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Degree

Bs (Tele)

Course

Telecommunication
Management

Assig # 1

Submitted

to

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(Q1)

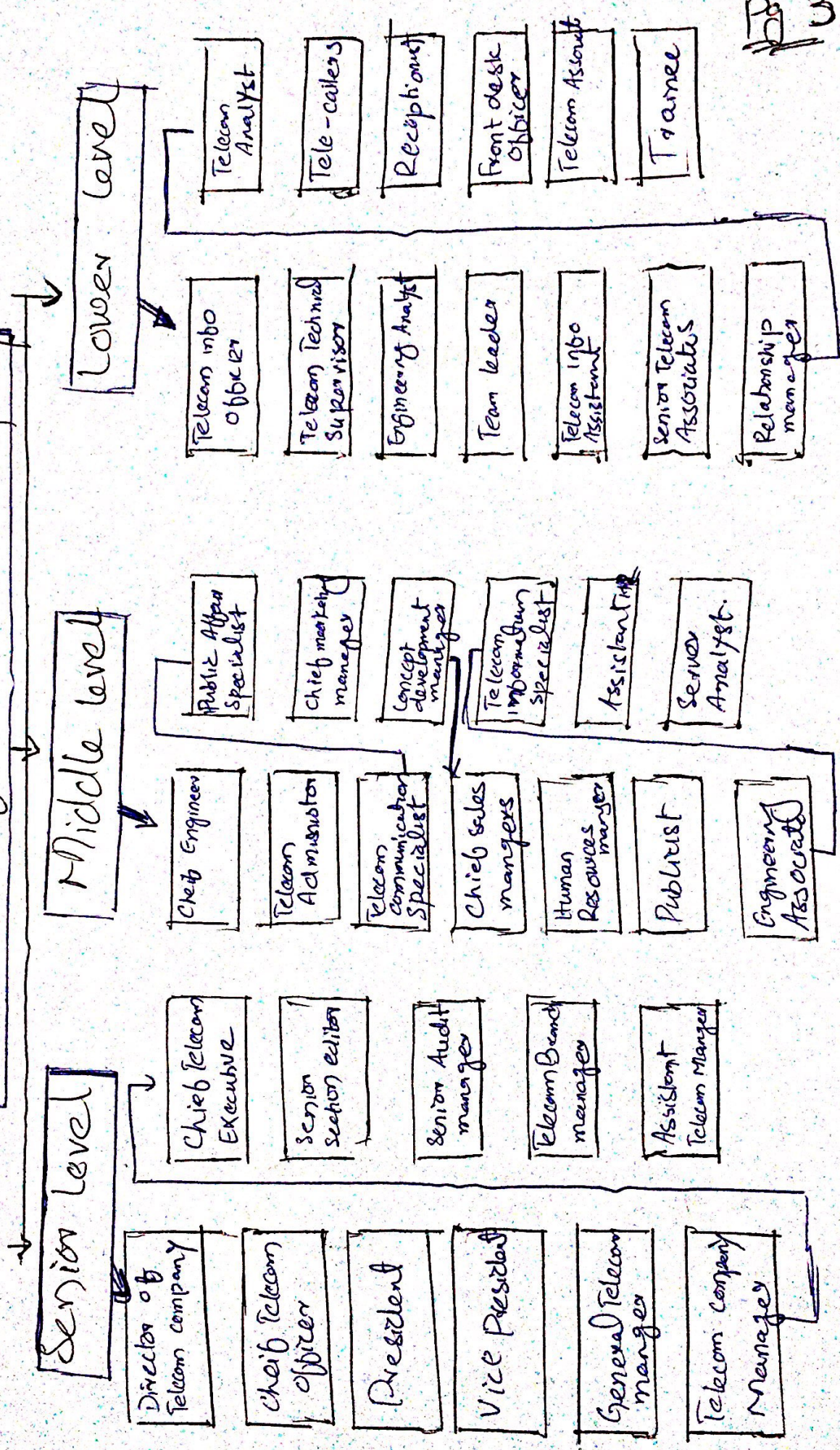
Explain the hierarchy of position in a telecom organization. Use organogram to show relationship hierarchy.

(Ans)

The hierarchy of telecom company is quite critical since it is such a broad field. Well to make it simple the hierarchy structure has been categorized into these core level which further incorporates sub level classification.

The order chosen here is the chronological one means in the hierarchy the highest level is kept at top while lowest one at the bottom.

Hierarchy of Telecom Company



* Senior Level

These are the highest jobs title attainable in the hierarchy of Telecom company. These professionals usually manage their own sector of expertise and are most involved in decision making process for the company.

* Middle Level

This level features all the job profiles at middle executive levels whose core duties depend on the sector they are associated with. This level involves professionals from different varying fields all working together for the smooth functioning of the Telecom company.

* Lower level

Pa # 5

The professional at this level of hierarchy of Telecom company incorporates both fresher as well as experienced one. The majority of this level is occupied with tele callers who are the customers care representative that handle the queries of clients around the country.

Q2

Explain PLMN (Public Land Mobile Network)

Draw diagram and describe the function each element.

(Ans) PLMN :-

A Public Land Mobile network (PLMN) is any wireless communications system intended for use by terrestrial subscribers in vehicles or on foot. Such a system can stand alone, but often it is connected with a fixed system such as the Public Switched Telephone Network (PSTN).

The most familiar example of PLMN end user is a person with a cell phone.

