1. Phase of a signal is measured by – **Angle**
2. X.25 is used in – ATM and Credit Card Verification And Validation
3. Modem in X.25 Network is termed as – DCE (Data Circuit Equipment)
4. Andrew Corporation is an – Equipment Vendor (Hard ware for comm netowrk)
5. IP is which layer protocol – Network + X.25
6. Governing body of US Telecom is - FCC
7. FCC regulates – Interstate comm. and International Communication that originate and terminate in the US
8. RBOCS – **R**egional **B**ell **O**perating **C**ompanie**S.**
9. What is LBS- **L**ocation **B**ased **S**ervice
10. Which are the different flagship under brands Orange - **Orange, France Telecom, Wanadoo**
11. HSDPA (High speed Downlink packet access) technology is used – Mobile Telephony
12. AT&T and SBC are called – AT&T Inc.
13. Which Forum is responsible for NGOSS – TMF(Tele Mgmt Forum)
14. NOT an service offered Dial up Network – Broad Band

1. A Service which can be offered with minimal loss using connection less protocol– Video Streaming
2. Switches which is located in customer premises is – PBX
3. Qos is to measure?– (Delaying, Dropping)
4. Qos is most prioritized by these criteria– MAC Address, Ethernet port and TCP/IP (priorities n/m traffic)
5. In which orbit you can’t station Comsat – High Earth Orbit

(You can station Comm. Sat on Molniya, Low Earth and Geo stationary)

1. Local computer rep –> Standard N/w Format – Presentation Layer
2. Which of the following layer protocol need not be implemented in Router

Options where, Physical, Datalink, Network and Transport. I opted **Transport layer**

1. Which is used to connect two dissimilar n/w – **Gateway**
2. Expand ILEC – **Incumbent Local Exchange Carrier**
3. What is the future of Mobile Comm. – Customer Retention or customer prevention etc.. I answered **Customer Retention.**
4. Horizontal Processes in eTom denotes – **Functional Processes**
5. The vertical groupings are required to support **customer and manage business**.
6. The technology which integrates live human agents into the design workflow is – **Guided Speech IVR**
7. Call screening is otherwise called – **Selective Call Rejection**
8. Based on which either the old or the new service provider can port a telephone number for a customer – **SOA (Service Order Activator) or LSOA**
9. Process of allowing telecomm operators to use the twister pair telephone connections from the CO to Customer Premises – LLU (Local Loop Unbundling)
10. **A question on LPVA and VOIP – Refer Comm Trends Slide**
11. Organizations that offer more than two services are called – **Multi-Play**
12. DOCSIS is introduced mainly for – **Providing high speed data over cables**
13. ParlayX is used in IMS appl. to – **Leverage the location Capability of Mobile Network**
14. **When STB is used with analog TV, the number channel depends on?**
15. Flow order among the systems BSS, Mediation, Network Infrastructure?

BSS->Mediation->Network Infrastructure

1. Which will not be there in CDR (Call Detail Record) – ans is a option with have Volume.

CDR will contain – call detail such as **time of call, period, date, rate**

1. Which system can be used better for Video streaming – **Packet Switch network**
2. What will be cost for laying Optic fibre infrastructure for a house, based on the statistic provided by Vodafone? 880$
3. **Which service will be affected if there is a power cut in customer permises**

**Options where, VOIP will disrupted ; VOIP will not be disrupted ; WiMax will be disrupted; None of the above**

1. Which processes in eTom is used for transaction between a service provider organization and its third party vendor – **B2B Transactions**
2. In which access methodology you can use all the available bandwidth – **CDMA**
3. E911 is difficult to implement in –**VOIP based network**

**----------------\*--------------------------------\* Part-2 \*-----------------------------\*-----------------------**

1. What is the effect of FCC making the report of the % of services provided to other carriers as mandatory?

1. **CLEC forced to increased amt of service provided for components**

2. ILEC “ “ “ “

3. No effect

4. FCE was forced to make reporting mandatory

1. Which DSL tech r best suited for HDTV, VOD n internet?
   1. Dsl
   2. Sdsl
   3. Idsl
   4. **Vdsl**
2. ITU-> International Telegraph Union->Telecomunications Standardisation sector
3. E.163 & E.164 r also known as
   1. IP address
   2. MACs
   3. **Tel nos**
   4. CKT Ids
4. Not an analog modal technique ->**FSK**,PM,AM,FM

6. Example of CRM includes functionality such as

a. call center

b.**callcenter+sales force automation**

c.SFA

d. INV.entry management

7. The LEC service type that offers PBX type without the need of leasing the switching equip is

a.PBX

b.**centrex**

c.CO switch

d.soft switch

8. Datagram-> it’s a self-contained packet, independent of other packets, that contains information sufficient for routing from the originating data to the destination without relying on prior exchanges b/w the equipment and the n/w.

9. The form of multiplexing used in cable TV transmission is

a.TDM

b.**FDM**

c.WDM

d.DWDM

10. What are the types of services for which E911 is mandated in US?

a.wireless

b.line

c.VOIP

**d.all**

**PSTN uses SS7 protocol**

11. Which of the following are true?

i..the signaling sys in PSTN uses a separate n/w as compared to the n/w used for carrying voice

ii..SS7 uses out of signaling.

iii..In INbond signaling the signaling is on the same channel as the telephone call

iv..Out of bond signaling is also called as common channel signaling.

**a.i,ii,iii,iv**

b.i,ii,iii

c.ii,iii,iv

d.i,ii,iv

12. Which of the following is not used to provide line powered voice access?

a.all

b.inside wiring

**c.CPE**

d.phone

13. The fibre optic architecture where one fibre is shared among multiple cases is called

a.PTP

**b.PON [PICONET]**

c.FTTH

d.FTTP

14. Which process desc retrieved of subsc accounting in for billing purpose?

a.rating

b.compiling

**c.charging**

d.none

15.HSDPA?

a.wireline telephony protocol

b.open std. for digital tv

c.digital radio broadcast std.

**d.mobile telephony protocol**

16. As a mark strategist, is develop new products n manage existing products using

**a.strat & commit**

b.resourse dev & mngmt

c.mrkting & offer

d.PLM

17. Select the billing system that does not fall under interconnect billing sys

a. Cascade billing

b.ITU “

**c. retail “**

d. Direct “

18. Which of following need not be implemented in routes?

a.phy

**b.trans**

c.dataline

d.n/w

19. Local monopoly is thwarted using ?

a.WPAN

**b.none**

c.LPVA

d,WLC

20. Which is the high level process flow involved in fulfillment?

**a.preorder,order placement,solution design,config&activation,order closure**

b.none

c.OP,PO,SP,C&A,OC

d.SD,PO,OP,C&A,OC

21. Which of the following compliance is available in LPVA server?

a.roaming

b.911

**c.E-911**

d.MPLS

22. Which among the following assures effective interconnection b/w the diff telecom service prior in India? **TRAI**

23. IPTV requires what to view picture?

a.all

b.IP enabled such as PDA

c.HHT

d.**digital set top box connection to TV.**

24. What is source coding? **Data Compression**

25. Name the record gen by n/w elt containing voice or data info?

a.data detail rec

b.**call detail rec**

c.usage detail rec

d.voice detail rec

26. CTS is providing ‘management comm. Services platform’ applicable for which client?

a**.EDS**

b.COVAD

c.ACCA

d.Vodafone

27. Protocol used to connect EDS computing resources to its client?

a.none

b.**MPLS**

c.from rel

d.ATM

28.Main purpose of intro of DOCSIS?

**a.Provide high speed data over cable**

b.provide value added service

c.incr penetration

d.make installation easier

29. Project % mobile in the total no.of new voice connections in 2009(in billion)?

**a.99**

b.80

c.90

d.50

30. Which among the following proc. r informed when the ‘service problem mangmt’ process realizes outage of a service instance?

a**.both problem handling customer QOS/SLA mgmt**

b.problem handling

c.resourse perfect mgmt

d.customer QOS?SLA mgmt

32. a signal has frequency of 24KHz. It is sampled at a rate of 4 times the highest frequency. For the signal to be transmitted within a 320KHz channel what is the no. of bits to be used for quantization?

