

Doc. No.: DCE/0/15

Lecture Plan -1

Revision :00

Semester:-6th

Course Code:-EE-318-F

Subject: - Electric Power Generation

Section: A

S. No.	Topic :- INTRODUCTION TO Power Generation	Time Allotted:-
1.	<u>Introduction</u> What is Power Generation. Define electricity, importance, Circuit, units etc: Energy sources, their availability. Recent trends in Power Generation, Interconnected Generation of Power Plants,	<u>5 min</u>
2	<u>Division of the Topic</u> -Recent Trends in power Generation -Electric Energy Growth in India -Growth of Electric Energy consumption -Electric Energy Losses	<u>35 min</u>
3.	<u>Conclusion</u> Importance of Power Generation Q1. Describe the development of power in India?	<u>5 min</u>
4	Q2 What are the reason of power crises in India.	<u>5min</u>

Assignment to be given:- NIL

Reference Readings:-

1. Electric Power Generation-B.R Gupta

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Lecture Plan -2

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: A
GENERATION

S. No.	Topic :- Electric Energy Sources	Time Allotted:-
1.	<p><u>Introduction</u> Discussion on sources of energy, Coal, Liquid Fuel, Gaseous Fuels, Nuclear fuels, classification, block diagram, significance. Non conventional Sources of energy. Definitions, Availability of fuel.</p>	<u>5 min</u>
2	<p><u>Division of the Topic</u> -Transport of Fuel -Power Crises in India -Organisation of Power Sector in India -Fuel Energy Demand in India -Characteristics -</p>	<u>35 min</u>
3.	<p><u>Conclusion</u> Role of Private Sector in Energy Management, Indian Electricity Grid Code</p>	<u>5 min</u>
4	<p><u>Questions / Answers</u> Q1 What are the silent features of electricity board. Q2 What is the advantage of pithead STPS. Q3 What is Grid Code? Q4 What are the function of CEA.</p>	<u>5min</u>

Assignment to be given:- Various methods involved in fabrication of VLSI as per Assignment-I enclosed

Reference Readings:-

1. Electric Power Generation-B.R Gupta

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Lecture Plan -3

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: A
GENERATION

S. No.	TOPIC: Future Energy Demands in India	Time Allotted:-
1.	<u>Introduction</u> - Forecast of Electrical Energy Management, Its importance, significance. Availability of resources.	<u>5 min</u> <u>35 min</u>
2.	Division of the Topic -Faulty Plannings -Sharp Increase in Demand. -Delay in Construction of Power Projects. -Interstate disputes -Erratic Monsoons	<u>5 min</u>
3.	Conclusion The reliability of Electric Power in our country is poor. PlantThe most familiar form of energy in our daily lives is electrical energy. The branch of engineering which deals with producing, managing and utilizing this energy, is referred as electrical engineering	<u>5min</u>
4.	Questions / Answers Q1. Name some liquid fuels in Power Generation. Q2. What is the role of NTPC. Q3. What is the total power plant installed capacity in India.	

Assignment to be given:- NIL

Reference Readings:-

1. Electric Power Generation-B.R Gupta

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Lecture Plan -4

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: A
GENERATION

S. No.	TOPIC: Indian Electricity Act	Time
1.	Introduction India Electricity Grid Code. Objectives, Significance, Importance. Generation, Transmission, Distribution, Tarrif, Power authorities, Offence and Penalties, Captive Generation and Miscellaneous.	Allotted:- <u>5 min</u>
2	<u>Division of the Topic</u> -Discussion on RLDC. - Discussion on REB. - Discussion on Central Transmission Utility . - Discussion on SLDC -Expression for Threshold voltage	<u>35 min</u> <u>5 min</u>
3.	<u>Conclusion</u> These all engaged in the activities of real time operation of the power system in the respective states. Their Functions and Obhectives.	<u>5min</u>
4	<u>Questions / Answers</u> Q1. Discuss organization of power sector in India. Q2. Give main Importance of Power grid.	

Assignment to be given:- NIL

Reference Readings:-

1.

