



Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE,

CONGRESS NAGAR, NAGPUR



Department of Electronics

Session 2023-24

B.Sc. First Year Semester-I

BRIDGE COURSE: ELECTRONICS

Report: Bridge Course Conducted by Electronics Department, S.S.E.S. Amravati's Science College, Congress Nagar, Nagpur

The Electronics Department of S.S.E.S. A's Science College, Nagpur, conducted a Bridge course as per the RTMNU (Rashtrasant Tukadoji Maharaj Nagpur University) notification for B.Sc. First-year Sem-I students in the academic year 2023-24. The aim of the Bridge course was to bridge the gap between the syllabus covered in the 12th Std. and the detailed curriculum of B.Sc. Sem - I.

The B.Sc. Sem - I RTMNU syllabus encompassed fundamental topics such as:

- Importance of Electronics.
- Need for Electronics literacy in society.
- Electronics in the 21st Century.
- Importance of Electronics in daily life.
- Carrier opportunities in Electronics.
- Miracles from Electronics.

Students enrolled in B.Sc. Sem I after successfully qualifying for their 12th Exam, and the Bridge course served as a foundational step in transitioning them from the Std. 12th curriculum to the rigorous academic demands of B.Sc. studies.

Syllabus:

Electronics paper-I:

- 1) Basic components: Resistors, Capacitors, Inductors, Transformers, etc.
- 2) Semiconductor basics: Atomic structure, classification of materials, semiconductor, PN junction, types of diodes.
- 3) Circuit analysis: Ohm's law, Kirchoff's current law, Kirchoff's voltage law and power supply.

Electronics paper-I:

- 1) Difference between Analog and Digital circuits, difference between AC and DC circuits.
- 2) Digital Electronics: Positive logic and Negative logic system, study of basic logic gates.
- 3) Switching circuits: Representation of LOW voltage level and HIGH voltage level in digital circuits.

Course Outcome:

- Learners will develop interest in the subject of Electronics and it will also be useful to fill the gap.
- To make the students familiar with the basic concepts of Electronics.
- To encourage and motivate the students for the technical education.
- To make the students aware towards the various branches of Electronics. For example: Circuits, Networks, and Communication and Embedded systems.

