

TEACHING PLAN TABLE

Academic Year 2017-2018

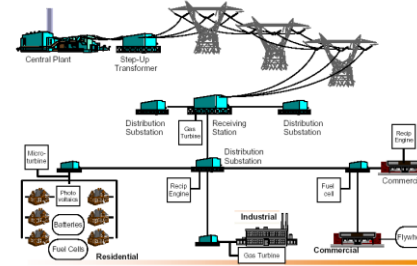
S NO	LECTURE NAME	TOPIC NAME	PLANNED DATE	ACTUAL DATE	REFERENCE USED	CONTENT DELIVERY METHODS/CIT TOOLS USED	COURSE OUTCOMES
1	Dr JVB Subrahmanyam	recent trends in electrical engineering	19-07-2017	20-07-2017	INTERNET	LCD PROJECT	STUDENT CAN ABLE TO LEARN THE RECENT TECHNOLOGY
2	Dr Tulasiyammal c	layout of substations	23-08-2017	24-08-2017	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO STRUCTURE OF SUBSTATION
3	Mr C Sreenivasulu	design practice of the secondary disturbed system	012-09-2017	13-09-2017	TEXT BOOKS	LCD PROJECT	CAN ABLE TO KNOW THE KNOWLEDGE ON DISTURBUTED SYSTEM
4	Mr T.Madhu Babu	environmental impact of solar power	25-10-2017	26-10-2017	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO KNOW THE SOLAR POWER
5	Mrs M.Harika Reddy	flip flop	3/11/2017	7/11/2017	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO DESIGN OF FLIP FLOPS
6	Mr A. Naga Sridhar	Reactive power compensation	6/12/2017	6/12/2017	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO EFFECT OF REACTIVE POWER
7	Mr B Ramesh	hydroelectric power plant models	18-01-2018	19-01-2018	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO KNOW THE POWER PLANTS
8	Mr Shabbier Ahmed Sydu	generation of harmonics AC and DC filters	30-01-2018	30-01-2018	NPTTEL	LCD PROJECT	STUDENT CAN ABLE TO KNOW THE KNOWLEDGE ON HARMONICS
9	Mr V Kranthi Kumar	natural hazards	6/2/2018	6/2/2018	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO KNOW THE NATURAL HAZARDS
10	Mr G Dhasharatha	principle of operation of static relays	21-02-2018	21-02-2018	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO KNOW THE OPERATION OF RELAYS
11	Mr B Nageswar Rao	control drives for machines	15-03-2018	15-02-2018	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO DESIGN OF CONTROL DRIVES
12	Mr J Lingappa	algorithm of gauss siedal method	3/4/2018	4/4/2018	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO KNOW POWER FLOW STUDIES
13	Mr N Ramesh Babu	working principle of synchronous machines	13-04-2018	13-04-2018	TEXT BOOKS	LCD PROJECT	STUDENT CAN ABLE TO LEARN THE PRINCIPLE OF SYNCHRONOUS MACHINES



DISTRIBUTION SYSTEMS

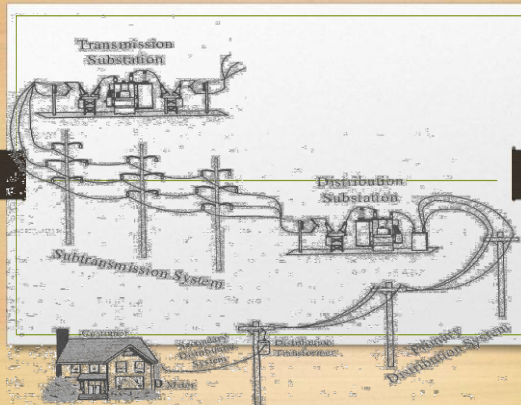
ELECTRICAL POWER SYSTEM

Electric Power System Layout



- The distribution system is a part of the power system, existing between distribution sub-stations and the consumers.

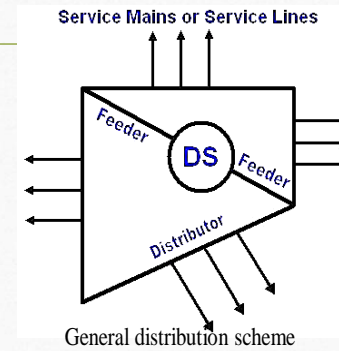
DISTRIBUTION SYSTEMS



INTRODUCTION (DISTRIBUTION SYSTEMS)

- Distribution systems
To **distribute** the electric power among the consumer.