Lecture Plan -5

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: A

GENERATION

S. No.	TOPIC: Sources of Electrical Power	Time Allotted:-
1.	<p><u>Introduction</u></p> <p>Diesel electric plants. Gas turbine plants. Mini, micro, and distributed generation. Hydro Power Generation: Selection of site. Classification of hydro-electric plants. General arrangement and operation. Hydroelectric power station structure and control.</p>	<p><u>5 min</u></p> <p>06 Hours</p>
2.	<p>Division of the Topic</p> <ul style="list-style-type: none"> -Occurrence -Importance -Significance -Objectives 	<p><u>35 min</u></p>
3.	<p>Conclusion</p> <p>How the Sources of energy are important for us.</p>	<p><u>10 min</u></p>

Assignment to be given:- NILReference Readings:-

1.Electric Power Generation-B.R Gupta

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Lecture Plan -6

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: A
GENERATION

S. No.	TOPIC:Interconnection of Generation of power Plants	Time
1.	<u>Introduction</u> Study the different types of interconnection between different power plants.	Allotted:- <u>5 min</u>
2.	Division of the Topic - Location - Utility - Advancement - significance	<u>35 min</u>
3.	Conclusion Power Electrical engineering is core engineering like civil and mechanical but it has a wide range of subfields. After modernization, many fields of engineering grew out of electrical such as electronics, computer, telecommunication engineering and many more. All the fields of study that directly or indirectly deal with electricity come under electrical engineering.	<u>5 min</u>
		<u>5min</u>

Assignment to be given:- Nil

Reference:-

1.Electric Power Generation-B.R Gupta

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Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: A
GENERATION

S. No.	TOPIC: Interconnection of Generation of power Plants contd.	Time Allotted:-
1.	<u>Introduction</u> In a power generation plant where electrical energy is produced, the application of this engineering is huge. All the mechanical and as well as electrical equipment involved in producing electrical energy, such as <u>alternators</u> , boilers, turbines etc. are controlled and protected by electrical signals. All the relays and switches involved in operation of the equipment are either electromechanical or static electronics devices. In the modern age, these devices are digitally controlled by computer software. So in addition to core electrical engineering, these electrical engineering subfields (electronics, computer, software engineering and IT) are also involved in power generation	<u>5 min</u>
2	Division of the Topic -electrical transformers -alternator	<u>35 min</u>
3.	<u>Conclusion</u> After stepping up the electrical power, it is transmitted to a load center. Huge electrical technology is involved in electrical power transmission systems and networks including large national grids. The problems associated with these systems are solved by electrical engineering including all engineering subfields	<u>5 min</u>
4		

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

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Revision :00

Lecture Plan -8

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section: A

S. No.	Topic:-Recent Trends in Power Generation	Time Allotted:-
1.	Introduction Electrical power systems includes power generation, electrical power transmission & distribution, control & power system protection, electrical switchgear, power transformers, control & protection relays, transmission & distribution substations, and all switch yard equipment. All the very basic electrical engineering theories related to this field of technology are also included in this study site. This site is continually improving and in the near future we will add many other functionalities to this website to make it a complete solution for electrical technology. Please give your suggestions to help make the site better.	<u>5 min</u>
2	Division of the Topic 1. Basic Principle 2. Working Principle 3. Model 4. Detail of Process .	<u>35 min</u>
3.	Conclusion In a power generation plant where electrical energy is produced, the application of this engineering is huge. All the mechanical and as well as electrical equipment involved in producing electrical energy, such as alternators, boilers, turbines etc. are controlled and protected by electrical signals. All the relays and switches involved in operation of the equipment are either electromechanical or static electronics devices. In the modern age, these devices are digitally controlled by computer software. So in addition to core electrical engineering, these electrical engineering subfields (electronic, computer, software engineering and IT) are also involved in power generation.	<u>5 min</u>
4		<u>5min</u>