320/24 \* 4 = 3.33 (4)

1. **4**
2. 6
3. 8
4. 5

33. Which operator in India provides digital exchanges?

a. **BSNL**

b. Hughes Network

c. None of the above

34. For LPVA where does power come from?

a. **CO**

b. Telephone

c. PBX

35. Which is used for preventing fraud?

a. Product Assurance

b. **Revenue Assurance**

c. Network Assurance

36. What is FCC?

a**. Regulatory Body**

b. Certification Body

c. Telecom Associations

d. Standards Organization

37. What does eTOM do? (Enhanced Telecom Operations Map)

**a. Categorize individual processes and intermediate flows**

b. Categorize individual processes

c. Categorize distinct and individual products

38. Which account in cognizant takes care of Managed Communication Services platform?

a. Covad

b. At&T

**c. EDS**

39. AT&T and SBC merged and was called wat? **AT&T Inc**

40. Which is not a RBOC?

a. **BellCore**

b. BellSouth

c. Ameritch

d. BellAtlantic

41. eTom- **business process framework**

42. order of flow : **netwrk infrastructure-mediation-billing**

1. PSTN expansn – **public switch telephone network**
2. IMS expansn- **IP Multimedia Subsystems**

48. Voice signl’s freq in POTS : 0.3 to 3.4khz (**0 – 4 Khz**)

49.Voice customers –**totally 80%.**

50.Orange community(dono d xct terminology wat dey used 2 say): **FT,orange,wanadoo**

**51.Voip based q’s –4**

52.Why operators wanna deploy wifi hotspots **– will compliment their 3G offering and generate more touch points.**

53.Portal of orange –**kabira (service acct. pack)**

54.ParleyX webservice— (**IMS : Location capablity of mobile n/w)**

55.At d outset identifiying customer’s propensity 2 pay d bill- **credit rating**

**56.More q’s in oss as wch subprocess doesn’t cum under assurance,fulfillment ,thn vice-versa also**

**----------------\*--------------------------------\* Part 3\*-----------------------------\*-----------------------**

1.STB is ?**Set-up Box**

2. Which organization gives an environment to work collaboratively? **TMF**

3. Name the mobile company which doesn’t have its own network? [**VIRGIN**]

4. Convergence is

a) A**ll communications** b)voice and data only.

c) Broadband and tv

5. Orange solutions account consists of which companies?

6. Covad does not provide this service

a)**wireline** b)value added.

c)enterprise d)broadband

7. Cognizant TCO,navallur,siruseri LAN are connected by? **MAN**

8. The switch that sits in the customer premises is

a) Co switch b) **pbx**

c) Centrex d) Soft switch

9. Cognizant provided code review for which company? **vodafone**

10. LPVA need broadband connection state.

a)true b)**false**

c)partially true

11. Wimax technology provides –

12.\_\_\_\_\_\_\_\_\_\_\_ can be intiated by either the home network or the receiving network

a)soa b)lsoa c)**soa and lsoa**  d)none of these.

**----------------\*--------------------------------\* Part 4\*-----------------------------\*-----------------------**

All the questions are radio button only no checkbox. Read carefully.

* Year of telephone invention : **1876**
* 1980 Anti trust case against AT&T results : **RBOCs**
* Features of Telecommunications Act of 1996 (deregualte, merger and acusition)
* Telecom regulatory body of US called as \_\_\_\_**FCC**
* Deregulation means \_\_\_\_ **Deregulation is a process by which the restrictions on business are removed to encourage the efficient operation of the marketplace and heighten competitiveness**
* Which among is not an analog modulation- Am,Fm,Pm,**Psk**
* Channel switching – **separate data and signal**
* **Features of FDMA,TDMA,CDMA**
* PBX,CO,Centrex
* Common cahnnel signaling – **OutBand signalling**
* Disadvantges of DSL **– work better if close**
* Properties of LAN,MAN,WAN
* Secure and Trusted VPN
* Descriptions on types of satellites
* Properties of OSI layers
* H.264 Codec for high compression
* IPTV

**----------------\*--------------------------------\* Part 5\*-----------------------------\*-----------------------**

1. e-Tom framework is based on which technology

a. .NET b. J2EE c. Mainframes **d.** **None**

2. Piconet in parking mode supports max of devices

a. 128 **b.** **255** c. 256 d. 64

3. Which of the following are results of 1980 Anticase

a. **RBOC’s Local phone**

b. RBOC’s should manufacture telephone equipment

c. **AT &T should take care of long distance calls**

**d. AT & T should manufacture telephone equipment**

4. US Regulatory body is

**a**. **FCC**

5. FCC & TRAI belong to which of the following categories

**a**. **Regulatory bodies**

b. Certification bodies

6. Maximum no of days to get the LNP number defined by FCC as

a. no rules defined

b. 5 days (**actually it is 5 days but not sure whether it is defined by FCC**)

c. 14 days

d. depends on service providers

7. X.25 uses

a. simplex b. **full duplex** c. half duplex d. none

8. bit rate of PCM is

a. **64kbps and** sampling frequency of PCM is 8 KHz and quantization bit of PCM is equal to eight

9. Traditional cable systems provide

a. **BroadCast TV**

b. Uni cast TV

10. Cable TV transmission uses which modulation technique

a. **FDM** b. TDM c.

11. Multimode Fiber transmission is used for long distances: **False**

12. Which of the following are true for PBX

a. **between people within organization**

**b. From users within organization to people outside**

**c. From callers outside the location to on-site**

d. require an operator to route calls

13. In contrast to PBX, the switching equipment will be located in Telecom Company’s central office

a. **Centrex** b. CO

14. ADSL frequency range is

a. **30 Khz – 1.1 MHZ** b. 500 khz-1MZ

15. VOD and Internet can be provided using which DSL

a. VDSL b. **ADSL**

16. For which of the following DSL technology, we can use Fiber from 0.75 feet

a. **VDSL** b. ADSL

17. How many DS0 channels are multiplexed to get DS1 channel

a. **24** b. 12 c. 48 d. 36

18. Which has to be implemented by LAN

a. **Ethernet & Token Ring** b. RS 232

19. Network of geographically dispersed LAN’s is

a. **WAN** b. Internet

20. Offices in CTS TCO, CSI , Navlur are connected by

a. LAN b. **MAN** c. WAN d. none

LAN’s are typically owned by single organization - **TRUE**

21. Functionality of Session Layer is

a. **Streaming audio and Video**

22. Which of the following are true reg HTTP

a. **delivers data in WWW**

**b. is a client-server protocol**

**c. is stateless request-response protocol**

d. belongs to a presentation layer

**CODE FOR CALL BLOCKING \*67 & CALL WAITING \*70**

23. Which of the following are true

a. **IP TV is the transmission of digital TV over Internet Protocol**

b. IPTV uses Internet

c. **uses RTSP for VOD**

**d. has two way communication for Interactive Television**

24. Which of the following are not the functionality of gatekeeper

a. **translation of protocols**

b. call routing

c. bandwidth management

d. billing

25. Which of the following are required for Video conference

a. **dedicated link**

b. low jitter

c. none of the above

26. Play trick uses which of the following protocol

a. **RTSP**

b. SRTP

c. TRSP

27. Fullform of IMS is

a. **IP Multimedia SubSystem**

b. IP Multimedia Services

28. e-TOM is a form of

a. **individual and distinctive processes which have an interlink**

b. only distinctive processes

c. only individual process without any link

d. none

30. Billing is invoked after what process in CRM

a. Resource Activation

b. **Service configuration and Activation**

31. Horizantal groupings denote

a. **functional processes** b. enterprise processes

32. Resolving customer’s problems comes under

a. **Problem handling of CRM**

33. Service Problem and Resource Problem management.

34. MoneyMap from cVidya comes under

a. **Revenue Assurance** b. Network Assurance

35. Formatting invoice comes under

a. **create and delivery bill**

36. CDR **doesn’t** include

a. call time

b. duration of time

c. **volume of sticks [data]**

d. terminating number

37. Which of the following decouples network to billing systems

a. **Mediation gateway**

40. Process manage all settlement and billing for the enterprise , including bill validation, verification, authorizing of payment is

a. **S/P settlements and billing management**

43. Telephone company that provides connections between local exchanges in different geographic areas is

a. **IXC** b. ILEC

44. That provides access to a hosting service is

a. **ISP** b. IAS b. both d. none\

45. Telecom regulatory bodies tries to create

a. **competitive environment**

46. Inherent benefit of deregulation is

a. **we have wide range of services**

47. Mostly used 802.11 standard is

a. **802.11 b and 802.11g**

48. 802.11 based protocols are

a. **RTP/RTCP**

49. IVR technologies use

a. **SALT and VoiceXML**

51. The number of employees in Telecom wireline industry are **more** and **decreasing** now.

52. Protocols for VOD is – **RTSP (real time streaming protocol) primary protocol IGMP (Internet Group Management Protocol)**

53. Which one of the following is competitor for ISD – **VoIP**

54. Packet cable and open cable are standards for **Cable broadband standards**

55. Final destination for E911 call is (public safety answering point)

a. **PSAP** b. call center

56. Campaigning is a part of which process

a. **Marketing fulfillment response**

b. Customer Interface management

57. Which of the following will not be impacted when a network outage occurs

a. **provisioning** b. Network inventory Mgmt c. CRM d Network Elem Mgmt

58. Zero touch provisioning is implemented for

a. **ACCA Networks**

59. EDS uses which protocol

a. **MLPS**

60. CTS implemented for EDS are a. **MLS** b. **MRS**

61. **If there is a problem in network resource what r the processes that are going to effect.**

