THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423] **APRIL 2023** **Sub. Code: 2456**

BACHELOR IN PROSTHETICS & ORTHOTICS
FIRST YEAR (Regulation 2017-2018 onwards)
PAPER VI – BASIC ELECTRONICS
Q. P. Code: 802456

Time: Three Hours **Answer All questions** **Maximum : 100 Marks**

I. Elaborate on : **(3 X 10 = 30)**

1. Explain Transformer and its types.
2. Explain in detail the simple safety procedure to be taken when servicing equipment.
3. What do you understand by integrated circuit? Explain briefly about its applications and types.

II. Write Notes on : **(8X5=40)**

1. Explain difference between intrinsic and extrinsic semiconductor.
2. Explain the difference between AC and DC circuit.
3. Voltage regulators Integrated circuits.
4. Total Resistance equations for 3 resistors connected in series and in Parallel.
5. Voltage Gain, Current Gain, Power Gain in Amplifier.
6. Describe the purpose and working principle of fuse and MCB.
7. Single phase and Three Phase supply system.
8. What is sensor and explain about its types and application?

III. Short Answers on : **(10 X 3 = 30)**

1. What is the definition and function of an amplifier?
2. What is Bioelectricity?
3. What is Electromyography?
4. Define Voltage and its unit.
5. What are the current practice in pin connection and colour codes?
6. What is insulator?
7. Define microprocessor and its application in prosthetic field.
8. Write down the SI unit of Potential difference, Frequency and current.
9. Define transformer ratio.
10. What is Conduction band?

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