Assignment to be given:- Assignment –IV given as enclosed

Reference Readings:-

Principles of Generation of Electricity –Dr. B.R Gupta

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Revision :00

Lecture Plan -9

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: B

GENERATION

S. No.	TOPIC: Power Generation Planning	Time Allotted:-
1.	Introduction Load Forcasting, A power station feeds different types of consumers The design of the power plant or system must take into account the future increase in load.	<u>5 min</u>
2	<u>Division of the Topic</u> -Load Forcasting -Load Cruves -Load Duration Curves	<u>35 min</u>
3.	Conclusion Various types of Conventional And non Conventional Energy sources are used for generating Energy.	10 min
4	Question Answer Q1-Between which quantities is mass curve plotted? Q2-What is the difference between chronological load curveand load Duration curve?	-

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

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Lecture Plan -10

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: B
GENERATION

S. No.	TOPIC: Load Power Generation Contd.	Time
1.	<p><u>Introduction</u></p> <p>A power plant can be of several types depending mainly on the type of fuel used. Since for the purpose of bulk power generation, only thermal, nuclear and hydro power comes handy, therefore a power generating station can be broadly classified in the 3 above mentioned types. Let us have a look in these types of power stations in details</p>	<p>Allotted:- <u>5 min</u></p>
2	<p><u>Division of the Topic</u></p> <ul style="list-style-type: none"> -Maximum Demand. -Demand Factor - Group Diversity Factor - 	<p><u>35 min</u></p>
3.	<p><u>Conclusion</u></p> <p>High output resistance required – As explained earlier for getting high output voltage and power several thermoelectric generators are connected in series, which in turn increases the total output resistance. Therefore for transferring high power efficiently large resistances are needed. This problem can be overcome by connecting more thermoelectric elements in parallel rather in series because it causes decrease in effective resistance.</p> <ul style="list-style-type: none"> • Thermoelectric power generators generate less electric power for the same heat flow i.e they <p>have low efficiency as compared to other mechanical generators. For the same energy input, the Seebeck Power Generation produces less output as compare to other energy converters.</p>	<p><u>5min</u></p>

Assignment to be given:-Nil

Reference Readings:-

1.Electric Power Generation-B.R Gupta

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Lecture Plan -11

Semester:-6th

Course Code:-EE-318-E

Subject:-ELECTRIC POWER Section: B
GENERATION

S. No.	TOPIC: Load Power Generation (CONTINUED)	Time
1.	Introduction Long term Forecasting ,Base load and Plants, Classification, Identification, Power plant,	Allotted:- <u>5 min</u>
2	<u>Division of the Topic</u> 1. Basic concept 2. Working of different Power Plant 3. Characteristics of different power plants	<u>35 min</u>
3.		<u>10 min</u>
4		

Assignment to be given:-Nil

Reference Readings:-

Electric Power Generation- Dr.B.R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -12

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: B
GENERATION

S. No	TOPIC: BASE LOAD AND PEAK LOAD POWER PLANT	Time Allotted:-
1.	Introduction Discussion on Domestic or Residential Load, Industrial Load, Commercial Load, Urban traction Load, Municipal Load, .	<u>5 min</u>
2	<u>Division of the Topic</u> -Basic concept -Discuss different load concepts. -Variety of load concepts. - Generation -Characteristic of different load.	<u>35 min</u>
3.	Conclusion Each of the above methodologies has its own advantages and limitations. No one approach is used by all the utilities consistently.	<u>5 min</u>
4	Questions / Answers Q1 What is a Capacity factor? Q2. Define Demand Factor? Q3 What is short term forecasting? .	<u>5min</u>

Assignment to be given:- NIL

Reference Readings:-

1. Electric Power Generation-B.R Gupta

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Lecture Plan -13

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section: B
GENERATION

S. No.	TOPIC: BASE LOAD AND PEAK LOAD POWER PLANT contd.	Time Allotted:-
1.	Introduction Cost of Electrical Energy-Capital cost of Plant, Annual Fixed Cost, Operating Cost Or fixed Cost, Annual Plant Cost, and Generation Cost.	<u>5 min</u>
2	<u>Division of the Topic</u> -Types of variation in cost - Depreciation -Effect of load Factor on Unit Energy cost -Fixed and operating Cost of Steam Plants -Fixed and Operating cost of Hydro Plants	<u>35 min</u>
3.	<u>Conclusion</u> The capital cost of a steam plant includes the cost of land ,design, specification, installation, power house building ,equipment, installation, testing ,commissioning,etc.	<u>5 min</u>
4	Questions / Answers Q1 Differentiate between Fixed costs and operating Costs? Q2 What is fixed charge rate? What are its components ? Q3 What is Depreciation ?	<u>5min</u>

