Sample Question from 2G/3G/4G/5G mobile Communications

Q1. Which of the given technology use OFDMA?

(a) GPRS (b) Edge (c) UMTS (d) LTE

Q2.Which of the given is not a multiple access technology

(a) WCDMA (b) OFDMA (c) MIMO (d) SDMA

Q3. Spectral efficiency unit is

(a) Hz (b) bits/sec/Hz (c) mill watt / Hz (d) dB

Q4. Which 3GPP Releases satisfy the IMT Advanced Criteria?

(a) Release 4 (b) Release 8 (c) Release 12 (d) Release 16

Q5.Which of the given may be a cause of call drop

(a) High BER in transmission system (b) cheaper Handset

© Service not Authorize (d) High EM Radiation

Q6. MSRN number assigned to a handset will remain active

(a) In roaming during O/G and I/C call period (b) In roaming only O/G call

(c) In roaming always (d) In roaming only I/C call

Q7. Rule 419 A, defines competent authority for

(a) Lawful Interception (b) License Agreement

© Penalty Imposition (d) Arbitrations

Q8. For a GOS of 1% number of users supported by a 10 channel system is 44, then number of users supported by system if channel is increased by two times

(a) 44 (b) 88 (c) 120 (d) 200

Q9.Frequency allocation to mobile service is related to which department

(a) WPC (b) DoT Licensing cell (c) TRAI (d) Deity

Q10. First license for cellular services to private operators is offered in following year in INDIA

(a) 1990 (b) 1994 (c) 1999 (d) 2003

Q11. The umbrella cell configuration consist one BTS with _____ transmission power and an antenna installed _____ above the ground that serve as an umbrella for a number of BTS. The suitable word with X and Y are

(a) High, High (b) High, Low (c) Low, High (d) Low, Low

Q12.The function of unit X in GSM is to convert the coded speech (Ex EFR 13 kbps) to or from standard 64 kbps. Where unit X is

(a) BTS (b) TRAU (c) TRX (d) EIR

Q13. Near Far effect is dominate in following radio technology

(a) CDMA (b) 2 G GSM (c) 5G NR (d) Blue Tooth

Q14. In 2G mobile communication we feels a DTMF tone for call waiting ,while speaking to someone(i.e TCH busy) the channel used for DTMF tone is

(a) SDCCH (b) SACCH (c) FACCH (d) NCH

Q15. In a GSM system allotted frequency 25 MHz both in Uplink and downlink. If average channel per site is 250 then frequency reuse factor (N) used is

(a) 3 (b) 4 (c) 7 (d) 12

Q. 16. Which agency allocate the IMEI/TAC numbers

(a) ITU (b) GSMA (c) DoT (d) ETSI

Q17. Whenever MS wants to initiate on outgoing call (In 2G system) or want to send an SMS it requested for a channel to BSS over which channel

(a) RACH (b) SDCCH (c) TCH (d) FACCH.

Q18. Permanent data in 2G is stored in

(a) VLR (b) HLR (c) AUC (d) EIR

Q19. EDGE used

(a) PSK (b) 8 PSK (c) 64 PSK (d) None of the given

Q20. In a SSA total 100 BTS are working in a single day total BTS breakdown hours are 72 Hrs then network availability of system is for that particular day is

(a) 96 % (b) 97% (c) 98% (d) 99%

Q21. Two RNC communicate each other, is related to which interface.

(a) I_{ps} (b) I_{cs} (c) I_{ur} (d) I_{ub}

Q22. Server to server e-mail delivery is an example of following service

(a) Conversational (b) Interactive (c) Streaming (d) Background

Q23. In a WCDMA system chip rate is $3.84x10^6$ Chips per seconds and spreading factor is 8 . What is the user data rate (Assume Half rate coding for error correction) in kbps.

(a) 120 (b) 240 (c) 480 (d) 960

Q24. In 3GPP R4 distributed network architecture, switching matrix is contained within

(a) MSC (b) MGW (c) MSC Server (d) IMS

Q25.MSC/VLR perform mobility management function in circuit switched, equivalent function in Packet switched (PS) is perform by

(a) SGSN (b) GGSN (c) SGSN and GGSN both (d) MSC

Q26. In a GPRS system which unit is interfaced with the external packet data network

a) SGSN (b) GGSN (c) SGSN and GGSN both (d) MSC

Q27. Which Specifications defines 3G

(a) IMT 2000 (b) IMT Advance (c) IMT 2020 (d) IMT

Q28.Whiich of the service capabilities is related to IN network

(a) OSA (b) VHE (c) CAMEL (d) WAP

Q29.In 3G which physical channel is used by Handset for Handover or Cell reselection

(a) SCH (b) CPICH (c) PRACH (d) PICH

Q30. In 3G various channels use a frame structure of duration.

(a) 10 ms (b) 20 ms (c) 40 ms (d) 60 ms

Q31. Which of the given unit is a part of 4G TECHNOLOGIES?

(a) SGSN (b) HLR (c) PCRF (d) AMF

Q32. LTE use single carrier FDMA (SC-FDMA) with cyclic prefix on uplink to overcome the following problem

(a) High sensitivity to frequency offset (b) Peak to average power ratio

© Doppler Effect (d) b and c both

Q33. Total slots in a LTE OFDMA sub frame is equal to

(a) 8 (b) 10 (c) 12 (d) 20

Q34. The multiple access method used in 4G is

(a) TDMA (b) CDMA (c) SDMA (d) OFDMA

Q35.In LTE architecture which unit is responsible for IP address allocation

(a) MME (b) S-GW (c) P-GW (d) HSS

Q36. Which technology does not have HSS/HLR

(a) 2G `(b) 3G (c) 4G (d) 5G

Q37. Location tracking in LTE network is a function of

(a) MME (b) SAE (c) P-GW (d) PCRF

Q38.The protocol/Layer used for Ciphering (Encryption) in LTE network

(a) RLC (b) PDCP (c) RRC (d) MAC

Q39.Which service use least packet Error Loss Rate

(a) Conversational Vedio (b) Voice

©Real Time Gaming (d) IMS Signalling

Q40. Mission Critical Push To Talk (MCPTT) over LTE is a standard which is first introduce in

(a) Release 11 (b) Release 12 (c) Release 13 (d) Release 14

Q41. Which of the given is a feature of 5G Architecture only

(a) Mobile Broadband (b) Introduction of HSS

© CUPS (d) QoS

Q42. In 5G which units is responsible for UE IP address allocation

(a) AMF (b) SMF (c) UPF (d) P-GW

Q43. Which performance parameter of 5G is extremely sensitivity to Latency

(a) URLLC (b) mMTC (c) eMBB (d) MBB

Q 44. In following application of 5G which require lowest latency

(a) Virtual Reality (b) Driverless Vehicle (c) Augmented Reality (d) UHD Video

Q45. First 3GPP release related to 5 G is

(a) 13 (b) 14 (c) 15 (d) 16

Q46. Hata Model is used for

(a) Link Budget (b) throughput calculation

(c) Spectral Efficiency calculation (d) Latency Calculation

Q47. Telecom cellular service market may be classified

(a) Pure Competition (b) Monopoly (c) Imperfect Competition (d) Oligopoly

Q48.GPRS first introduce in

(a) 2G (b) 2.5G (c) 3G (d) 4G

Q49. Which band in MHz range is corresponds to CDMA services in India

(a) 890-915 (b) 824-844 (c) 1920-1980 (d) 1710-1785

Q50. Which IEEE 802 standard deals with WLAN

(a) 802.3 (b) 802.8 (c) 802.11 (d)802