling System 7</i>
118.	<i>STP</i>	<i>Signalling Transfer Point</i>
119.	<i>MAP</i>	<i>Mobile Application Part</i>
120.	<i>INAP</i>	<i>Intelligent network Application part</i>
121.	<i>SMSC</i>	<i>Short message Service Center</i>
122.	<i>SSP</i>	<i>Service Switching Point</i>
123.	<i>SP/SEP</i>	<i>Signalling Point/Signalling End Point</i>
124.	<i>M2PA</i>	<i>MTP2 Peer To Peer Adapter Layer</i>
125.	<i>M3UA</i>	<i>MTP 3 User Adaption layer</i>
126.	<i>HLR</i>	<i>Home Location Register</i>

127.	<i>GGSN</i>	<i>Gateway GPRS Support Node</i>
128.	<i>SGSN</i>	<i>Serving GPRS Support node</i>
129.	<i>NGN</i>	<i>Next Generation Network</i>
130.	<i>NAAF</i>	<i>Network Access and Attachment Function</i>
131.	<i>RACF</i>	<i>Resource Admission and Control Function</i>
132.	<i>TMG</i>	<i>Trunk Media Gateway</i>
133.	<i>CNG</i>	<i>Comfort Noise Generation</i>
134.	<i>VAD</i>	<i>Voice Activity Detection</i>
135.	<i>FCAPS</i>	<i>Fault, Configuration, Accounting, Performance Security</i>
136.	<i>VAS</i>	<i>Value Added Services</i>
137.	<i>ISDN</i>	<i>Integrated Service Digital Network</i>
138.	<i>BRA</i>	<i>Basic Rate Access</i>
139.	<i>PRA</i>	<i>Primary Rate Access</i>
140.	<i>FPH</i>	<i>Free Phone Service</i>
141.	<i>VCCS</i>	<i>Virtual Card Calling Services</i>
142.	<i>ACC</i>	<i>Account Card Calling</i>
143.	<i>VPN</i>	<i>Virtual Private Networks</i>
144.	<i>PRM</i>	<i>Premium Rate Services</i>
145.	<i>UAN</i>	<i>Universal Number</i>
146.	<i>VOT</i>	<i>Televoting Services</i>
147.	<i>FLPP</i>	<i>Fixed Line Pre Paid Telephone</i>
148.	<i>CNC</i>	<i>Call Now Cards</i>
149.	<i>PRBTS</i>	<i>Personalized Ring Back Tone Services</i>
150.	<i>SMS</i>	<i>Short Message Service</i>
151.	<i>ECS</i>	<i>Electronic Clearance Scheme</i>
152.	<i>AMS</i>	<i>Answering Machine Service</i>
153.	<i>PNP</i>	<i>Private Numbering Plan</i>
154.	<i>UPNS</i>	<i>Universal Personal Number Services</i>
155.	<i>BBRAS</i>	<i>Broad Band Remote Access Server</i>

II. Management

<i>Sl.No.</i>		
01.	<i>SWOT</i>	<i>Strength, Weakness, Opportunities, Threat</i>
02.	<i>KRA</i>	<i>Key Result Area, Key Responsibility Area</i>
03.	<i>KPI</i>	<i>Key Performance Indicator</i>
04.	<i>GPMS</i>	<i>Group Performance Management System</i>
05.	<i>TMO</i>	<i>Transformation Management Office</i>
06.	<i>ADT</i>	<i>Aspiration Driven Transformation</i>
07.	<i>NTP</i>	<i>New Telecom Policy</i>
08.	<i>CFA</i>	<i>Consumer Fixed Access</i>
09.	<i>CM</i>	<i>Consumer Mobility</i>
10.	<i>FOS</i>	<i>Feet On Street</i>
11.	<i>BCG</i>	<i>Boston Consulting Group</i>
12.	<i>PMS</i>	<i>Performance Management System</i>
13.	<i>BBSC</i>	<i>Balanced Business Score Card</i>
14.	<i>MC</i>	<i>Management Committee</i>
15.	<i>IPMS</i>	<i>Individual Performance Management System</i>
16.	<i>FPMS</i>	<i>Field Performance Management System</i>
17.	<i>SFA</i>	<i>Sales Force Automation System</i>
18.	<i>DSA</i>	<i>Direct Selling Agent</i>
19.	<i>SCA</i>	<i>Service Center Agent</i>
20.	<i>CSC</i>	<i>Common Service Center</i>
21.	<i>RFP</i>	<i>Request For Proposal</i>
22.	<i>EOI</i>	<i>Expression Of Interest</i>
23.	<i>NLD</i>	<i>National Long Distance</i>
24.	<i>ILD</i>	<i>International Long Distance</i>
25.	<i>BFSI</i>	<i>Banking, Financial Services & Insurance</i>
26.	<i>NAM</i>	<i>National Account Manager</i>
27.	<i>KAM</i>	<i>Key Account Manager</i>
28.	<i>SI</i>	<i>System Integrator</i>
29.	<i>CP</i>	<i>Channel Partner</i>
30.	<i>OEM</i>	<i>Original Equipment Manufacture</i>
31.	<i>AMC</i>	<i>Annual Maintenance Contract</i>
32.	<i>B2C</i>	<i>Business To Customer</i>
33.	<i>B2B</i>	<i>Business To Business</i>
34.	<i>CVM</i>	<i>Customer Value Management</i>
35.	<i>LTV</i>	<i>Life Time Value</i>
36.	<i>CLTV</i>	<i>Customer Life Time Value</i>
37.	<i>PEST</i>	<i>Political, Economical, Social, Technology</i>
38.	<i>FMA</i>	<i>First Mover Advantage</i>
39.	<i>SMA</i>	<i>Second Mover Advantage</i>

40.	<i>PON</i>	<i>Passive Optical Network</i>
41.	<i>NRU</i>	<i>Net Relisable Value</i>
42.	<i>MSTC</i>	<i>Metals and Scrapping Trading Corporation</i>
43.	<i>WDV</i>	<i>Written Down Value</i>
44.	<i>EOIR</i>	<i>Expression Of Interest Route</i>
45.	<i>CET</i>	<i>Committee for Evaluation of Tender</i>
46.	<i>MOU</i>	<i>Memorandum of Undenrtaking</i>
47.	<i>FICO</i>	<i>Finance and Management Accounting</i>
48.	<i>PM</i>	<i>Plant Maintenance</i>
49.	<i>VAD</i>	<i>Voice, Activity Detection</i>