**a) Service problem handling**

**b) Network problem handling**

**c) Both**

**----------------\*--------------------------------\* Part 6\*-----------------------------\*-----------------------**

1. Product Ranger is a \_\_\_\_\_\_\_\_\_\_\_ (fraud management systems)
2. What is channel Signaling – Provides the ability to remotely modify multiplexes….
3. High speed internet has resulted in \_\_\_\_\_\_\_\_\_ (increase) in count and \_\_\_\_\_\_\_\_\_ (increase) in rate of adoption of technologies
4. X.25 establishes \_\_\_\_\_\_\_\_ (duplex) sessions
5. SMLC is implemented in Nokia account (serving mobile location center)
6. Which is emerging as major alternative to ISD? (VOIP)
7. Which OSI Layer checks the availability of communication partner? Application layer
8. Which etom process ensures end-to-end testing of service? Fulfillment Service Management and Operations
9. **What are the advantages of cable transmission over DSL?**
10. What is used in Cable TV (**FDM**/ TDM/ WDM / DWDM)
11. What is used for speech recognition in web pages (SALT)
12. In fulfillment, Lead to Cash is termed as \_\_\_\_\_\_\_\_\_\_\_\_(order to bill)
13. The order status is made available to \_\_\_\_\_\_\_\_\_\_\_\_\_\_(external systems or customer)
14. variable delay is \_\_\_\_\_\_\_\_\_\_ (jitter)
15. When there is high load in the network, which of the following services will not be affected (audio / video / email) (Email)
16. NGOSS is developed / maintained by \_\_\_\_\_\_\_\_TMF
17. What is media convergence? It occurs when multiple products come together to form a single product with the advantages of all of them.
18. wiretapping can be done in only wireline (true / **false**) and the law governing this is \_\_\_\_\_\_\_\_ (CALEA)
19. Which helped in providing services like VOD and pay per view? (STB)
20. What is FMT? Find My Teen
21. Which VOIP provider did Covad acquire (GoBeam)
22. Which inventory system is used in Covad (Netcracker)
23. Deregulation \_\_\_\_\_\_\_\_\_\_\_ (increased) competition

**############## ADITIONAL ###########**

18. The research work on packet cable and open cable provides what

a. Standards for cable network (cable broadband standards)

b. Current research on packetcable and opencable standards by CableLabs would help to improve the performance of multicast traffic thereby improving the data throughput.

19. RBOC is

**A. LEC**

b.IXC

c.CLEC

d.ILEC

27. What is FMT project? **Find My Teen**

28. What is OLT? **Optical Line Terminal / Optical Network Units** (ONU)

29. What is the freq range of remote control? **0.3 Hz- 300 GHz.**

30. Preemption of FCC happened in

a. 1985 b 1986 c.1995 d.**1996**

31. Mobile convergence leads to

**a. integration of mobile and fixed line telephone services**

b. integration of mobile and fixed line telephone bills

32. What system is used in call centres?

**a. IVR**

b. Both IVR and ACD

c.ACD

33. Which of the following is false about IP?

**A. IP is a connectionless protocol - True**

**b. IP provides unreliable service - True**

don’t remember c and d options

36. Distinguish the etom process that stores the cause for service problem ,service problem restoration and activation,….

**a. Service problem management**

b. Service Quality management

37. Tracking leads comes under

a. Market fulfillment response

**b. Selling**

c. Order handling

38. Testing the service end to end

**a. Service Management and Operations (SM & O)**

39. Remote surgery requires

a) Soft QoS

b) End to end QoS

**c) Hard QoS**

d) none

**National Database**

40. NPAC **(National Portablity Administration Center)** data containing correct routing information in

a) AIMNET

**b) Neustar**

c) Farthorn

d) FCC

41. eTom process that is involved in testing the end to end service during fulfillment process

**a)Fulfillment Service Mgmt and Operation(SM&O)**

b) Resource provisioning

c**)** Service confin and activation

d) Problem handling

42. Type of virtual ckt for sporadic data transfer

a) Permanent virtual ckt

b) Temporary VC

c) Sporadic VC

**d) Switched VC**

43. Network in which each telephone is connected to other telephone

a. Public switched network

b.Private switched network

c. centrally switched network

**d. non switched network**

44. Problem can be solved in CRM is it necessary to pass same service Mgnt and Operation

a) Required

**b) Not required**

c) Varies

d) May required or not required

45. Protocols of X.25

a) TCP/IP

b) X.21b

c) G-708

**d) PLP, LAPB**

47. Which organization focus on service provider s technical and business requirements

a.ITU-T

b.OMA

**c. TMF – TeleManagement Forum – proivide environment to address service provider’s business n technical requirement.**

48. Deregulation is **Process by which restriction on Business is removed to encourage efficient operation of Market place.**

49. Establishes competitive environment by providing own network and switching

**A.CLEC**

b.LEC

c.IXC

d.ILEC

50. COVAD does not support

a. Value added services

b. Enterprise services

c. DSL services

**d. long distance telephony**

51. Some product from Subex -don’t remember question exactly

a. Netcracker

b.Metasolv

**Revenue Assurance: Incharge**

**SARAS** from Subex Azure solutions

**MoneyMap** from cVidya

**RAID** from WeDoSoft

**Fraud mgmt - Ranger**

1) ARP used for

a)congestion control

b)QoS Assurance

c) **Logical address to mac address mapping**

d)Error handling

4) For ground based antenna which kind of satellite are used

a) Low earth satellite

**b) Geostationary**

c) Molniya

d) High earth satellite

5) High MPEG4 data compression

a) H.278

**b) H.264**

c) H.325

d) None

6) Order status available to

a) External system

b) Customer

c**) Above both**

d) Both external and internal system

7) Architecture and code review of customer self service portal is done to which customer

a) Nokia

b) ACCA

c) Comcast

**d) Vodafone**

11) Maintenance activity under assurance process

**a) Proactive**

b) Reactive

c) Both

d) None

12) Fulfillments includes

a) Realizing request from customer to full fledge service

b) Realizing request from prospect to full fledge service

c) **Realizing request from customer and also prospect to full fledge service**

d) None

14) Which Indian company indigenously produces digital telephone exchange

a) **CDOT (1984)**

b) BSNL

c) Reliance

d) Huges

16) Identify the process that collects rated records on bill pool

a) Mediating

b) Invoicing

**c) Aggregate**

d) None

17) Call waiting tune is at which frequency

a) 367 Hz

b) 70 Hz

c) 67 Hz

**d) 440 Hz**

18) WiFi

a) Used for wireless wide area n/w

**a) Used for wireless local area n/w**

a) Used for wirelline wide area n/w

**a**) Used for wirelline local area n/w

19) VoIP service provider which COVAD acquired

**a) GoBeam**

b) Premier Voice

c) Quantum tune

d) Inphonix

20) CODEC’s used during VOD

a) VC

b) MPEG

**c) MPEG2 &4**

d) None

21) Forum on NGOSS

a) ITU-T

b) 3GPP

c) OMA

**d) TMF**

22) LPVA subject to same distance limitation of DSL

a) True

**b) False**

24) Convergence means

a) Voice and data

b) VOD & TV

c) Internet, ATM & frame relay

**d) All the above**

26) RBOC’s relate to

**a) LEC**

b) ILEC

c) CLEC

d) IXC

27) Communication act 2003 result into

**1) OfCOm creation**

2) Regulation Communication infrastructure

3) Legal reorganization of communication

4) Privatization of telecom sector

Ans: find which of above choices correct.

28) If ur browsing port is 80 and 443 then which of following priority

a) High

b) Light

**c) Medium**

d) Premium

29. Campaign management fall under what?

a. selling

b. **selling and marketing (Marketing Fulfillment Response)**

c.

d. none

30. Widest frequency is provided by what?

a. **CDMA**

b. FDMA

c. PDMA

d. TDMA

----------------------------------------------------\* part \*---------------------------------------------------

1. Selling broadband services to new mobile subscriber to ensure customer’s reliance on company is increased is called

* Forward call
* Cross call
* Up call
* Expanded call

4. Call agent **does not** perform

signalling

call routing

billing

**creation end-to-end path**  **ans: (end to end path) because end to end path is provided by gateway**

1. identify provider VoD,pay-per view

Internet service provider

Network

**Cable**

Both cable & Internet **ans : cable**

7 . layer 3 protocol

**X.25**

Frame relay

SCTP

TCP **ans: X.25**

1. Which DSL actuate distance limitations (0.75 mile) can overcome by fiber to cover remaing length to CO?

ADSL

VDSL

RDSL

SDSL **ANS: SDSL(NOT SURE)**

1. which DSL best suited for HDTV,Vod and Internet

IDSL

SDSL

VDSL

ADSL **ans: Adsl**

1. name the billing solution that Ranger from Subex system address

Fraud management

Mediation

Convergent billing

Rating **ANS: fraud management**

59. When was the telecommunication act passed? Ans... 1996

60. Portal infranet billing is associated with which company? Ans **Covad**

61. Find My teen is a?

a. **Proof of concept**

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c. both

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What is channel signaling? Provides the ability to remotely modify multiplexes

Business needs of MPDG solution: sales for force automation, real time yard mgt, warehouse automation, port mgt

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MVNO (Mobile Virtual Network Operator): that does not own its own spectrum and network infrastructure.

