**BE (E&TC) – Mobile Communication**

**Unit No. 4 : GSM Fundamentals**

1. What are the three main parts of a GSM Architecture or Structure?

A) Mobile Station

B) BSS - Base Station Subsystem

C) NSS - Network and Switching Subsystem

D) All the above

Answer: D

2. What are the main parts of a Mobile Station in a GSM Network?

A) MT - Mobile Terminal

B) SIM - Subscriber Identity Module

C) Both A and B

D) None

Answer: C

3. What are the main parts of a BSS (Base Station Subsystem) in a GSM network?

A) BTS - Base Transceiver Station

B) BSC - Base Station Controller

C) A and B

D) None

Answer: C

4. What are the main parts of a NSS (Network and Switching Subsystem) of a GSM Architecture?

A) MSC - Mobile Switching Center

B) HLR & AuC

C) VLR, EIR

D) All the above

Answer: D

5. What are the main parts of an MSC (Mobile Switching Center) system in a GSM structure?

A) MGW - Media Gateway

B) MSC Server

C) Both A and B

D) None

Answer: C

6. A GPRS Core network is part of System in a GSM Network Structure?

A) Mobile Station

B) BSS

C) MSS

D) NSS

Answer: D

7. A BTS is also called \_\_\_\_\_ by general public?

A) Mobile tower

B) Exchange

C) Charging Point

D) None

Answer: A

8. Each Mobile Terminal is identified by a unique \_\_\_\_\_\_ number?

A) IMEI

B) SIM

C) IMSI

D) None

Answer: A

9. IMEI stands for?

A) Internal Mobile Equipment Identity

B) International Mobile Equipment Identity

C) Intra Mobile Enable Identity

D) None

Answer: B

10. Each SIM is identified by a unique \_\_\_\_\_ number?

A) IMSI

B) IMEI

C) MSDN

D) None

Answer: A

11. IMSI stands for?

A) Internal Mobile Subscriber Identity

B) International Mobile Subscriber Identity

C) Investigating Mobile Subscriber Identity

D) None

Answer: B

12. Your mobile number is actually called \_\_\_\_\_\_ number.

A) IMSI

B) SIM

C) MSISDN

D) None

Answer: C

13. IMSI number of a SIM is also called?

A) MSISDN

B) IMEI

C) ICCID

D) None

Answer: C

14 What controller a group of BTS or Cell Towers?

A) BSC

B) MSC

C) HLR

D) VLR

Answer: A

15. How many digits of PIN (Personal Identification Number) is allowed to protect a SIM card?

A) 4

B) 8

C) 10

D) None

Answer: A

16. What is PUK code of a SIM?

A) PIN Unlock Key

B) 4 digit code

C) It is like a password to enter after inserting SIM in a mobile for the first time. It prevents misuse.

D) All

Answer: D

17. The only element that personalises a Mobile Station is \_\_\_\_\_\_\_?

A) Back cover

B) SIM

C) Screen guard

D) None

Answer: B

18. What is the maximum number of Transceivers a BTS can handle is ?

A) 8

B) 12

C) 16

D) 22

Answer: C

19. What are the functions of a BSC?

A) Handovers, exchange functions

B) Frequency hopping

C) Control of radio frequency power level of BTS

D) All

Answer: D

20. What is the main function of NSS?

A) Establishing communication between mobile and landline numbers.

B) Providing eligible services to the subscriber

C) Providing parameters for Authentication and Encryption

D) All

Answer: D

21. Which of the following is the world’s first cellular system to specify digital modulation and network level architecture?

a) GSM

b) AMPS

c) CDMA

d) IS-54

View Answer

Answer: a

22. Previously in 1980s, GSM stands for \_\_\_\_\_\_\_\_\_\_\_\_

a) Global system for mobile

b) Groupe special mobile

c) Global special mobile

d) Groupe system mobile

View Answer

Answer: b

23. Who sets the standards of GSM?

a) ITU

b) AT & T

c) ETSI

d) USDC

View Answer

Answer: c

24. Which of the following does not come under the teleservices of GSM?

a) Standard mobile telephony

b) Mobile originated traffic

c) Base originated traffic

d) Packet switched traffic

View Answer

Answer: d

25. Which of the following comes under supplementary ISDN services?

a) Emergency calling

b) Packet switched protocols

c) Call diversion

d) Standard mobile telephony

View Answer

Answer: c

26. Which of the following memory device stores information such as subscriber’s identification number in GSM?

a) Register

b) Flip flop

c) SIM

d) SMS

View Answer

Answer: c

27. Which of the following feature makes impossible to eavesdrop on GSM radio transmission?

a) SIM

b) On the air privacy

c) SMS

d) Packet switched traffic

View Answer

Answer: b

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28. Which of the following does not come under subsystem of GSM architecture?

