

**MET'S INSTITUTE OF TECHNOLOGY POLYTECHNIC,
BHUBAL KNOWLEDGE CITY, ADGAON NASHIK
DEPARTMENT OF ELECTRICAL ENGINEERING
COURSE OUTCOMES – 'K' SCHEME BY MSBTE**

| Sr.No | Course | Course Code | Course Outcomes |
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| SEMESTER : FIRST | | | |
| 1 | BASIC MATHEMATICS (BMS) | 311302 | CO1 - Apply the concepts of algebra to solve engineering (discipline) related problems. CO2 - Utilize trigonometry to solve branch specific engineering problems. CO3 - Solve area specific engineering problems under given conditions of straight lines. CO4 - Apply differential calculus to solve discipline specific problems. CO5 - Use techniques and methods of statistics to crack discipline specific problems. |
| 2 | COMMUNICATION SKILLS (ENGLISH) (ENG) | 311303 | CO1 - Construct grammatically correct sentences in English. CO2 - Compose paragraphs and dialogues on given situations . CO3 - Comprehend passages correctly. CO4 - Use contextual words in English appropriately. CO5 - Deliver effective presentations in English using appropriate body language . |
| 3 | BASIC SCIENCE (BSC) | 311305 | CO1 - Use basic instruments to measure the physical quantities in various engineering situations. CO2 - Apply the basic principles of electromagnetics to solve given engineering problems. CO3 - Apply basic principles of thermometry and fibre optics to solve engineering problems. CO4 - Predict the structure, properties and behaviour of molecules and compounds based on the types of chemical bond. CO5 - Apply the concepts of electrochemistry and corrosion preventive measures in industry. CO6 - Use the appropriate engineering material and catalyst appropriately. |
| 4 | FUNDAMENTALS OF ICT (ICT) | 311001 | CO1 - Use computer system and its peripherals for given purpose. CO2 - Prepare Business document using Word Processing Tool . CO3 - Analyze Data and represent it graphically using Spreadsheet . CO4 - Prepare professional Slide Show presentations . CO5 - Use different types of Web Browsers and Apps . CO6 - Explain concept and applications of Emerging Technologies . |
| 5 | YOGA AND MEDITATION (YAM) | 311003 | CO1 - Practice basic Yoga and Pranayama in daily life to maintain physical and mental fitness. CO2 - Practice meditation regularly for improving concentration and better handling of stress and anxiety. CO3 - Follow healthy diet and hygienic practices for maintaining good health. |
| 6 | ENGINEERING WORKSHOP PRACTICES (EWP) | 311005 | CO1 - Use firefighting tools and equipment. CO2 - Prepare job using different tools in fitting shop. CO3 - Perform various operations using plumbing and carpentry tools. CO4 - Prepare various welding joints. CO5 - Produce simple job using different sheet metal operations. |
| 7 | ENGINEERING GRAPHICS (EGR) | 311006 | CO1 - Draw geometrical figures and engineering curves. CO2 - Apply principles of orthographic projections for drawing given pictorial views. CO3 - Draw isometric views of given component or from orthographic projections. CO4 - Use various drawing codes, conventions and symbols as per IS SP-46 in engineering drawing. CO5 - Draw free hand sketches of given engineering elements. |
| SEMESTER : SECOND | | | |
| 8 | APPLIED MATHEMATICS (AMS) | 312301 | CO1 - Solve the broad-based engineering problems of integration using suitable methods. CO2 - Use definite integration to solve given engineering related problems. CO3 - Apply the concept of differential equation to find the solutions of given engineering problems. CO4 - Employ numerical methods to solve programme specific problems. CO5 - Use probability distributions to solve elementary engineering problems. |
| 9 | APPLIED SCIENCE (ASC) | 312308 | CO1 - Select relevant material in industries by analyzing its physical properties . CO2 - Apply the concept of simple harmonic motion , resonance and ultrasonic sound for various engineering applications. CO3 - Apply the concept of modern Physics (X-rays, LASER, Photosensors and Nanotechnology) for various engineering applications. CO4 - Use the relevant metallurgical processes in different engineering applications. CO5 - Use relevant water treatment processes to solve industrial problems. CO6 - Use appropriate fuel and electrolyte for engineering applications. |