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CTS services to COVAD (Billing, CRM (Development and maintenance), Order Management).

 CTS services to ACCA: Order Mgt, Covering OSS areas (Order entry, order mgt, Field Workforce Mgt, Trouble Ticket)

Broadband Operators (Comcast, COX, Covad, Akka Network, DishnetDSL).

    Wireless Operators (Alltel, Vodafone, Orange)

    Wireline Operators (AT&T, Earthlink, MCI, Equant, SBC, CoreComm, ChoiceOne, BellSouth)

    S/W Vendors       (Telution, Hikesiya, Comsys, Quantum Shift, Lucent Technologies)

    Equipment Vendors (Andrew, Cisco Systems, Avaya, Digex, Sony, Nokia, 3 com, Intel)

    Whereas KPN, VERIZON, FT come under wireless as well as wireline operators.

    ICON (Implementing Contract based service in NGN).

    AVIS (Accelerating VoIP and IMS based Services)

  Two types of video conferencing systems: Dedicated Systems & Desktop Systems

 VoIP (Voice over Internet Protocol) supports computer to telephone calls, telephone to computer calls and telephone to telephone calls. The main VoIP protocols are Simple Gateway Control Protocol (SGCP), Media Gateway Control Protocol (MGCP), and Session Initiation Protocol (SIP).

**RS232, 10Base-T are examples for Physical Layer.**

**Ethernet 802.3 is example for Data Link Layer**

**IP, X.25, ATM are examples for Network Layer.**

**TCP, UDP, SCTP are examples for Transport Layer.**

**Telnet, Http, ftp and so on are examples for Application layer.**

The most important use of the broadcast info is to set up channels for one to one communication between the mobile transceiver and the base station. This is called as "Paging".

First optical fiber system for local junction commissioned in **Pune**.

37. Which of the following decouples network to billing systems

a. **Mediation gateway**

40. Process manage all settlement and billing for the enterprise , including bill validation, verification, authorizing of payment is

a. **S/P settlements and billing management**

43. Telephone company that provides connections between local exchanges in different geographic areas is

a. **IXC** b. ILEC

44. That provides access to a hosting service is

a. **ISP** b. IAS b. both d. none\

a. ISP b. IAP b. **both** d. none

45. Telecom regulatory bodies tries to create

a. **competitive environment**

46. Inherent benefit of deregulation is

a. **we have wide range of services**

47. Mostly used 802.11 standard is

a. **802.11 b and 802.11g**

48. 802.11 based protocols are

a. **RTP/RTCP**

49. IVR technologies use

a. **SALT and VoiceXML**

51. The number of employees in Telecom wireline industry are **more** and **decreasing** now.

52. Protocols for VOD is – **RTSP (real time streaming protocol) primary prototcl IGMP (Internet Group Management Protol)**

53. Which one of the following is competitor for ISD – **VoIP**

54. Packet cable and open cable are standards for **Cable broadband standards**

55. Final destination for E911 call is (public safety answering point)

a. **PSAP** b. call center

56. Campaigning is a part of which process

a. **Marketing fulfillment response**

b. Customer Interface management

57. Which of the following will not be impacted when a network outage occurs

a. **provisioning** b. Network inventory Mgmt c. CRM d Network Elem Mgmt

58. Zero touch provisioning is implemented for

a. **ACCA Networks**

59. EDS uses which protocol

a. **MLPS**

60. CTS implemented for EDS are a. **MLS** b. **MRS**

61. **If thereis a problem in network resource what r the processes that are going to effect.**

**a) Service problem handling**

**b) Network problem handling**

**c) Both**

**----------------\*--------------------------------\* Part 6\*-----------------------------\*-----------------------**

1. Product Ranger is a \_\_\_\_\_\_\_\_\_\_\_ (fraud management systems)
2. What is channel Signaling – Provides the ability to remotely modify multiplexes….
3. High speed internet has resulted in \_\_\_\_\_\_\_\_\_ (increase) in count and \_\_\_\_\_\_\_\_\_ (increase) in rate of adoption of technologies
4. X.25 establishes \_\_\_\_\_\_\_\_ (duplex) sessions
5. SMLC is implemented in Nokia account (serving mobile location center)
6. Which is emerging as major alternative to ISD? (VOIP)
7. Which OSI Layer checks the availability of communication partner? Application layer
8. Which etom process ensures end-to-end testing of service? Fulfillment Service Management and Operations
9. **What are the advantages of cable transmission over DSL?**
10. What is used in Cable TV (**FDM**/ TDM/ WDM / DWDM)
11. What is used for speech recognition in web pages (SALT)
12. In fulfillment, Lead to Cash is termed as \_\_\_\_\_\_\_\_\_\_\_\_(order to bill)
13. The order status is made available to \_\_\_\_\_\_\_\_\_\_\_\_\_\_(external systems or customer)
14. variable delay is \_\_\_\_\_\_\_\_\_\_ (jitter)
15. When there is high load in the network, which of the following services will not be affected (audio / video / email) (Email)
16. NGOSS is developed / maintained by \_\_\_\_\_\_\_\_TMF
17. What is media convergence? It occurs when multiple products come together to form a single product with the advantages of all of them.
18. wiretapping can be done in only wireline (true / **false**) and the law governing this is \_\_\_\_\_\_\_\_ (CALEA)
19. Which helped in providing services like VOD and pay per view? (STB)
20. What is FMT? Find My Teen
21. Which VOIP provided did Covad acquire (GoBeam)
22. Which inventory system is used in Covad (Netcracker)
23. Deregulation \_\_\_\_\_\_\_\_\_\_\_ (increased) competition

**############## ADITIONAL ###########**

18. The research work on packet cable and open cable provides what

a. Standards for cable network (cable broadband standards)

b. Current research on packetcable and opencable standards by CableLabs would help to improve the performance of multicast traffic thereby improving the data throughput.

19. RBOC is

**A LEC**

b.IXC

c.CLEC

d.ILEC

27. What is FMT project? **Find My Teen**

28. What is OLT? **Optical Line Terminal / Optical Network Units** (ONU)

29. What is the freq range of remote control? **0.3 Hz- 300 GHz.**

30. Preemption of FCC happened in

a. 1985 b 1986 c.1995 d.**1996**

31. Mobile convergence leads to

**a. integration of mobile and fixed line telephone services**

b. integration of mobile and fixed line telephone bills

32. What system is used in call centres?

**a. IVR**

b. Both IVR and ACD

c.ACD

33. Which of the following is false about IP?

**A. IP is a connectionless protocol - True**

**b. IP provides unreliable service - True**

don’t remember c and d options

36. Distinguish the etom process that stores the cause for service problem ,service problem restoration and activation,….

