EduPaper Archive

RGPV B.Tech – First Year Syllabus

BT-104: Basic Electrical and Electronics Engineering

Unit I: DC Circuits

- Ohm's law, Kirchhoff's laws
- Series and parallel circuits
- Mesh and nodal analysis
- Superposition, Thevenin's and Norton's theorems

Unit II: AC Circuits

- Sinusoidal signals, phasors
- RLC circuits, impedance and admittance
- Power factor, resonance
- Three-phase systems: star and delta connections

Unit III: Electrical Machines

- Transformers: working, EMF equation, losses
- DC machines: types, characteristics
- Induction motors: principle, types
- Synchronous machines: basics

Unit IV: Semiconductor Devices

- Diodes, transistors, FETs
- Rectifiers, voltage regulators
- LEDs, photodiodes, optoelectronic devices

Unit V: Digital Electronics

- Number systems, binary arithmetic
- Logic gates, Boolean algebra
- Combinational and sequential circuits
- Flip-flops, counters, registers

📥 Download Official Syllabus

- [2Learn – BT-104 Course Overview](http://edupaper-archive.netlify.app)
- [CompleteNotes – BT-104 Notes & PDFs](http://edupaper-archive.netlify.app)