a) BSS

b) NSS

c) OSS

d) Channel

View Answer

Answer: d

29. Which of the following subsystem provides radio transmission between mobile station and MSC?

a) BSS

b) NSS

c) OSS

d) BSC

View Answer

Answer: a

30. \_\_\_\_\_\_\_\_\_\_\_ manages the switching function in GSM.

a) BSS

b) NSS

c) OSS

d) MSC

View Answer

Answer: b

31. Cellular concept replaces many low power transmitters to a single high power transmitter.

a) True

b) False

View Answer

Answer: b

32. Why neighbouring stations are assigned different group of channels in cellular system?

a) To minimize interference

b) To minimize area

c) To maximize throughput

d) To maximize capacity of each cell

View Answer

Answer: a

33. What is a cell in cellular system?

a) A group of cells

b) A group of subscribers

c) A small geographical area

d) A large group of mobile systems

View Answer

Answer: a

34. What is frequency reuse?

a) Process of selecting and allocating channels

b) Process of selection of mobile users

c) Process of selecting frequency of mobile equipment

d) Process of selection of number of cells

View Answer

Answer: a

35. Which of the following is a universally adopted shape of cell?

a) Square

b) Circle

c) Triangle

d) Hexagon

View Answer

Answer: d

36. Actual radio coverage of a cell is called \_\_\_\_\_\_\_\_\_\_

a) Fingerprint

b) Footprint

c) Imprint

d) Matrix

View Answer

Answer: b

37. Why the shape of cell is not circle?

a) Omni directionality

b) Small area

c) Overlapping regions or gaps are left

d) Complex design

View Answer

Answer: c

38. What is the main reason to adopt hexagon shape in comparison to square and triangle?

a) Largest area

b) Simple design

c) Small area

d) Single directional

View Answer

Answer: a

39. Which type of antenna is used for center excited cells?

a) Dipole antenna

b) Grid antenna

c) Sectored antenna

d) Omnidirectional antenna

View Answer

Answer: d

40. Which type of antenna is used for edge excited cells?

a) Omnidirectional antenna

b) Grid antenna

c) Sectored directional antenna

d) Dipole antenna

View Answer

Answer: c

41. For a cellular system, if there are N cells and each cell is allocated k channel. What is the total number of available radio channels, S?

a) S=k\*N

b) S=k/N

c) S=N/k

d) S=kN

View Answer

Answer: a

42. What is a cluster in a cellular system?

a) Group of frequencies

b) Group of cells

c) Group of subscribers

d) Group of mobile systems

View Answer

Answer: b

43. What is a frequency reuse factor for N number of cells in a system?

a) N

b) N2

c) 2\*N

d) 1/N

View Answer

Answer: d

44. Capacity of a cellular system is directly proportional to \_\_\_\_\_\_\_\_\_\_

a) Number of cells

b) Number of times a cluster is replicated

c) Number of Base stations

d) Number of users

View Answer

Answer: b

45. A spectrum of 30 MHz is allocated to a cellular system which uses two 25 KHz simplex channels to provide full duplex voice channels. What is the number of channels available per cell for 4 cell reuse factor?

a) 150 channels

b) 600 channels

c) 50 channels

d) 85 channels

View Answer

Answer: a

46. Which of the following is not an objective for channel assignment strategies?

a) Efficient utilization of spectrum

b) Increase of capacity

c) Minimize the interference

d) Maximize the interference

View Answer

Answer: d

47. The choice of channel assignment strategy does not impact the performance of the system.

a) True

b) False

View Answer

Answer: b

48. In fixed channel assignment strategy, each cell is allocated a predetermined set of \_\_\_\_\_\_\_

a) Voice channels

b) Control channels

c) Frequency

d) base stations

View Answer

Answer: a

Explanation: In a foxed channel strategy, each cell is allocated a predetermined set of voice channels. Any call attempt within the cell can only be served by the unused channels in that particular cell.