**a. Service problem management**

b. Service Quality management

37. Tracking leads comes under

a. Market fulfillment response

**b. Selling**

c. Order handling

38. Testing the service end to end

**a. Service Management and Operations (SM & O)**

39. Remote surgery requires

a) Soft QoS

b) End to end QoS

**c) Hard QoS**

d) none

**National Database**

40. NPAC **(National Portablity Administration Center)** data containing correct routing information in

a) AIMNET

**b) Neustar**

c) Farthorn

d) FCC

41. eTom process that is involved in testing the end to end service during fulfillment process

**a)Fulfillment Service Mgmt and Operation(SM&O)**

b) Resource provisioning

c**)** Service confin and activation

d) Problem handling

42. Type of virtual ckt for sporadic data transfer

a) Permanent virtual ckt

b) Temporary VC

c) Sporadic VC

**d) Switched VC**

43. Network in which each telephone is connected to other telephone

a. Public switched network

b.Private switched network

c. centrally switched network

**d. non switched network**

44. Problem can be solved in CRM is it necessary to pass same service Mgnt and Operation

a) Required

**b) Not required**

c) Varies

d) May required or not required

45. Protocols of X.25

a) TCP/IP

b) X.21b

c) G-708

**d) PLP, LAPB**

47. Which organization focus on service provider s technical and business requirements

a.ITU-T

b.OMA

**c. TMF – TeleManagement Forum – proivide environment to address service provider’s business n technical requirement.**

48. Deregulation is **Process by which restriction on Business is removed to encourage efficient operation of Market place.**

49. Establishes competitive environment by providing own network and switching

**A.CLEC**

b.LEC

c.IXC

d.ILEC

50. COVAD does not support

a. Value added services

b. Enterprise services

c. DSL services

**d. long distance telephony**

51. Some product from Subex -don’t remember question exactly

a. Netcracker

b.Metasolv

**Revenue Assurance: Incharge**

**SARAS** from Subex Azure solutions

**MoneyMap** from cVidya

**RAID** from WeDoSoft

**Fraud mgmt - Ranger**

52. Don’t remember the question –regarding VoIP

a. VoIP over the public network

b. VoIP over the private network

c. all

1) ARP used for

a)congestion control

b)QoS Assurance

c) **Logical address to mac address mapping**

d)Error handling

3) NPAC data containing correct routing information in (**National Portability Administration Center)**

a) AIMNET

**b) Neustar**

c) Farthorn

d) FCC

4) For ground based antenna which kind of satellite are used

a) Low earth satellite

**b) Geostationary**

c) Molniya

d) High earth satellite

5) High MPEG4 data compression

a) H.278

**b) H.264**

c) H.325

d) None

6) Order status available to

a) External system

b) Customer

c**) Above both**

d) Both external and internal system

7) Architecture and code review of customer self service portal is done to which customer

a) Nokia

b) ACCA

c) Comcast

**d) Vodafone**

9) Type of virtual ckt for sporadic data

a) Permanent virtual ckt

b) Temporary VC

c) Sporadic VC

**d) Switched VC**

10) VAS such as VOD and Pay-per view provides with help of

a) Triple play

b) DOCSIS

**c) STB**

d) cable cabs

11) Maintenance activity under assurance process

**a) Proactive**

b) Reactive

c) Both

d) None

12) Fulfillments includes

a) Realizing request from customer to full fledge service

b) Realizing request from prospect to full fledge service

c) **Realizing request from customer and also prospect to full fledge service**

d) None

13) Problem can be solved in CRM is it necessary to pass same service Mgnt and Operation

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**b) Not required**

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14) Which Indian company indigenously produces digital telephone exchange

a) **CDOT (1984)**

b) BSNL

c) Reliance

d) Huges

16) Identify the process that collects rated records on bill pool

a) Mediating

b) Invoicing

**c) Aggregate**

d) None

17) Call waiting tune is at which frequency

a) 367 Hz

b) 70 Hz

c) 67 Hz

**d) 440 Hz**

18) WiFi

a) Used for wireless wide area n/w

**a) Used for wireless local area n/w**

a) Used for wirelline wide area n/w

**a**) Used for wirelline local area n/w

19) VoIP service provider which COVAD acquired

**a) GoBeam**

b) Premier Voice

c) Quantum tune

d) Inphonix

20) CODEC’s used during VOD

a) VC

b) MPEG

**c) MPEG2 &4**

d) None

21) Forum on NGOSS

a) ITU-T

b) 3GPP

c) OMA

**d) TMF**

22) LPVA subject to same distance limitation of DSL

a) True

**b) False**

24) Convergence means

a) Voice and data

b) VOD & TV

c) Internet, ATM & frame relay

**d) All the above**

26) RBOC’s relate to

**a) LEC**

b) ILEC

c) CLEC

d) IXC

27) Communication act 2003 result into

**1) OfCOm creation**

2) Regulation Communication infrastructure

3) Legal reorganization of communication

4) Privatization of telecom sector

Ans: find which of above choices correct.

28) If ur browsing port is 80 and 443 then which of following priority

a) High

b) Light

**c) Medium**

d) Premium

29. Campaign management fall under what?

a. selling

b. **selling and marketing (Marketing Fulfillment Response)**

c.

d. none

30. Widest frequency is provided by what?

a. **CDMA**

b. FDMA

c. PDMA

d. TDMA

----------------------------------------------------\* part \*---------------------------------------------------

1. Selling broadband services to new mobile subscriber to ensure customer’s reliance on company is increased is called

* Forward call
* Cross call
* Up call
* Expanded call

4. Call agent **does not** perform

signalling

call routing

billing

**creation end-to-end path**  **ans: (end to end path) because end to end path is provided by gateway**

1. identify provider VoD,pay-per view

Internet service provider

Network

**Cable**

Both cable & Internet **ans : cable**

7 . layer 3 protocol

**X.25**

Frame relay

SCTP

TCP **ans: X.25**

1. The preemption by FCC in the US happened in which year

1995

**1996**

1985

1986 **ans: 1996**

1. HTTP is
   * + Client-server
     + Stateless request –response
     + Uses world wide web
     + All the above **ans: allthe above**
2. Which DSL actuate distance limitations (0.75 mile) can overcome by fiber to cover remaing length to CO?

ADSL

VDSL

RDSL

SDSL **ANS: SDSL(NOT SURE)**

1. which DSL best suited for HDTV,Vod and Internet

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First optical fiber system for local junction commissioned in **Pune**.

1. Samuel Morse invented the Morse Code (which is out of sight communication).

2. In 1844 Samuel Finely Breese Morse sent the first message over telegraph line btw Baltimore and Washington in U.S using a signal code of his own invention. The msg read "What hath God wrought?”

3. Before Morse Wheatstone had developed a system using the deflection of the needle which was used for railway signaling.

4. Wheatstone invents Automatic Morse Transmitter in 1900.

5. Teleprinter – 1950

6. In the late 1980's the idea of using facsimile (fax) transmission introduced.

7. The basic principle of fax is: The reader of some kind converts the optical information on a document into an electrical signal which is then transmitted down a telephone line to a receiver at the other end. The signal is essentially the same as that used to carry speech between conventional telephones. At the receiving end it is used to reproduce an exact copy of the original document by any of a number of copying technique.

Some fax machines are combined with a normal telephone, ringing the telephone if it is established that is not another fax machine trying to make contact and commencing fax operation if it is.

8. Alexander Graham Bell (March 3 1847 - August 2 1922) He has invented Telephone in 1876. But he has done research on Photophone, Hydrofoil Boat, Metal Detector, Ailerons and Box Kites.

9. A pioneer in optical communication is called photophone.

10. The first telephone exchange opened in New Haven, Connecticut in Jan-1878.

11. Thomas Edison also invented Carbon telephone transmitter

12. The main requirements in manual exchange are: A way for callers to alert the operator, a way for operators to alert the call recipient, a simple, practical method for connection pairs of lines.

13. The main disadvantage in manual exchange is: it requires more patch cords and multiple switch boards and Long distance.

14. Alan Strowger, a Funeral Parlor Owner is called as the "Father of Automatic Exchange”. It contains mainly:

A Cylinder - made from a collar box.

A spindle - made from a pencil.

A perpendicular arm - made from dressmaking pins.

15. The first automatic exchange opened at La Porte, Indiana in 1892.

16. In 1897 a Strowger exchange using two stage switching opened in Augusta, Georgia.

17. Electronic control system, developed after the Second World War.

18. Part of telephone transmission is now carried out by microwave links and optical fibers.

19. Betulander Exchange (Small Grids, Reed relays, Electronic control system)

20. Crossbar switch (Electromagnet based)

21. Wiring (Buried, Overlay).

22. Switching Equipment (Electricity, Call Metering (Rent - Fixed part, Call charges - Variable part)).

23. To operate the exchanges electromagnets and relays the current must be converted from AC to DC.

24. Computerized exchanges (Digital switching, Calls-Mix and match, Computer control centre, Queuing and retrieval).

25. In computer exchanges, software carries out the tasks once performed physically by electro mechanical devices. Such exchanges are sometimes called Stored Program Control exchange.

26. The computer exch works like time division multiplex using pulse code modulation instead of transmitting a continuously varying signal, like traditional system, the new meth samples the conversation (or both transmitted sound) 8000 p/s.

27. Btw 1877 and 1878 Alexander Graham Bell, Thomas Watson, Gardiner Green Hubbard (Bell's future father-in-law) and their bankers created a company called Bell Telephony Company

In 1879 New England Telephone comp and Telegraph comp merged with Bell Telephony Company to create - National Bell Telephony Company. Later on it became American Bell Telephony Company in 1880

American Telephony Company bought the 'Western Electric Manufacturing Company' in 1881 and renamed as 'Western electric comp'

**American Telegraph and Telephone Company** incorporated in 1885 to expand the long line connection in U.S

In 1889 AT&T acquired all assets of Bell companies (American Bell Telephony and Western Electric Comp).

