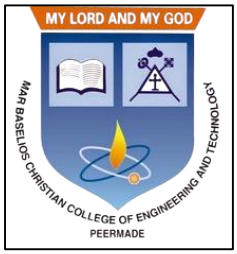

MAR BASELIOS CHRISTIAN COLLEGE OF ENGINEERING AND TECHNOLOGY, PEERMADE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

REPORT ON

Electrical Wiring Workshop

ABOUT THE WORKSHOP

Organized By: Electrical and Electronics Department

Date: 20-November-2023

Venue: Electrical Lab, Mar Baselios Christian College of Engineering and Technology, Peermade

Attendees: Students of Electrical and Electronics Engineering

INTRODUCTION

The Electrical Wiring Workshop is a fundamental component of practical electrical engineering and technical education. It provides students and trainees with hands-on experience in basic electrical wiring practices, safety protocols, and circuit installation techniques. This workshop is designed to bridge the gap between theoretical knowledge and real-world application by introducing participants to the essential tools, materials, and procedures used in residential, commercial, and industrial electrical systems.

Throughout the workshop, participants gain insight into wiring systems, including single-phase and three-phase connections, distribution boards, earthing methods, and protection devices like fuses and circuit breakers. Emphasis is placed on adherence to safety standards, accurate circuit design, and proper installation techniques. This foundation prepares individuals for more advanced electrical tasks and cultivates the discipline and precision required in professional electrical work.

By the end of the workshop, attendees are expected to confidently interpret wiring `in electrical installations.

❖ SYNOPSIS OF THE PROGRAM

The **Electrical Wiring Workshop** is a practical training program aimed at imparting essential skills in electrical installation and maintenance. It focuses on equipping participants with the knowledge and hands-on experience needed to perform safe and efficient wiring practices in domestic, commercial, and industrial settings.

During the workshop, students are introduced to various types of electrical wiring systems, tools, and components such as switches, sockets, MCBs (Miniature Circuit Breakers), DBs (Distribution Boards), and earthing systems. Key topics include the interpretation of wiring diagrams, the layout and design of circuits, and the implementation of safety procedures as per national standards.

The workshop blends theory with practical sessions, covering activities like:

- Wiring of one-way, two-way, and intermediate switches
- Installation of lighting and power circuits
- Use of protection devices (fuses, MCBs, ELCBs)
- Earthing and grounding methods
- Fault detection and troubleshooting

This workshop is especially beneficial for students pursuing electrical engineering, diploma courses, and ITI programs. It builds foundational skills that are essential for both further academic pursuits and real-world applications in the electrical field.

Key Takeaway

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1. Energy efficiency: Optimizing energy usage to reduce waste.

2. Energy management: Planning, monitoring, and controlling energy consumption.

3. Indian energy scenario: Challenges, opportunities, and initiatives.

4. Renewable energy sources: Solar, wind, hydro, and biomass.

5. Energy-efficient technologies: LED lighting, smart grids, and green buildings.

PO JUSTIFICATION

PO1 – Engineering Knowledge
→ Students apply fundamental electrical concepts in real-world wiring tasks, such as circuit protection, load calculation, and earthing.

PO2 – Problem Analysis
→ Diagnosing wiring issues and determining safe and effective solutions involve analytical and troubleshooting skills.

PO3 – Design/Development of Solutions
→ Designing wiring layouts for homes, labs, or industrial setups requires understanding of standards and load management.

PO4 – Conduct Investigations of Complex Problems
→ Includes testing for continuity, fault detection, insulation resistance, etc., during practical wiring exercises.

PO5 – Modern Tool Usage
→ Utilization of tools like multimeters, insulation testers, wire strippers, etc., aligns with the modern tool proficiency outcome.

PO6 – The Engineer and Society
→ Understanding safety codes and electrical regulations ensures student awareness of societal and legal aspects of electrical installations.

PO9 – Individual and Team Work
→ Students often work in teams for wiring tasks, promoting collaboration, delegation, and coordination.

PO10 – Communication
→ Clear labeling, circuit explanation, and schematic representation support effective communication of technical information.

PO12 – Life-long Learning
→ Hands-on workshops enhance practical competence and motivate students to update their skills continuously.

CONCLUSION

The Electrical Wiring Workshop proved to be a highly informative and skill-enhancing experience for all participants. It provided a strong foundation in basic wiring techniques, safety practices, and the use of essential electrical tools and components. By blending theoretical understanding with practical application, the workshop enabled students to develop the confidence and competence required for real-world electrical tasks.

Through guided hands-on sessions and interactive learning, participants not only improved their technical abilities but also gained a deeper appreciation for precision, safety, and standard procedures in electrical installations. This workshop has undoubtedly strengthened the participants' readiness for future academic projects, industrial training, and professional roles in the electrical field.

POSTER


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Date
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GLIMPSES OF WORKSHOP