LESSION PLAN

BRANCH - MECHANICAL

SUB-POWERPLANT ENGINEERING (6TH SEM) EACH DAY 5TH PERIOD

SUB CODE – MET 604 (ELECTIVE)

SUB TEACHER –ER. GOPABANDHU GHADAI(WORKSHOP SUPT.)

GOVT.POLYTECHNIC,BHUBANESWAR

THEORY – 4 PERIODS/WEEK

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| WEEK NO. | SYLLABUS TO BE COVERED | ACUALLY COVERED | SORT FALL | REASON |
| **ONE** | INTRODUCTION TO POWERPLANT(CH – 1)  DESCRIPTION OF SOURCES OF ENERGY  CONCEPT OF CENTRAL & CAPTIVE POWER STATION  CLASSIFICATION OF POWERPLANT | NOT TAKEN  NOT TAKEN  INTRODUCTION TO POERPLANT  DESCRIPTION OF SOURCES OF ENERGY & CONCEPT OF CENTRAL & CAPTIVE POWER STATION | 1 PERIOD  1 PERIOD  NIL  EXTRA 1 PERIOD | MASS ABSENT OF STUDENTS  DO |
| 1.MONDAY    TUESDAY  WEDNESDAY  THURS DAY |
| **TWO** | INTRODUCTION TO STEAM POWERPLANT & ITS LAYOUT AND STEAM POWER CYCLES.(CH – 2)  DERIVE THE FORMULA FOR THERMAL EFFICIENCY,WORKDONE,WORK RATIO & SSC WITH THE HELP OF P-V,T-S,H-S DIAGRAM OF RANKINE CYCLE  SOLVE SIMPLE PROBLEMS ON ABOVE QUANTITIES  EXPLAIN REHEAT CYCLE & REGENETIVE CYCLE AND THEIR COMBINATION | NOT TAKEN  NOT TAKEN  NOT TAKEN  NOT TAKEN | 1 PERIOD  1 PERIOD  1 PERIOD  1 PERIOD | EXAMINER DUTY FOR SKILL TEST 2017 AT ITI CUTTACK  DO  DO  ON LEAVE |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **THREE** | AIR PRE HEATER,ECONOMISER  ELECTRO STATIC PRESSIPITATOR & SUPER HEATER    NEED OF BOILER MOUNTING  DROGHT SYSTEM,NATURAL DRAUGHT,FORCE DROUGHT,BALANCE DRAUGHT | CLASSIFICATION OF POWERPLANT & INTRODUCTION TO STEAM POWERPLANT & ITS LAYOUT AND STEAM POWER CYCLES  DERIVE THE FORMULA FOR THERMAL EFFICIENCY,WORKDONE,WORK RATIO & SSC WITH THE HELP OF P-V,T-S,H-S DIAGRAM OF RANKINE CYCLE  NOT TAKEN | EXTRA 1 PERIOD  NIL  1 PERIOD | GOVT. TOUR |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |

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| **FOURTH** | GOVT. HOLIDAY  GOVT. HOLIDAY  ADVANTAGES & DISADVANTAGES OF ABOVE QUANTITIES  STEAM PRIME MOVER,ADVANTAGES & DISADVANTAGES OF STEAM TURBINE,ELEMENTS OF STEAM TURBINE  . | GOVT. HOLIDAY  GOVT. HOLIDAY |  |  |
| 1.MONDAY    TUESDAY  WEDNESDAY  THURS DAY |
| **FIFTH** | COMPONDING & GOVERNING OF STEAM TURBINE,PERFORMANCE OF STEAM TURBINE,  EXPLAIN THERMAL EFFICINCY,STAGE EFFICINCY,GROSS EFFICIENCY  SOLVE SIMPLE PROBLEMS ON ABOVE  STEAM CONDENSER & ITS FUNCTION |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **SIXTH** | EXPLAIN JET & SURFACE CONDENSER,FUNCTION OF CONDENSE AUXILLARIES SUCH AS HOT WELL,CONDENSER EXTRACTION PUMP,AIR EXTRACTION PUMP  COOLINF TOWER & CIRCULATING PUMP,  TYPES OF COOLING TOWER & ITS FUNCTION  DESCRIBE THE VARIOUS TYPE OF COOLING TOWER(NATURAL DRAFT COOLING TOWER & MECHANICAL DRAFT COLING TOWER) |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **SEVENTH** | INTRODUCTION TO NUCLEAR POWERPLANT,CLASSIFICATION OF NUCLEAR FUEL.(CH – 3)  FISSILE AND FERTILE MATERIAL,  GOVT. HOLIDAY  EXPLAIN FUSION & FISSION REACTON, |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |

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| **EIGHTH** | EXPLAIN NUCLEAR REACTOR,  COMPONENTS OF NUCLEAR REACTOR,  FUELMODERATOR,REFLECTOR,COOLANT,CONTROL ROD  SHIELDING,REACTOR VESSEL & THEIR FUNCTION |  |  |  |
| 1.MONDAY    TUESDAY  WEDNESDAY  THURS DAY |
| **NINETH** | EXPLAIN THE WORKING PRINCIPLE OF PWR & BWR POWERPLANT  COMPARE THE NUCLEAR & THERMAL PLANT  EXPLAIN THE DISPOSAL OF NUCLEAR WASTE  GOVT. HOLIDAY |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **TENTH** | GOVT. HOLIDAY  DIESEL ENGINE POWERPLANT(CH – 4)  ADVANTAGES & DIS ADVANTAGES OF DIESEL ENGINE POWERPLANT  EXPLAIN BRIEFLY DIFFERENT SYSTEMS OF DIESEL POWERPLANT |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **ELEVENTH** | ,  FUEL STORAGE & FUEL SUPPLY SYSTEM  FUEL INJECTION SYSTEM  AIR SUPPLY SYSTEM,EXHAUST SYSTEM  COOLING SYSTEM,LUBRICATION SYSTEM |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **TWELVETH** | STARTING SYSTEM,GOVERING SYSTEM  FUEL INJECTION SYSTEM  AIR SUPPLY SYSTEM,EXHAUST SYSTEM  COOLING SYSTEM,LUBRICATION SYSTEM |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| **THIRTEENTH** | STARTING SYSTEM & GOVERNING SYSTEM OF DIESEL POWER PLANT  CONTINUE  INTRODUCTION TO HYDEL POWERPLANT(CH – 5)  ADVANTAGES OF HYDEL POWERPLANT |  |  |  |
| 1.MONDAY    TUESDAY  WEDNESDAY  THURS DAY |
| **FOURTEENTH** | DISADVANTAGES OF HYDEL POERPLANT  CLASSIFICATION OF HYDEL POWERPLANT  EXPLAIN THE GENERAL ARRANGMENT OF STORAGE TYPE HYDRO ELECTRIC PROJECT  EXPLANATION OF ABOVE OPERATION |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |
| FIFTEENTH | REVISION OF CHAPTER 1 & DISCUSSION ON PROBABLE QUESTINS  REVISION OF CHAPTER 2& DISCUSSION ON PROBABLE QUESTINS  REVISION OF CHAPTER 3& DISCUSSION ON PROBABLE QUESTINS  REVISION OF CHAPTER 4 & 5& DISCUSSION ON PROBABLE QUESTINS |  |  |  |
| MONDAY  TUESDAY  WEDNESDAY  THURSDAY |