In 1925 AT&T and Western Electric found Bell labs from their combined research and engineering resource.

**28. In 1980 Anti trust case against AT&T results:**

**- AT&T Monopoly ended**

**- RBOC created - Local phone service only.**

**- AT&T - Long distance telephony and equipment manufacturing only.**

29. In 1984 seven regional companies are created when it was broken up.

**30. The seven baby bells are Ameritech, Bell Atlantic, Bell South Corp, NYMEX, Pacific Telesis Group, Southwestern Bell Corp, and US West. Thus RBOC (Regional Bell Operating Companies) formed.**

31**. FCC (Federal Communications Commissions):**

- Independent U.S government agency.

- Regulates all non-federal use of radio spectrum, interstate telecommunication, and international communication

- Conducts merge review

- Writes rules of competition for all communication markets.

- Deregulates where markets have become competitive.

32. In 1879 First telephone exchange opened in London. In 1896 Post office took over the private sector trunk service.

Other prominent players in UK marker are: T-Mobile, Vodafone, O2, and Orange

33. The commission Act 2003: Created Ofcom (Office of Communications), Regulation of communication infrastructure, Legal recognition of Community Radio, Lifter restrictions on cross media ownership.

34. Telecom Industry in INDIA:

In 1850 first electric telegraph line was started btw Kolkata and Diamond Harbor.

In 1853 it was started in Bangalore and Chennai in south places. (Some places in Mumbai, Agra, Ootkamandu etc)

A separate dept opened in 1854 when telegraph facilities were opened to public.

In 1880 two telephony companies (The oriental telephony company and Anglo Indian Telephone Company) approached the Govt of India to establish telephone exchange in India.

1882 Jan 28 is the Red letter day in history of telephone India. Bcoz E. Baring (Member of Governor general) has declared to open telephone exchange in Kolkata, Chennai and Mumbai.

In 1907 first cenral battery working of telephones introduced in Kanpur.

Btw 1913 and 1914 first automatic exchange was installed in Simla.

On July 23 1927 Radio telegraph started btw UK and India.

1960 First STD route commissioned btw Kanpur and Lucknow.

1979 First optical fiber system for local junction commissioned in Pune.

1984 C-DOT was established fir indigenous production and development of digital exchange.

1985 Mobile telephone service started in Delhi.

1975 DoT (Dept of Telecom) separated from P&T

1985 MTNL (Mahanagar Telephone Nigam Ltd) carved out of DoT to run the telecom services of Delhi and Mumbai.

1990 Telecom sector opened up for private investments.

2000 BSNL (Bharat Sanchar Nigam Ltd) is formed.

1984 Private manufacturing of CPEs begun

1991 New economic policy delicensing manufacture of telecom equipment

1992 Mobile Telephony opened to private sectors.

1994 National Telecom policy

**1997 TRAI (Telecom Regulatory Authority of India) established.**

1998 Internet services opened up to private layers. Monopoly of VSNL ended. Satyam Infoway is the first private ISP.

35. Binary signals are more widely used in data communication than other types of digital signals bcoz of their greater immunity in noise.

36. Parameters of signals (Amplitude, Frequency, Wavelength and phase).

37. The o/p from microphone or video camera is an analog signal. Where as the o/p of the computer is digital signal.

38. Sampling - Conversion of analog to discrete signal Quantization - Conversion of digital to discrete.

39. The aim of modulation is to transfer the lowpass info signal (Baseband signal) over bandpass (Carrier wave) channel.

40. Analog modulation: An analog low pass signal is transferred over an analog band pass channel (Amplitude Modulation and Frequency Modulation used in Radio transmission).

Digital Modulation has Phase Shift Key (PSK), Frequency Shift Key (FSK) and Amplitude Shift Key (ASK).

41. Act of returning the modulated signal back to its base band form is called Demodulation.

42. Modem (A device which will be acted for both modulation and de-modulation).

- Voice band Modem - Used for dial-up connections and converts digital to analog then back to digital

- Cable Modem - Primarily used to deliver broadband internet access

- ADSL Modem - Used to connect one more computers to telephone in order to implement the ADSL service.

43. Data Switching (Circuit Switching and Packet Switching).

44. DTE - Data Terminal Equipment.

45. DTE is used to converts user info into signals for transmission or reconverts received signals to user info. DTE device communicates with Data circuit terminating Equipment (DCE). DTE/DCE classification was introduced by IBM

46. Multiplexing refers to that enable the sharing of the usable electro-magnetic spectrum of a telecommunication channel among multiple users for the transfer of individual streams.

**47. Multiple Accesses: FDMA (Frequency Division Multiple Access), TDMA (Time Division Multiple Access), CDMA (Code Division Multiple Access)**

48. Guided Media (Twisted pair, Co-axial cable, Fiber optic)

Unguided Media (Radio Transmission, Microwave transmission, Lightwave transmission)

49. Analog Switching Devices (Cross-bar, Electronic Switching System, Stored program Control).

50. Signaling is the exchange of info between involved points in the n/w that sets up, controls, and terminates each phone call.

Types of signaling (In-band Signaling (loop signaling), Out of band signaling (common-channel signaling))

51. Two types of internet connectivity (Dial-up, DSL).

Client uses a modem to connect computer to telephone line.

Dial into an ISP (Internet Service Provider) node to establish a link. The link is then routed to internet.

DSL (Digital Subscriber Link): It is a **broadband access technology**.

Transmits bandwidths several times higher than conventional analog modems

52. Fiber to the Premises (FTTP) or Fiber to the Home (FTTH) is a broadband telecommunications system based on fiber optic cables and associated optical electronics.

53. PSTN (**Public Switched Telephony Network**) guarantees voice communication with QoS (Quality of Service).

54. Types of VPN (virtual Private Network)

- Secure VPN - Cryptographic Tunneling

- Trusted VPN - Rely on Single Service Provider.

55. The most important use of the broadcast info is to set up channels for one to one communication between the mobile transceiver and the base station. This is called as "Paging".

56. LED (Light Emitting Diodes) types: PDH (Plesiochronous Digital Hierarchy) & SDH (Synchronous Digital Hierarchy)

58. VoIP (Voice over Internet Protocol) supports computer to telephone calls, telephone to computer calls and telephone to telephone calls. The main VoIP protocols are Simple Gateway Control Protocol (SGCP), Media Gateway Control Protocol (MGCP), and Session Initiation Protocol (SIP).

59. Two types of video conferencing systems: Dedicated Systems & Desktop Systems

60. **PBX** (Private Branch Exchange) is located in the customer premises, while Centrex is located at CO (Central Office).

61. ADSL2+ is the most famous DSL flavor.

62. ICON (Implementing Contract based service in NGN).

AVIS (Accelerating VoIP and IMS based Services)

FMT (Find My Teen)

Mobile Platform Development Group (MPDG) is focuses on developing applns on mobile and PDA devices for the clients.

63. Validate the ability to find and map a cell phone's location using Location Based Service (LBS) and provide subsequent telephony functions(e.g. click to dial) over an IP Multimedia Subsystems(IMS) platform over IPTV,PC and wireless channels.

64. ParlayX is a set of telecommunications WebServices. Parlay X is designed to enable s/w developers to use capabilities from telecom N/W.

65. Broadband Operators (Comcast, COX, Covad, Akka Network, DishnetDSL).

Wireless Operators (Alltel, Vodafone, Orange)

Wireline Operators (AT&T, Earthlink, MCI, Equant, SBC, CoreComm, ChoiceOne, BellSouth)

S/W Vendors (Telution, Hikesiya, Comsys, Quantum Shift, Lucent Technologies)

Equipment Vendors (Andrew, Cisco Systems, Avaya, Digex, Sony, Nokia, 3 com, Intel)

Whereas KPN, VERIZON, FT come under wireless as well as wireline operators.

66. CTS in involved in developing Managed Communication Service Platforms.

67. CTS services to COVAD (Billing, CRM (Development and maintenance), Order Management).

68. CTS services to ACCA: Order Mgt, Covering OSS areas (Order entry, order mgt, Field Workforce Mgt, Trouble Ticket)

69. CTS services to Nokia: SMLC

70. Incumbent Local Exchange Carriers (ILEC) emerged as an effect of deregulation. It providing services to local carriers reduced tariffs for local and long distance calls.

71. Triple Play is an IP service involving the three following services (Internet, Television and phone Voice over IP (VoIP)).

72. Quadruple play is a set of services that offer the same capability as triple play but also enable mobility for the user.

73. IPTV - Video over IP

74. Convergence is the consolidation of all communications-voice, data (Internet, ATM, Frame Relay, and so on), .and video (broadcast TV and video on demand) onto a single network infrastructure.

