

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA**Lesson plan****Semester: 4th****Subject: Fuels and Combustion**

Lecture	Module	Topic
1	01	Introduction
2	01	Origin of coal
3	01	Composition
4	01	Calorific value, Types & Different measuring equipment
5	01	problems
6	01	Classification of Indian Coal
7	01	Petrography of coal
8	01	Storage and Spontaneous combustion of coal
9	01	Washing of coal(Dry washing and equipments)
10	01	Washing of coal(Wet washing and equipments)
11	01	Carbonization of coal, Metallurgical coke
12	01	Physical and chemical Properties of Metallurgical coke
13	01	Recovery of crude Benzol from COG
14	02	Introduction to Liquid Fuels and different Theories
15	02	Classification of Liquid Fuels
16	02	Petroleum Refinery Operation
17	02	Crude oil distillation
18	02	Cracking, Types, Reaction, Factors affecting
19	02	Thermal Cracking Processes
20	02	Catalytic cracking reactions, Factors affecting
21	02	Catalytic cracking processes
22	02	Octane number, Cetane number and Shale oil
23	03	Natural Gas
24	03	Compressed Natural Gas
25	03	Coal Gas
26	03	Reforming, Chemical Reactions, Types
27	03	Reforming processes
28	03	Coke oven Gas, Blast Furnace Gas
29	03	Water Gas, Carburetted Water Gas
30	03	Producer Gas
31	03	Bergius Process
32	03	Fisher Tropsch process
33	04	Combustion Fundamentals
34	04	Theoretical Air calculation
35	04	Problems
36	04	Excess air calculation
37	04	Problems
38	04	Orsat Analysis
39	04	Composition of solid fuel
40	04	Problems

Signature of the Faculty Member:

Date:

Counter Signature of H.O.D