49. What happen to a call in fixed channel strategy, if all the channels in a cell are occupied?

a) Queued

b) Cross talk

c) Blocked

d) Delayed

View Answer

Answer: c

Explanation: As any call attempt within a cell can be served by unused channels in fixed channel strategy. If all the channels in that cell are occupied, the call is blocked and subscriber does not receive any service.

50. What is a borrowing strategy in fixed channel assignments?

a) Borrowing channels from neighbouring cell

b) Borrowing channels from neighbouring cluster

c) Borrowing channels from same cell

d) Borrowing channels from other base station in same cell

View Answer

Answer: a

Explanation: In borrowing strategy, a cell is allowed to borrow channels from a neighbouring cell if all of its own channels are already occupied. The MSC supervises such borrowing procedure and ensures that the borrowing of channel does not interfere with any call in progress.

51. In dynamic channel assignment strategy, voice channels are allocated to different cells permanently.

a) True

b) False

View Answer

Answer: b

Explanation: In a dynamic channel strategy, voice channels are not allocated to different cells permanently. Instead, serving base station requests a channel from MSC each time a cell request is made.

51. In dynamic channel assignment strategy, base station requests channel from \_\_\_\_\_\_\_\_\_\_\_\_

a) MSC

b) Neighbouring cell

c) Neighbouring cluster

d) Neighbouring base station

View Answer

Answer: a

Explanation: Each time a call request is made, the serving base station requests a channel from the MSC. The switch then allocates a channel to the requested cell following an algorithm that takes into account the likelihood of future blocking within the cell.

52. Dynamic channel assignment reduces the likelihood of blocking in comparison to fixed channel assignment.

a) True

b) False

View Answer

Answer: a

Explanation: Dynamic channel assignment reduces the likelihood of blocking. Accordingly, the MSC only allocates a given frequency if that frequency is not presently in use in the cell or any other cell which falls within the minimum restricted distance of frequency reuse.

53. RSSI stands for \_\_\_\_\_\_\_\_

a) Radio System Signal Indicator

b) Restricted Signal Strength Indicator

c) Radio Signal Strength Indication

d) Restricted System Software Indicator

View Answer

Answer: a

Explanation: Received signal strength indicator (RSSI) is a measurement of the power present in a received radio signal. RSSI is usually invisible to a user of a receiving device.

54. What is the drawback of dynamic channel assignment?

a) Decrease channel utilization

b) Increase probability of blocked call

c) Cross talk

d) Increase storage and computational load on system

View Answer

Answer: d

Explanation: Dynamic channel assignment requires the MSC to collect real time data on channel occupancy, traffic distribution and RSSI of all channels on continuous basis. This increases the storage and computational load on the system but provides the advantage of increased channel utilization and decreased probability of blocked call

55. What is the condition for handoff?

a) A mobile moves into a different cell while in conversation

b) A mobile remains in the same cell while in conversation

c) A mobile moves to different cell when idle

d) A mobile remains in the same cell and is idle

View Answer

Answer: a

56. Handoff does not require voice and control channel to be allocated to channels associated with the new base station.

a) True

b) False

View Answer

Answer: b

57. The time over which a call can be maintained within a cell without handoff is called \_\_\_\_\_\_\_\_\_

a) Run time

b) Peak time

c) Dwell time

d) Cell time

View Answer

Answer: c

58. Dwell time does not depend on which of the following factor?

a) Propagation

b) Interference

c) Distance between subscriber and base station

d) Mobile station

View Answer

Answer: d

59. Which of the following is associated with the handoff in first generation analog cellular systems?

a) Locator receiver

b) MAHO

c) Cell dragging

d) Breathing cell

View Answer

Answer: a

60. MAHO stands for \_\_\_\_\_\_

a) MSC assisted handoff

b) Mobile assisted handoff

c) Machine assisted handoff

d) Man assisted handoff

View Answer

Answer: b

61. A handoff is initiated when the power received from the base station of a neighbouring cell falls behind the power received from the current base station by certain level.