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -14

Semester:-6th

Course Code:-EE-318-E

Subject:-Electric Power Generation Section: B

S. No.	TOPIC: Tariffs and Power Factors	Time Allotted:-
1.	<u>Introduction</u> Objectives Of Tarrifs, Electric utilities derive their income from customers through electricity bills. Objectives and requirement of tariffs	<u>5 min</u>
2	Division of the Topic -Advantages -Disadvantages -Types -Brief -Types - <u>Conclusion</u> Demineralization plant employs a chemical method to separate out the dissolved salt in raw water. But reverse osmosis plant employs a simple physical method to separate the dissolved salts. Before feeding the raw water to these plants sand filtration is done by different filters. Along with these plants there are two deaerators , which remove dissolved oxygen in the feed water, as traces of oxygen may react with boiler tubes and thereby corrode those.	<u>35 min</u>
3.		<u>10 min</u>
4		

Assignment to be given:- NIL

Reference Readings:-

1. Electric Power Generation-B.R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -15

Semester:-6th

Course Code:-EE-318-E

Subject:-Electric Power Generation Section: B

S. No.	TOPIC: POWER GENERATION PLANNING:	Time Allotted:-
1.	<p><u>Introduction</u></p> <p>An increase in inlet steam temperature gives a steady improvement in cycle efficiency. Hence, the function of super-heater is to raise the overall efficiency. In addition, it reduces the moisture content in the later stages of the turbine and thus increases the turbine internal efficiency.</p>	<u>5 min</u>
2	<p><u>Division of the Topic</u></p> <ul style="list-style-type: none">-A simple model-The rule for designing construction of model.-Specification-Disadvantages.	<u>35 min</u>
3.	<p><u>Conclusion</u></p> <p>An easier method of generating power in large scale.</p>	<u>5 min</u>

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

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Revision :00

Lecture Plan -16

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section: B

S. No.	TOPIC: Power Generation Planning	Time Allotted:-
1.	<p><u>Introduction</u></p> <p>Load forecasting, load curves, load duration curve, Base load and Peak load Power Plants, connected Load, maximum demand, demand factor, Group diversity factor, load factor, significance of load factor, plant factor, capacity factor, selection of unit size, No. of Units, reserves, cost of power generation, Depreciation, tariff.</p>	<u>5 min</u>
2	<p><u>Division of the Topic</u></p> <ul style="list-style-type: none">- A simple model-The rule for designing construction of model.-Specification-Disadvantages	<u>35 min</u>
3.	<p><u>Conclusion</u></p> <p>An easier method of generating power in large scale.</p>	<u>10 min</u>

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -17

Semester:-6th

Course Code:-EE-318-E

Subject:-Electric Power Generation Section: B

S. No.	TOPIC: Significance of load Factor	Time Allotted:-
1.	<u>Introduction</u> Load forecasting, load curves, load duration curve, Base load and Peak load Power Plants, connected Load, maximum demand, demand factor, Group diversity factor, load factor, significance of load factor, plant factor, capacity factor, selection of unit size, No. of Units, reserves, cost of power generation, Depreciation, tariff	<u>5 min</u>
2	<u>Division of the Topic</u> type 1. block diagram Type 2. Disadvantages	<u>35 min</u>
3.	<u>Conclusion</u> Super convertors are used to produce typically symmetric propagation delays within the	<u>10 min</u>

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

Doc. No.: DCE/0/15

Revision :00

Lecture Plan -18

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section: B

S. No.	TOPIC: Depreciations and Tariffs	Time Allotted:-
1.	<u>Introduction</u> Technology which is the combination of different types have different features. It has advantage of higher bandwidth and low power dissipation.	<u>5 min</u>
2	Division of the Topic -Load Forecasting - Effective Voltage and Frequency on Loads. -Base load and peak load plants -Utilisation factor	<u>35 min</u>
3.	<u>Conclusion</u> An easier method of generating power in large scale.	<u>10 min</u>