75. Enhanced911 (E911) service is a North American telephone Network (NANP) feature of 911 emergency-calling systems that automatically associates a physical address with the calling party's telephone number.

76. The final destination of E911 call is a Public Safety Answering Point (PSAP).

77. VOIP enhanced 911 is a mechanism for location tracking does not apply to IP based n/w hence a mandate to use E911 for IP based networks was agreed upon.

78. Tele-Management Forum is responsible for NGOSS.

79. CNID (Caller Number Identification) is a telephony intelligent n/w service that transmits the caller telephone's number and the caller's name to the called party's telephone equipment during the ringing signal.

CNID is transmitted digitally using Bell 202 modulation btw first and second ring.

80. CNID is originated with the Automatic Number Identification (ANI).

81. SDMF (Single Data Message Format): Number + Date and time of call

MDMF (Multiple Data Message Format): Number + Name + Data and Time of call

82. In telephony IVR (Interactive Voice Response) is a computerized system that allows a person, typically a telephone caller, to select an option from a voice menu and otherwise interface with a computer system.

83. Speech Application Language Tags (SALT) is an XML based markup language that is used in HTML and XHTML pages to add voice recognition capabilities to web based applications.

84. LNP (Local Number Portability) is the ability to take an existing fixed-line telephone number assigned by Local Exchange Carrier (LEC) and reassign it to another LEC, while referring to the same physical connection.

85. FMNP (Full Mobile Number Portability) is the LNP equivalent for mobile phones.

86. Providers use SS7 to route calls throughout the US/Canada Network.

87. Set Top Box (STB) describes a device that connects to a TV and some external source of signal, and turns the signal into content then displayed on the screen. The signal source might be Ethernet cable (triple Play), a satellite dish, a coaxial cable, a telephone line or even an ordinary VHF or UHF antenna.

Types of STB: Analog, Digital

88. IPTV (Internet Protocol Television) describes a system where a digital television service is delivered using the Internet Protocol over a network infrastructure.

89. ILEC - Incumbent Local Exchange Carrier CLEC - Competitive Local Exchange Carrier

IXC - Inter-exchange Carrier LLU - Local Loop Unbundling

90. PAN (Personal Area Network) which is a computer network used for communication among computer devices.

91. LEC (Local Exchange Carrier) - Provides Local Service.

ILEC (Incumbent Local Exchange Carrier) - Provided local service when the Telecommunications act of 1996.

CLEC (Competitive Local Exchange Carrier) - competes with local established local telephone business by providing its own network and switching.

IXC (Interexchange Carrier) - For long distance.

92. MVNO (Mobile Virtual Network Operator): that does not own its own spectrum and network infrastructure.

93. Deregulation - Process by which restrictions on business are removed to encourage the efficient operation of the marketplace and heightens competitiveness.

94. Standard Bodies and Associations:

OMA - Open Mobile Alliance

3GPP - Third Generation Partnership Project

ETSI - European Telecommunication Standard Institute.

OBF - Ordering and Billing Forum

95. Telecom standards are:

X.25, 802.11, QoS

X.25 devices (Data Terminal Equipment, Data Circuit Terminating Equipment, Packet switching exchange)

PAD-Packet Assembler/Disassembler: It is a device commonly found in X.25 networks.

X.25 Virtual Circuits: Switched Virtual Circuits (SVC) are temporarily connections used for sporadic data transfers.

Permanent Virtual Circuits (PVC) are permanent connections used for frequent and consistent data transfer.

96. X.25 protocols suite: Mapping, PLP, LAPB, X.21bis

97. QoS (Quality of Service) it means to prioritize network traffic, to help ensure that the most important data gets through the network as quickly as possible.

98. Remote Surgery comes under the **Hard QoS** (Quality of Service)

99. Basic functionalities of Business Support System (BSS) include Order Mgmt, Customer Care, and Billing.

100. NOSS (Network Ops Support Syst) includes Perf & Usage, Inventory Mgt, Provisioning, Fault Mgt, & Element Mgt Syst.

101. Level0 in e-Tom includes SIP (Strategy, Infrastructure and Product) as vertical process.

102. OSR (Operations Support and Readiness)

103. The high level fulfillment process involved is that of pre-order, order placement, solution design, configuration and activation and order closure.

104. Customer call centers will handle by "Problem Handling". Most of the telco's have automated IVR system to help with this process of broadcasting information to users.

105. CDR (Call Detail Record) must have the originating number, Terminating number, start time and duration of call. The CDR is stored until it is rated.

106. Charging: process where subscriber accounting info is retrieved for billing purposes, to write a bill according to specific tariff & criteria. CDR processing module retrieves the data records from mediation and network devices for billing purposes.

107. In circuit switched networks charging info is generated by n/w elements (MSCs, PSTN switches) based on subscriber id.

108. Mediation system is sits in btw the n/w elements/infrastructure and the BSS.

The goal of the Mediation system is to capture all usage info reqd by the BSS system, and export it within the temporal requirement. Thus, the mediation system must determine the devices at the service element layer and interface with that infrastructure to extract the relevant usage info.

Second goal is to pass provisioning info from BSS to the n/w elements.

109. Collecting the rated records in the bill pool is called aggregation.

110. Some carriers automatically re-route all calls made by a delinquent customer to a collections operator. This is called "Hot Lining". It is typically used when telephone is first sold or activated to allow activation after the customer has provided the info to register for service or when the customer has not paid their bill.

1. Which of the following advantages are provided by VOIP & not by LPVA (line powered voice access)? cheaper, no switched network
2. Parlay X is a set of telecommunication web services and it is used in IMS appl. to Leverage the location Capability of Mobile Network.
3. Satellite used for broadcasting cricket in UK with a time delay: Molniya satellites
4. Cryptographic tunneling is used in Secure VPNs
5. Which service will be affected if there is a power cut in customer premises VOIP will disrupted; VOIP will not be disrupted; WiMax will be disrupted; **none of the above**

167. Which process describe retrieved of subscriber accounting in for billing purpose? Rating, compiling, charging, **none**

168. Functions of call agent: billing, call routing, signaling and call services

169. Which of following needn’t be implemented in routes? phy

171. Local monopoly is thwarted using? WWL

192. IMS: IP Multimedia Service

198. Internet is a connection oriented protocol

199. At d outset identifying customer’s propensity to pay the bill? Credit rating

202. Name the mobile company which doesn’t have its own network? T-Mobile, Vodafone?

208. Wimax technology: standards-based technology enabling the delivery of last mile wireless broadband access as an alternative to cable and DSL.

209. Serving Mobile Location Center: Nokia

218. In contrast to PBX, the switching equipment will be located in Telecom Company’s central office: Centrex

230. Billing is invoked after what process in CRM? Service configuration and Activation

231. Resolving customers’ problems comes under Problem handling of CRM

232. Money Map from cVidya comes under Revenue Assurance

233. Formatting invoice comes under create and delivery bill

234. Which of the following decouples network to billing systems? Mediation gateway

235. Bill format with banner ads included is called rendering

236. Collecting of information on products to take decisions in future is information management

237. Process manage all settlmt & billing for enterprise, incl bill validat, verif, authorizing of paymt S/P settlemt & billing mgt

238. Business needs of MPDG solution: sales for force automation, real time yard mgt, warehouse automation, port mgt

239. A telephone company that provides connections between local exchanges in different geographic areas is IXC

240. That provides access to a hosting service is ISP and IAP

241. Telecom regulatory bodies try to create a competitive environment

242. Inherent benefit of deregulation is increase of competition

243. The mostly used 802.11 standard are 802.11 b and 802.11g

244. 802.11 based protocols are RTP/RTCP

245. IVR technologies use SALT and VoiceXML

246. The number of employees in Telecom wireline industry is more and decreasing now.

247. Protocols for VOD is IPTV

248. Which one of the following is competitor for ISD? VoIP

249. Packet cable and open cable are standards for Cable broadband standards

250. Final destination for E911 call is PSAP

251. Campaigning is a part of which process? Marketing fulfillment response

252. Which of the following will not be impacted when a network outage occur? Provisioning

253. Zero touch provisioning is implemented for **ACCA Networks**

254. CTS implemented for EDS are MLS and MRS

255. Forum for collaborative envt to address service provider's most critical business & technical reqt: TMF (Tele Mgt Forum)