a) True

b) False

View Answer

Answer: b

62. What is the condition for intersystem interference?

a) Mobile moves from one cell to another cell

b) Mobile remains in the same cell

c) Mobile moves from one cellular system to another cellular system

d) Mobile remains in the same cluster

View Answer

Answer: c

63. What is the disadvantage of guard channel?

a) Efficient utilization of spectrum

b) Cross talk

c) Near far effect

d) Reduce total carried traffic

View Answer

Answer: d

64. Which of the following priority handoff method decrease the probability of forced termination of a call due to lack of available channels?

a) Queuing

b) Guard channel

c) Cell dragging

d) Near far effect

View Answer

Answer:

65. Umbrella cell approach is possible by using \_\_\_\_\_\_\_\_\_

a) Antenna of same heights

b) Antenna of different heights

c) Different voice channels

d) Different control channels

View Answer

Answer: b

66. Cell dragging is a problem occur due to \_\_\_\_\_\_\_\_\_\_

a) Pedestrian users

b) Stationary users

c) High speed mobile systems

d) Base stations having same frequency

View Answer

Answer: a

67. What was the typical handoff time in first generation analog cellular systems?

a) 1 second

b) 10 seconds

c) 1 minute

d) 10 milliseconds

View Answer

Answer: b

14. How much time it takes for handoff in digital cellular systems like GSM?

a) 1 second

b) 10 seconds

c) 1 minute

d) 10 milliseconds

View Answer

Answer: a

68. Soft handoff is also known as \_\_\_\_\_\_\_\_\_

a) MAHO

b) Hand over

c) Break before make

d) Make before break

View Answer

Answer: d

69. Which of the following is not a source of interference?

a) Base station in a different cluster

b) Another mobile in same cell

c) A call in progress in neighbouring cell

d) Any BS operating on same frequency

View Answer

Answer: a

70. Interference on voice channels causes \_\_\_\_\_\_\_

a) Blocked calls

b) Cross talk

c) Queuing

d) Missed calls

View Answer

Answer: b

71. Interference in control channel leads to \_\_\_\_\_\_\_\_

a) Cross talk

b) Queuing

c) Blocked calls

d) Voice traffic

View Answer

Answer: c

72. Interference is more severe in rural areas.

a) True

b) False

View Answer

Answer: b

73. What are co-channel cells?

a) Cells having different base stations

b) Cells using different frequency

c) Cells using adjacent frequency

d) Cells using same frequency

View Answer

Answer: d

74. Co-channel interference is a function of \_\_\_\_\_\_\_\_\_

a) Radius of cell

b) Transmitted power

c) Received power

d) Frequency of mobile user

View Answer

Answer: a

75. Co-channel reuse ratio is define by \_\_\_\_\_\_\_\_\_

a) Q=D\*R

b) Q=D/R

c) Q=D^R

d) Q=1/R

View Answer

Answer: b

76. Co-channel ratio in terms of cluster size is defined as \_\_\_\_\_\_\_\_\_

a) (3N)−−−−√

b) N

c) 3N

d) √N

View Answer

Answer: a

77. What is the cluster size for CDMA?

a) N=10

b) N=100

c) N=1

d) N=50

View Answer

Answer: c

78. What is breathing cell effect?

a) Fixed coverage region

b) Dynamic and time varying coverage region

c) Large coverage region

d) Very small coverage region

View Answer

Answer: b

79. Adjacent channel interference occurs due to \_\_\_\_\_\_\_

a) Power transmitted by Base station

b) MSCs

c) Same frequency of mobile users

d) Imperfect receiver filters

View Answer

Answer: d

80. Which of the following problem occur due to adjacent channel interference?

a) Blocked calls

b) Cross talk

c) Near-far effect

d) Missed calls

View Answer

Answer: c

81. In near-far effect, a nearby transmitter captures the \_\_\_\_\_\_\_\_\_\_

a) Receiver of the subscriber

b) Transmitter of the subscriber

c) Nearby MSC

d) Neighbouring base station

View Answer

Answer: a

82. Adjacent channel interference can be minimized through \_\_\_\_\_\_\_

a) Changing frequency of base stations

b) Careful filtering and channel assignments

c) Increasing number of base stations

d) Increasing number of control channels

View Answer

Answer: b

83. In dynamic channel assignment, any channel which is being used in one cell can be reassigned simultaneously to another cell in the system at a reasonable distance.

a) True

b) False

View Answer

Answer: a

84. \_\_\_\_\_\_\_ is a first-generation cellular phone system.