Assignment to be given:- NIL

Reference Readings:-

1.Electric Power Generation-B.R Gupta

Doc. No.: DCE/0/15
 Revision :00

Lecture Plan -19

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section: C

S. No.	Topic :- Types of Fluidized Bed Combustion (FBC)	Time Allotted:-
1.	<p>Introduction</p> <p>Fluidized Bed combustion can be in 2 variants, namely :-</p> <p>1) Vertical type FBC :These are generally used in smaller plant, and has the capacity to produce steam of up to 6 tonnes per hour only. Their vertical shape reduces the overall dimension of the <u>steam boiler</u>, and is extremely efficient in plants, where space provision is limited.</p> <p>2) Horizontal type FBC : There are almost 10 times in capacity when compared to vertical type fluidized bed combustion. They can produce as much as 60 tonnes of steam per hour, and are placed horizontally with respect to the boiler tubes. The high capacity of the horizontal type Fluidized boilers coupled with their high efficiency, makes them an extremely desirable choice for the coal fired <u>thermal power generating station</u> .</p>	<u>5 min</u>
2	<p><u>Division of the Topic</u></p> <ul style="list-style-type: none"> - Combinational - Expression - Expression - Realization 	<u>35 min</u>
3	<p><u>Conclusion</u></p> <p>In view of all these advantages of fluidized bed combustion above, where fluidized bed combustion emerges as the best alternative available today, still the major drawback of this system is that the fan power has to be maintained at a considerably highvalue, since the air has to be supplied continuously at a very high pressure for supporting the bed. This in turn increases the operating cost of the auxiliary units of the plant. But it is more than compensated by the high values of efficiency that FBC provides</p>	<u>10 min</u>

Assignment to be given:- Nil

Reference Readings:-

Principles of Electrical Power Generation-...Dr. B,R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -20

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section: C

S. No.	Topic :- POWER GENERATION PLANNING	Time Allotted:-
1.	<p><u>Introduction</u> Load forecasting, load curves, load duration curve, Base load and Peak load Power Plants, connected Load, maximum demand, demand factor, Group diversity factor, load factor, significance of load factor, plant factor, capacity factor, selection of unit size, No. of Units, reserves, cost of power generation, Depreciation, tariff.</p>	<u>5 min</u>
2	<p><u>Division of the Topic</u></p> <ul style="list-style-type: none">- Basic Daigram- availibility- uses- characteristics- Tristate inverter	<u>35 min</u>
3.	<p><u>Conclusion</u> Demineralization plant employs a chemical method to separate out the dissolved salt in raw water. But reverse osmosis plant employs a simple physical method to separate the dissolved salts. Before feeding the raw water to these plants sand filtration is done by different filters. Along with these plants there are two deaerators, which remove dissolved oxygen in the feed water, as traces of oxygen may react with boiler tubes and thereby corrode those.</p>	<u>10 min</u>

Assignment to be given:- Nil

Reference Readings:-

Principles of Electrical Power Generation...Dr.B.R, Gupta

Doc. No.: DCE/0/15
 Revision :00

Lecture Plan -22

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section: C

S. No.	Topic :- CHARACTERIZATION & PERFORMANCE ESTIMATION of Plans	Time Allotted:-
1.	<p><u>Introduction</u> Fluidized Bed combustion can be in 2 variants, namely :- 1) Vertical type FBC :These are generally used in smaller plant, and has the capacity to produce steam of up to 6 tonnes per hour only. Their vertical shape reduces the overall dimension of the <u>steam boiler</u>, and is extremely efficient in plants, where space provision is limited. 2) Horizontal type FBC : There are almost 10 times in capacity when compared to vertical type fluidized bed combustion. They can produce as much as 60 tonnes of steam per hour, and are placed horizontally with respect to the boiler tubes. The high capacity of the horizontal type Fluidized boilers coupled with their high efficiency, makes them an extremely desirable choice for the coal fired <u>thermal power generating station</u> .</p>	<u>5 min</u>
2	<p>Division of the Topic Estimation of R 1. Resistance of Nonrectangular Regions 2. Contact and Via Resistance Estimation of C</p>	<u>35 min</u>
3.	<p>Conclusion Hence the resistance of a conductor on a layer is obtained by multiplying the sheet resistance R_s by the ratio of the length to width of the conductor.</p>	<u>10 min</u>