1. Product Ranger is a fraud management systems
2. What is channel signaling? Provides the ability to remotely modify multiplexes
3. High speed internet has resulted in increase in count and increase in rate of adoption of technologies
4. X.25 establishes duplex sessions
5. SMLC is implemented in Nokia account
6. Which OSI Layer checks the availability of communication partner?
7. Which e-TOM process ensures end-to-end testing of service? Fulfillment Service Management and Operations
8. What are the advantages of cable transmission over DSL: VOD, HD TV, pay-per-view, interactive TV?
9. What is used for speech recognition in web pages? SALT
10. In fulfillment, Lead to Cash is termed as order to bill
11. The order status is made available to external systems or customer
12. Variable delay is jitter
13. When there is high load in the network, which of the following services will not be affected? Email
14. Wiretapping can be done in only wireline: false and the law governing this is CALEA
15. Which helped in providing services like VOD and pay per view? STB
16. What is FMT? Find my teen
17. Which VOIP provided did Covad acquire? GoBeam
18. **Which inventory system is used in Covad? Netcracker**
19. What is the range of frequencies that your remote control can operate? 30 KHz -300 GHz
20. Which of the following is done by call center? Problem handling.
21. Which of the following is provided by traditional telephone systems? Unicast
22. What is the protocol used in PSTN networks? SSN
23. Which of the following comes under CRM fulfilling? Resource activation.
24. Tracking & managing of customer account record exchange is done by ETSI (European Telecom Standards Institute)
25. Frame relay, X.25, ATM come under WAN

281. New provider competing with well established telephone provider? CLEC (Competitive Local Exchange Carrier)

282. In which year FCC enacted its policies? 1996.

283. Which of the following provides carrier sensing? CDMA/CS

284. Remote surgey comes under **hard Qos**

285. Call centers use which of following technologies to handle their customers? IVR & ACD

286. What is the switch used to connect between different exchanges over different locations?IXE

287. In call waiting service, the signal beeps with a frequency of440 Hz

288. A database called NPAC for local number portability is provided by Neustar

289. Total revenue generated from voice based services is 80%

290. Mediation is done by which of the following? Compel-MDS/SAS

291. HTTP is a part of Application layer

292. What is the type of communication that only one communicates at a time? Half duplex

293. Which of the following the call agent cannot perform? To create end to end path in the call

294. What is the frequency that is used by old/traditional telephone systems? 3.4 kHz

295. OLT in passive optical network will do the following: **houses laser transmitters dedicated to each laser**.

296. Which of the following is not provided by Gate keepers? Call set up & release

297. What is the protocol used for codec/MPEG4 to achieve very high data compression? H.264

298. What is the protocol that is used in IPTV? RTSP

299. The reason for India decreasing ISD call rates: dot com burst

300. What is WiFi? A standard for Wireless lan, wireline lan, wireless wan

301. What is required for LAN? Ethernet, TCP/IP

* 1. New product development takes place in the horizontal of eTOM
  2. Disadvantages of DSL? Work better when close to office, connection faster for receiv than send, not avail evwhere
  3. Who develops standards for mobile gaming etc? Open Mobile Alliance
  4. Telephone was invented in 1876.
  5. ARP is used in Congestion control and Error Control

307. What is the extra service provided in Quadruple play than Triple play? Wireless

308. Which of the following clients providing VoIP services? AT&T, ACCA, and CoVad

309. Order Management includes inventory management

310. If you go some place, there is no habitual communication. What type of phone you will use for communication? Satellite

311. Assurance Process grouping is responsible for the execution of proactive and reactive activities.

312. What is the responsible for critical industry documents for exchange messaging, access-service ordering? OBF

313. Television broadcasting in Serbia made possible by using which type of satellite? Monlyia

314. Gateways are not responsible which of the following actions: call routing, signaling and billing

315. Which of the following techniques allows different frequency ranges for a single base station? FDMA

316. Triple play service is Internet, TV and Phone (VOIP)

318. Which account in cognizant takes care of Managed Communication Services platform – EDS

319. Datagram-> it’s a self-conntained packet,independent of other packets,tat contains information sufficient for routing from the originating data to the destination widout relying on prior xchanges b/w the equip n the n/w

320. Fullform of IMS is - IP Multimedia SubSystem

321. What is used for video conferencing between 3 or more terminals? gate keeper gateway etc.

322. The form of multiplexing used in cable TV transmission is – FDM

323. OSS follows which of the technologies? – JAVA

324. which of the following multiplexing techniques provides widest frequency range

For a signal in a channel? – CDMA

325. cognizant uses which network to connect between different offices located across

a geographical area ? WAN

326. results of 1980 Anticase

a. At&t monopoly ended,

b RBOC is created – local phone service only

c. At&T ma bell – long distance telephony and equipment manufacturing only.

327. which of the following is characterized by splitting of opical fiber and sharing among multiple users. - PON passive optical network

328. What is the frequency of call waiting beep - 440 Hz

1. what protocol is used in trick play signaling – RTSP ( Real Time streaming protocol)

---------------------------------------------------------------------------------------------

16. MoneyMap from cVidya comes under

a. Revenue Assurance b. Network Assurance

17. 802.11 based protocols are

a. RTP/RTCP

21. Call screening is otherwise called – **Selective Call Rejection**

23. Which of following need not be implemented in a router?

a.**physical layer**

b.transport

c.dataline

d.network

25. Campaign management is a part of which process

**a. Marketing fulfillment response**

b. Customer Interface management

c. selling

d. order handling

26. Zero touch provisioning is implemented for

**a. ACCA Networks**

39. Remote surgery requires

a) Soft QoS

b) End to end QoS

**c) Hard QoS**

d) none

**National Database**

40. NPAC **(National Portablity Administration Center )** data containing correct routing information in

a) AIMNET

**b) Neustar**

c) Farthorn

d) FCC

43. Network in which each telephone is connected to other telephone

a. Public switched network

b.Private switched network

c. centrally switched network

**d. non switched network**

46. Verizon estimates for separate fiber for each home is

a) $1200

b) $500

c) $27

d) **$880**

47. Which organization focus on service provider s technical and business requirements

a.ITU-T

b.OMA

**c. TMF – TeleManagement Forum – proivide environment to address service provider’s business n technical requirement.**

48. Deregulation is **Process by which restriction on Business is removed to encourage efficient operation of Market place.**

49. Establishes competitive environment by providing own network and switching

**A.CLEC**

b.LEC

c.IXC

d.ILEC

50. COVAD does not support

a.value added services

b.enterprise services

c.DSL services

**d. long distance telephony**

1) ARP used for

a)congestion control

b)QoS Assurance

c) **Logical address to mac address mapping**

d)Error handling

7) Architecture and code review of customer self service portal is done to which customer

a) Nokia

b) ACCA

c) Comcast

**d) Vodafone**

11) Maintenance activity under assurance process

**a) Proactive**

b) Reactive

c) Both

d) None

1. which DSL actuate distance limitations(0.75 mile)can overcome by fiber to cover remaing length to CO?

ADSL

VDSL

RDSL

SDSL **ANS: SDSL(NOT SURE)**

1. name the billing solution that Ranger from Subex system address

Fraud management

Mediation

Convergent billing

Rating **ANS: fraud management**

5.Not an analog modal technique ->**FSK**,PM,AM,FM

7.the LEC service type tat offers PBX type widout the need of leasing the switching equip is

a.PBX

b.**centrex**

c.CO switch

d.soft switch

14.which process desc retrieved of subsc accounting in for billng purpose?

a.rating

b.compiling

c.**charging**

d.none

18.which of foll needn be impl in a routes?

a.phy

b.**trans**

c.dataline

d.n/w

19.local monopoly is thwarted using ?

a.WPAN

b.**none**

c.LPVA

d,WLC

38. bill format with banner ads included is called

a. **rendering**

b. comiling

39. collecting of information on products to take decisions in future is

a. **information management**

b. product management

40. process manage all settlement and billing for the enterprise , including bill validation, verification, authorizing of payment is

a. **S/P settlements and billing management**

41. NEMS collected information is not required by

44 . That provides access to a hosting service is

47. Mostly used 802.11 standard is

a. **802.11 b and 802.11g**

48. 802.11 based protocols are

a. **RTP/RTCP**

1. Which of the following is provided by traditional cable systems? **broadcast**(unicast/broadcast)
2. Frame relay, X.25, ATM come under

**a.WAN**

b.LAN

c. MAN

1. Which of the following provides carrier sensing? **CDMA/CS**
2. What is used by most telephone operators throughout the world

a.1G

b.2G

**c.3G**

d.4G

1. **PAD The Packet Assembler and Disassembler**
2. **Interexchange Carriers (IXCs)** are long-distance carriers. They are the telephone companies that provide connections between local exchanges in different geographic areas
3. . The signalling for the trick play functionalities, such as pause, rewind, and so on, are assured by **RTSP (Real-Time Streaming Protocol).**The most common codecs used for VoD are **MPEG-2, MPEG-4 and VC-1**.
4. . **FMNP** **(Full Mobile Number Portability)** is the LNP equivalent for mobile phones.
5. Which of the following layer protocol need not be implemented in Router? **Network layer**