A) AMPS

B) D-AMPS

C) GSM

D) none of the above

Ans: A

85. \_\_\_\_\_\_\_\_\_\_ is a second-generation cellular phone system.

A) AMPS

B) D-AMPS

C) GSM

D) none of the above

Ans: B

86. \_\_\_\_\_\_\_\_\_\_\_\_ is a digital version of AMPS.

A) GSM

B) D-AMPS

C) IS-95

D) none of the above

Ans: B

87. \_\_\_\_\_\_\_\_\_\_\_ is a second-generation cellular phone system used in Europe.

A) GSM

B) D-AMPS

C) IS-95

D) none of the above

Ans: A

88. \_\_\_\_\_\_\_\_ is a second-generation cellular phone system based on CDMA and DSSS.

A) GSM

B) D-AMPS

C) IS-95

D) none of the above

Ans: C

89. The \_\_\_\_\_\_\_\_\_\_ cellular phone system will provide universal personal communication.

A) first-generation

B) second-generation

C) third-generation

D) none of the above

Ans: C

90. In a \_\_\_\_\_\_ handoff, a mobile station only communicates with one base station.

A) hard

B) soft

C) medium

D) none of the above

Ans: A

91. In a \_\_\_\_\_\_ handoff, a mobile station can communicate with two base stations at the same time.

A) hard

B) soft

C) medium

D) none of the above

Ans: B

92. \_\_\_\_\_\_\_ is an analog cellular phone system using FDMA.

A) AMPS

B) D-AMPS

C) GSM

D) none of the above

Ans: A

93. AMPS operates in the ISM \_\_\_\_\_ band.

A) 800-MHz

B) 900-MHz

C) 1800-MHz

D) none of the above

Ans: A

94. In AMPS, each band is divided into \_\_\_\_\_\_ channels.

A) 800

B) 900

C) 1000

D) none of the above

Ans: D

95. AMPS has a frequency reuse factor of \_\_\_\_\_\_\_.

A) 1

B) 3

C) 5

D) 7

Ans: D

96. AMPS uses \_\_\_\_\_\_ to divide each 25-MHz band into channels.

A) FDMA

B) TDMA

C) CDMA

D) none of the above

Ans: A

97. D-AMPS uses \_\_\_\_\_\_ to divide each 25-MHz band into channels.

A) FDMA

B) TDMA

C) CDMA

D) both (a) and (b)

Ans: D

98. GSM allows a reuse factor of \_\_\_\_\_\_\_.

A) 1

B) 3

C) 5

D) 7

Ans: B

99. GSM is a digital cellular phone system using \_\_\_\_\_\_\_\_.

A) FDMA

B) TDMA

C) CDMA

D) both (a) and (b)

Ans: D

100. IS-95 is based on \_\_\_\_\_\_\_\_\_\_\_\_.

A) FDMA

B) CDMA

C) DSSS

D) all of the above

Ans: D

101. IS-95 uses the ISM \_\_\_\_\_\_\_band.

A) 800-MHz

B) 900-MHz

C) 1900-MHz

D) either (a) or (c)

Ans: D

102. IS-95 uses the \_\_\_\_\_\_\_ satellite system for synchronization.

A) GPS

B) Teledesic

C) Iridium

D) none of the above

Ans: A

103. In an IS-95 system, the frequency-reuse factor is normally \_\_\_\_\_.

A) 1

B) 3

C) 5

D) 7

Ans: A

104. In the third generation of cellular phones, \_\_\_\_\_\_\_ uses W-CDMA.

A) IMT-DS

B) IMT-MC

C) IMT-TC

D) IMT-SC

Ans: A

105. In the third generation of cellular phones, \_\_\_\_\_\_\_\_ uses CDMA2000.

A) IMT-DS

B) IMT-MC

C) IMT-TC

D) IMT-SC

Ans: B

106. In the third generation of cellular phones, \_\_\_\_\_\_ uses a combination of W-CDMA and TDMA.

A) IMT-DS

B) IMT-MC

C) IMT-TC

D) IMT-SC

Ans: C

107. In the third generation of cellular phones, \_\_\_\_\_\_\_ uses TDMA.

A) IMT-DS

B) IMT-MC

C) IMT-TC

D) IMT-SC

Ans: D

108. The period of a satellite, the time required for a satellite to make a complete trip around the Earth, is determined by \_\_\_\_\_\_\_\_\_ law.