Below a certain voltage



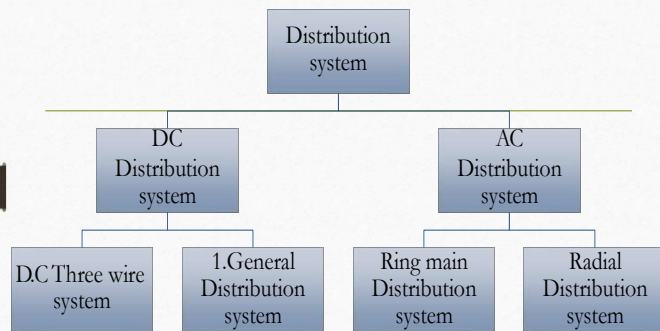
Requirements of good distribution systems

- **Continuity** in the power supply must be ensured.
- **Voltage** must not vary more than the prescribed **limits** ($\pm 5\%$).
- **Efficiency** of line must be **high** as possible.
- **Safe** from consumer point of view.
- Layout should not effect the **appearance of locality**.
- Line should **not be overloaded**.

Distribution system is further **classified on the basis of voltage**

1. primary distribution systems
2. secondary distribution systems

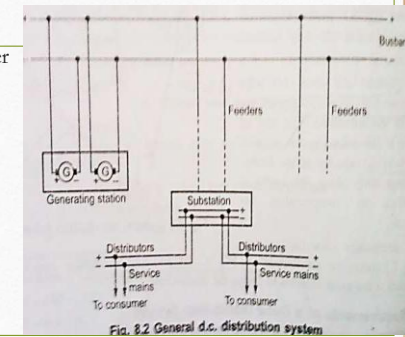
- **Primary Distribution:**-The part of the electrical-supply system existing between the distribution substations and the distribution transformers is called the primary system.
- **Secondary Distribution:**-The secondary distribution system receives power from the secondary side of distribution transformers at low voltage and supplies power to various connected loads via service lines.



DC Distribution system 1. General Distribution system

1. General Distribution system

- **Feeder** are used to feed the electrical power from the generating station to the substation.
- **Distributors** are used to distribute the supply further from the substation.
- **Service mains** are connected to the distributors so as to make the supply available at the consumers. (simplest two wire distribution system)



2.D.C Three wire system

- Voltage level can not be increased readily like a.c.
- **Method**:-two generators are connected in **series**
 - each is generating a voltage of **V volts**
 - common point is neutral from where neutral wire is run.(too expensive , use to double the transmission voltage)
- **Demand** :-consumers demanding higher voltage are connected to the two lines.
 - consumers demanding less voltage are connected between any one line and neutral.

D.C Three wire system

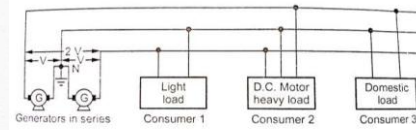


Fig. 8.6 Three wire d.c. system

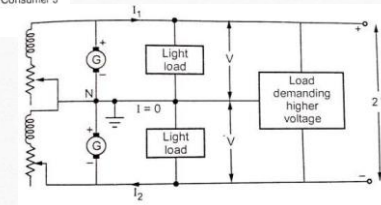


Fig. 8.7 Three wire d.c. system with balanced loads

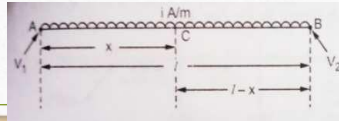
- **2.Ends at Unequal voltages**
 - Let point C be the point of minimum potential which at a distance x from feeding point A
 - The current supplied by the feeding point A is ix
 - The current supplied by the feeding point B is i(l-x)
 - V_1 -drops over AC= V_2 -drops over BC
-
- In case of distributed load the drop is given by $\frac{ir l^2}{2}$ for a length of l

$$V_{AC} = \frac{irx^2}{2} \text{ volts}$$

$$V_{BC} = \frac{ir(l-x)^2}{2} \text{ volts}$$

$$V_1 - \frac{irx^2}{2} = V_2 - \frac{ir(l-x)^2}{2}$$

X?



Thank you