Assignment to be given:- Nil

Reference Readings:-

Principles of Electrical Power Generation-...Dr. B,R Gupta

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 Revision :00

Lecture Plan -23

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section:C

S. No.	Topic:- ENERGY MANAGEMENT	Time Allotted:-
1.	<u>Introduction</u> Electrical energy conservation is an important part of electrical energy <u>Conservation.</u>	<u>5 min</u>
2	<u>Division of the Topic</u> - Basic Daigram - availibilty - uses - characteristics - Tristate inverter	<u>35 min</u>
3.	<u>Conclusion</u> In view of all these advantages of fluidized bed combustion above, where fluidized bed combustion emerges as the best alternative available today, still the major drawback of this system is that the fan power has to be maintained at a considerably highvalue, since the air has to be supplied continuously at a very high pressure for supporting the bed. This in turn increases the operating cost of the auxiliary units of the plant. But it is more than compensated by the high values of efficiency that FBC provides	<u>10 min</u>
4		

Assignment to be given:-Nil

Reference Readings:-

Basic Electrical Power Generation.....B.R.Gupta.

Lecture Plan -24

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section:D

S. No.	Topic:- ENERGY MANAGEMENT cntds	Time Allotted:-
1.	<p><u>Introduction</u></p> <p>In all new engineering enterprises of this era, the question of cost is of utmost importance. It is the role played by an engineer to achieve the desired technical result, with minimum cost that distinguishes him from a non engineer who can also possibly attain the same result, but at what cost? In a power generation industry we are usually confronted with a situation where we have to make a choice between equipment of high cost with high efficiency and their low cost counterpart with lower efficiency. In the first case, the charges due to interest and depreciation will be higher with lower energy bill as compared to the corresponding figures in the second case. Here the role of the Electrical Engineer comes into play, where he has to balance the situation in such a way that the total expenditure of the plant is minimum, and thus the study of economics of power generation is of prime importance, taking all practical purposes into consideration.</p>	<u>5 min</u>
2.	<p><u>Division of the Topic</u></p> <p>Energy management, Energy Audit, Energy Efficient Motors, Co-generation.</p>	<u>35 min</u>
3.	<p><u>Conclusion</u></p> <p>Cost of the fuel delivered coupled with the fuel handling cost in the plant. Coal is the fuel used in a thermal power plant, and diesel oil in case of a diesel station. In case of a hydro-electric plant there is no fuel cost as water is the free gift of nature. But a hydro-plant requires higher installation cost and their mega Watt output of power generation is also lower compared to the thermal power plants</p>	<u>10 min</u>

Assignment to be given:-Nil

Reference Readings:-

Electrical Power GenerationDr.B.R, Gupta

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Lecture Plan-25

Semester:-6th

Course Code:-EE-318-F

Subject:-ELECTRIC POWER Section:D

GENERATION

S. No.	Topic :-Electrical Energy Consumption And Management	Time Allotted:-
1.	Introduction:- What is Energy consumption. Motivation for energy Consumption, Principle for energy consumption, Significance, Causes, Importance, Types, Discription.	<u>10 min</u>
2	Division of the Topic <input type="checkbox"/> Types <input type="checkbox"/> Uses <input type="checkbox"/> Significance	<u>30 min</u>
3.	Conclusion: Implementation of Energy conservation measures. Question / Answer	<u>5 min</u>
4	Q1 What is meant by energy conservation? Q2 Explain the term Electric Quantity Measures. Q2 What are the main provision of Electric energy. Q3 What can energy conservation can done	<u>5 min</u>