A) Kepler's

B) Newton's

C) Ohm's

D) none of the above

Ans: A

109. The signal from a satellite is normally aimed at a specific area called the \_\_\_\_\_\_\_\_\_.

A) path

B) effect

C) footprint

D) none of the above

Ans: C

110. There is (are) \_\_\_\_\_ orbit(s) for a GEO satellite.

A) one

B) two

C) many

D) none of the above

Ans: A

111. MEO satellites are located at altitudes between km.

A) 3000 and 5000

B) 5000 and 10,000

C) 5000 and 15,000

D) none of the above

Ans: C

112. LEO satellites are normally below an altitude of \_\_\_\_\_\_\_\_ km.

A) 1000

B) 2000

C) 3000

D) none of the above

Ans: B

113. \_\_\_\_\_\_ is based on a principle called trilateration.

A) GPS

B) Teledesic

C) Iridium

D) none of the above

Ans: A

114. Low-Earth-orbit (LEO) satellites have \_\_\_\_\_ orbits.

A) equatorial

B) polar

C) inclined

D) none of the above

Ans: B

115. A GEO is at the \_\_\_\_\_\_\_\_ orbit and revolves in phase with Earth.

A) equatorial

B) polar

C) inclined

D) none of the above

Ans: A

116. GPS satellites are \_\_\_\_\_\_\_\_ satellites.

A) GEO

B) MEO

C) LEO

D) none of the above

Ans: B

117. \_\_\_\_\_\_\_\_ satellites provide time and location information for vehicles and ships.

A) GPS

B) Iridium

C) Teledesic

D) none of the above

Ans: A

118. Iridium satellites are \_\_\_\_\_\_\_\_satellites.

A) GEO

B) MEO

C) LEO

D) none of the above

Ans: C

119. \_\_\_\_\_\_\_\_ satellites can provide direct universal voice and data communications for handheld terminals.

A) GPS

B) Iridium

C) Teledesic

D) none of the above

Ans: B

120. Teledesic satellites are \_\_\_\_\_\_\_\_\_satellites.

A) GEO

B) MEO

C) LEO

D) none of the above

Ans: C

121. \_\_\_\_\_\_\_\_ satellites will provide universal broadband Internet access.

A) GPS

B) Iridium

C) Teledesic

D) none of the above

Ans:

122. Which channel is used to transmit random access signals?

A. BCCH

B. CCCH

C. SDCCH

D. TCH

Ans: B

123. Which one of the following is the combination of main BCCH?

A. TCH+SACCH

B. FCH+SCH+BCH+CCCH

C. SDCCH/8+SACCH/8

D. FCH+SCH+BCH+SDCCH+SACCH

Ans: B

124. The Value Range of Timing Advance (TA) in GSM is?

A. 0-31

B. 0-127

C. 0-63

D. 0-7

Ans: C

125. How many MS can be paged with 1 paging massage with IMSI?

A. 1

B. 2

C. 3

D. 4

Ans: B

126. Directed Retry handover means?

A. TCH to TCH

B. SDCCH to TCH

C. SDCCH to SDCCH

D. None of Above

Ans: B

127. How many neighbors are measured by MS at a time?

A. 5

B. 6

C. 7

D. 8

Ans: B

128. Time Duration of Super Frame?

A. 3 Hour 28 minutes 53 seconds 760 ms

B. 6.12 seconds

C. 235.65 ms

D. 120 ms

Ans: B

129. Maximum number of characters allowed in one SMS?

A. 160

B. 170

C. 180

D. 150

Ans: A

130. If you have 5 MHz frequency band what will be the maximum number of channels as per GSM system?

A. 25

B. 35

C. 20

D. 24

Ans: A

132. Which kind of Handovers more desired in the Network?

A. Rx Level

B. Power Budget

C. Rx Quality

D. Interference

Ans: B

133. SDCCH holding time for Normal location update is

A. 3.8ms

B. 3.5sec

C. 3.5ms

D. None of them

Ans: B

134. SDCCH holding time for call setup (MOC) is

A. 2.7sec

B. 3.5sec

C. 2.7ms

D. 3.5ms

Ans: A

135. \_\_\_\_\_\_\_\_\_\_ supports the operation and maintenance of GSM.

a) BSS

b) NSS

c) OSS

d) MSC

View Answer

Answer: c