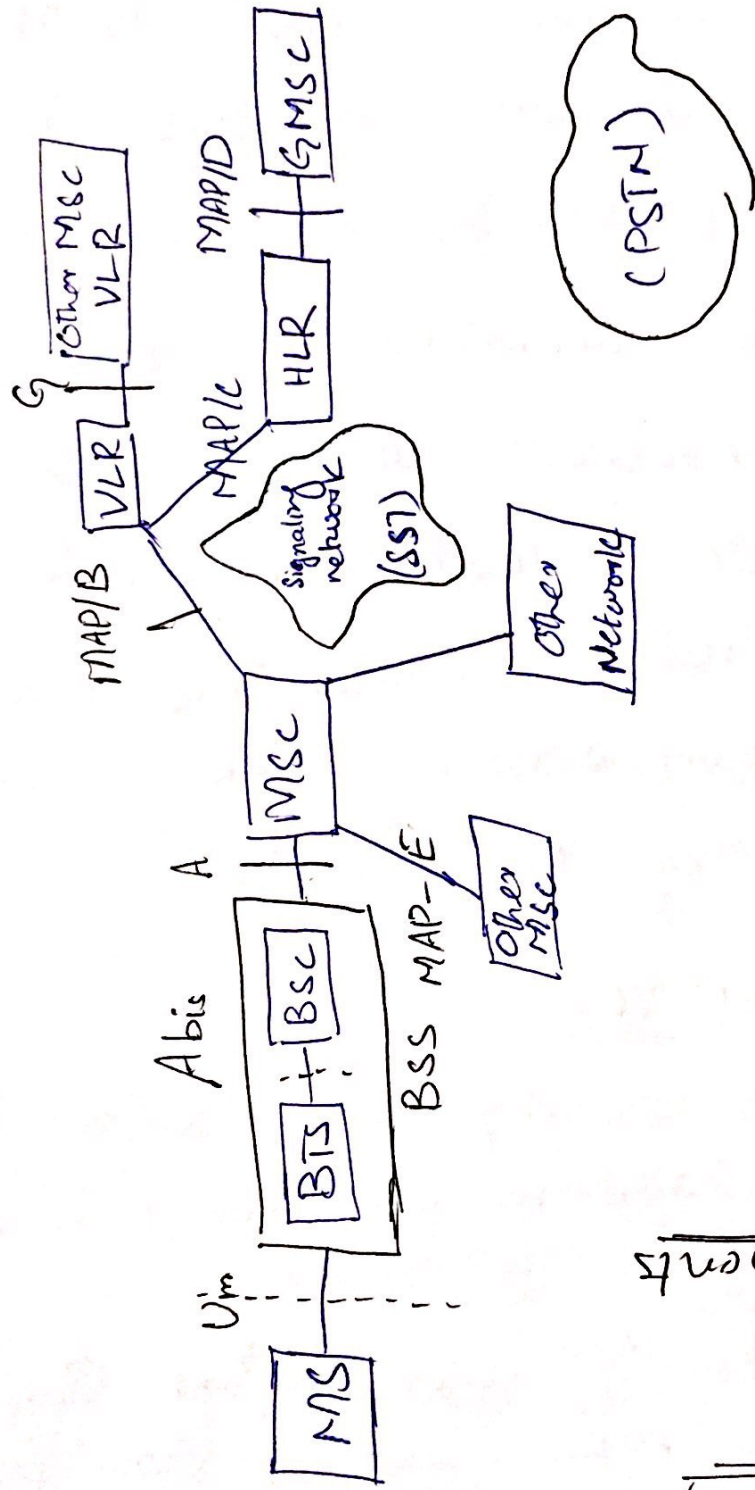


Diagram
PLMN
Elements

* BTS BSC and MSC

= The Base station controller (BSC) is in control of and supervises for the allocation of Base Transceiver Station (BTS). The BSC is responsible for the allocation of radio resources to a mobile call and for the handover that are made between base stations. Under his control other handovers are under control of The MSC.

* HLR AND VLR

= HLR is basically Home location Register is a database use for permanent storage of customer information.

→ VLR is basically visitor location Register is similar to HLR but it store data of subscribers.

Q3

What is TMN (Telecom Management Network)
Explain its management functions.

(Ans) TMN:-

⇒ Its purpose is to support operators in managing Telecommunication network and services.

= To do that it provides a framework to achieve interconnection of operation system and Telecommunication equipment-

⇒ Series of ITU-T recommendations (M.3xxx). Building on the ISO/OST system management model (X.700) is based on the OST management specification in ITU-T.

* Management functional Area

Types of management activity have been categorised into five generic functional areas:

(1) Fault Management:

- = Receive reports about malfunctions (Alarms)
 - Prioritise, condense, filter.
- = Alarm correlation, confidence / diagnostic testing.
- ⇒ Fault identification and diagnosis
- ⇒ Maintenance dispatch.
 - Periodic Testing / Repair activities
- = Bypass faults through soft re-configurations
 - Relationship with configuration management.

(2) Configuration Management

- => Maintain the configuration state of a network and the relationship between components.
- => Identify status and location of equipment (Inventory).
- => Initialize, configure and shut down equipment, maintain view of both physical and logical network topology.
- => Support semi-permanent connections, e.g. permanent virtual circuits (PVCs)
- => Relationship with planning, performance and fault management.

3) Accounting Management

* Collect service usage information (Usage management)

⇒ Associate it with Tariffing schemes to produce charging and billing information.

⇒ Monitor User Access Privileges.

⇒ Provide analysis of usage for sales, New Tariffing policies etc.

4) Performance Management

* Collect Traffic information

⇒ use it for capacity planning and provide traffic flow prediction (Per, Hour, Day, Month)

⇒ Monitor the level of resource utilisation and Response times.

⇒ Identify bottlenecks and congestion
try to recover through soft
Re-configuration

- Relationship with configuration management.

(5) Security Management

→ Protect access to network, system,
Service and management resources

⇒ Authentication: validate legitimate
user and application.

⇒ Confidentiality: encrypt confidential
information while in Transit.

⇒ Integrity: Prevent modification
of information while in
Transit.