Assignment to be given:-Nil

Reference Readings:- Generation of Electric Energy..... Dr.B.R, Gupta

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Lecture Plan -26

Semester:-6th

Course Code:-EE-318-F

Subject:- Electric Power Generation Section:D

S.		Time
No.	Topic:- ELECTRIC ENERGY CONSERVATION & MANAGEMENT:	Allotted:-
	<p>Introduction: Electrical energy conservation is an important part of electrical energy Conservation.</p>	<u>10 min</u>
	<p>Division of the Topic</p> <p>1 Energy management, 2 Energy Audit, 3 Energy Efficient Motors, 4 Co-generation.</p>	<u>30 min</u>
3.	<p>Conclusion: This lecture provided a brief overview of the major aspects of the language. Some of the other important features like types, overloading, and resolution functions, were not discussed which will be covered later.</p>	<u>10 min</u>
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Assignment to be given:-

1. Do the data flow modeling of 2*4 decoder
2. Do the Behavioral modeling of multiplexer.

Reference Readings:- Electrical Power Conservation.....Dr. B.R Gupta

Lecture Plan -27

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section:D

S. No.	Topic:- ENERGY MANAGEMENT cntds	Time Allotted:-
1	<p>Introduction: In this lecture we will study the different styles of Energy management.</p>	<u>5 min</u>
2	<p>Division of the Topic</p> <ul style="list-style-type: none"> <input type="checkbox"/> Significance <input type="checkbox"/> Types <input type="checkbox"/> Discription <p>All possible types that can exist in the language can be categorized into the following four major categories:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Scalar Type <input type="checkbox"/> Component Types <input type="checkbox"/> Access Types <input type="checkbox"/> File Types 	<u>35 min</u>
3.	<p>Conclusion: It is an important section of the Electrical Power Generation.</p>	<u>5 min</u>
		-

1

Assignment to be given:-NIL

Reference Readings:- Electrical Power GenerationDr B.R. Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -28

Faculty:-Mr.Manihal B

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section:D

S. No.	Topic:- ENERGY MANAGEMENT cntds	Time Allotted:-
1.	Introduction: -In this lecture we will study the different styles of Energy management.	<u>5 min</u>
2	Division of the Topic Introduction to different Management styles .	<u>35 min</u>
3.	Conclusion: An entity declaration describes the energy management.	<u>10 min</u>

Assignment to be given:-NIL

Reference Readings:-Dr. B.R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -29

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section:D

S. No.	Topic:-	Time
	ENERGY AUDIT	
	Introduction: In this lecture we will discuss about how energy plays a vital role in power consumption.	
2	Division of the Topic <input type="checkbox"/> Over power consumption <input type="checkbox"/> Overloading	<u>35 min</u>
	Conclusion: Hence in this we will discuss the power consumption and its utility in many other aspects.	<u>5 min</u>
4	Question / Answer Q1 Discuss energy Audit.	<u>5min</u>

Assignment to be given:-Nil

Reference Readings:-

Electrical Power Generation By Dr. B.R Gupta.

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -30

Semester:-6th

Course Code:-EE-318-F

Subject:-Electric Power Generation Section:D

S. No.	Topic:- ENERGY EFFICIENT MOTORS	Time Allotted:-
1.	Introduction The brief discussion about the efficiency of a motors.	<u>5 min</u>
2	Division of the Topic <ul style="list-style-type: none"><input type="checkbox"/> Functioning<input type="checkbox"/> Design<input type="checkbox"/> Types<input type="checkbox"/> Applications<input type="checkbox"/> Demand	<u>35 min</u>
3.	Conclusion The efficiency of motor also plays a vital role in power generation.	<u>10 min</u>

Assignment to be given:-Nil

Reference Readings:-

Electrical Power GenerationBy Dr.B.R Gupta

Doc. No.: DCE/0/15
Revision :00

Lecture Plan -31

Semester:-6th
Subject:-Generation Power
Generation

Course Code:-EE-318-F

Section:D

S. No.	Topic:- CO-GENERATION	Time Allotted:-
1.	Introduction In this topic we will discuss the conservation of energy .	<u>5 min</u>
2	Division of the Topic -Methodology used -Significance -demand -Output	<u>35 min</u>
3.	Conclusion In this we discuss the power consumption in different manners.	<u>10min</u>

Assignment to be given:-Nil

Reference Readings:-

Generation of Electric Power by : Dr.B.R Gupta