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| 10 | ELEMENTS OF ELECTRONICS (EOE) | 312309 | CO1 - Identify various electronic components. CO2 - Use semiconductor diodes in different applications. CO3 - Use semiconductor transistors in different applications. CO4 - Use different types of Oscillators as per requirement . CO5 - Test operation of regulated power supply. |
| 11 | FUNDAMENTAL OF ELECTRICAL ENGINEERING (FEE) | 312310 | CO1 - Determine various parameters used in electric circuit. CO2 - Use basic laws of electrical engineering in D.C. Circuits. CO3 - Use capacitor and battery in electrical circuits. CO4 - Use principles of magnetism in Magnetic Circuits. CO5 - Apply Laws of electromagnetism in electrical circuit and systems. |
| 12 | PROFESSIONAL COMMUNICATION (PCO) | 312002 | CO1 - Communicate effectively (oral / spoken and Written) in various formal and informal situations minimizing the barriers. CO2 - Develop listening skills through active listening and note taking. CO3 - Write circulars, notices and minutes of the meeting. CO4 - Draft inquiry letter, complaint letter , Job application with resume / CV, Compose effective E - mails . CO5 - Write Industrial reports. |
| 13 | SOCIAL AND LIFE SKILLS (SFS) | 312003 | CO1 - Enhance the ability to be fully self-aware and take challenges by overcoming all fears and insecurities and grow fully. CO2 - Increase self-knowledge and awareness of emotional skills and emotional intelligence at the place of study/work. CO3 - Provide the opportunity to realizing self-potential through practical experience while working individually or in group. CO4 - Develop interpersonal skills and adopt good leadership behaviour for self-empowerment and empowerment of others. CO5 - Set appropriate life goals with managing stress and time effectively. |
| 14 | BASIC MECHANICAL ENGINEERING (BME) | 312006 | CO1 - Find faults in Thermal Power Plant using acquired knowledge and skills in a given situation. CO2 - Diagnose faults of Material handling system using acquired knowledge and skills. CO3 - Identify faults of Hydraulic turbines and Hydraulic pumps in a given situation. CO4 - Diagnose faults of given Air compressor and Refrigeration system using acquired knowledge and skills |
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| SEMESTER : THIRD | | | |
| 15 | ELECTRICAL CIRCUITS AND NETWORK (ECN) | 313332 | CO1 - Analyze the parameters of single-phase AC series circuits. CO2 - Analyze the parameters of single-phase AC parallel circuits. CO3 - Analyze the parameters of polyphase AC circuits. CO4 - Apply network reduction methods to solve DC circuits. CO5 - Apply network theorems to solve basic electrical circuits. |
| 16 | ELECTRICAL POWER GENERATION, TRANSMISSION AND DISTRIBUTION (GTD) | 313333 | CO1 - Maintain the optimised working of the thermal power plant and hydro power plant. CO2 - Select the relevant power generation technology based on economic operation. CO3 - Interpret the normal operation and parameters of the electric transmission system. CO4 - Interpret the parameters of the extra high voltage transmission system. CO5 - Maintain the functioning and operation of electric power distribution system. |
| 17 | ELECTRICAL AND ELECTRONIC MEASUREMENT (EEM) | 313334 | CO1 - Apply the basics of measurement to the measuring instruments. CO2 - Measure precisely electrical power and energy using appropriate meters. CO3 - Use digital measuring instruments for different applications. CO4 - Maintain required pressure for given application using pressure transducer. CO5 - Use appropriate transducer for maintaining required flow, level and temperature in given application. |
| 18 | FUNDAMENTALS OF POWER ELECTRONICS (FPE) | 313335 | CO1 - Test the functionality of a given power electronic device. CO2 - Test the switching performance of a thyristor. CO3 - Test the performance of given controlled converter. CO4 - Test the performance of given chopper. CO5 - Use suitable power electronic circuit for given application. |
| 19 | ESSENCE OF INDIAN CONSTITUTION (EIC) | 313002 | CO1 - List salient features and characteristics of the constitution of India. CO2 - Follow fundamental rights and duties as responsible citizen of the country. CO3 - Analyze major constitutional amendments in the constitution. CO4 - Follow procedure to cast vote using voter-id. |
| | ELECTRICAL MATERIAL AND | | CO1 - Follow safe working practices when undertaking electrical work. CO2 - Select relevant conducting, electromagnetic and magnetic materials. |

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| 20 | MATERIAL AND WIRING PRACTICE (EMW) | 313015 | CO3 - Select relevant insulating materials. |
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