



Govt. Science College, Jabalpur

B.Sc. 3rd year

Electronics

**Microprocessors and Microcontrollers (Theory)
(Group A Paper I)**

Course Learning Outcomes (CLO)

- ❖ Understand the basic blocks of microcomputers i.e. CPU, Memory, I/O and architecture of microprocessor's and Microcontroller's.
- ❖ Apply knowledge and demonstrate proficiency of designing hardware interface for memory and I/O as well as write assembly language programs for target microprocessor and microcontroller.
- ❖ Derive specifications of a system based on the requirements of the application and select the appropriate Microprocessor or Microcontroller.






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Electromagnetics, Transmission line and waveguides (Group A Paper II)

Course Learning Outcomes (CLO)

- ❖ Understanding the fundamentals of Electrostatics and Magneto-statics hence get the insight of the characteristics of materials and their interactions with electric and magnetic fields.
 - ❖ Understand the application of Vector Differential and integral operators in Electromagnetic Theory.
 - ❖ Interpret Maxwell's equation in differential and integral forms, both in time and frequency domains.
 - ❖ Describe the complex ϵ, μ and σ , plane waves, Snell's laws from phase matching, and calculate the reflection and transmission coefficients at the interface of simple media.
 - ❖ Calculate input impedance and reflection coefficient of an arbitrarily terminated transmission-line and can use Smith chart to convert these quantities.
 - ❖ Explain the phenomenon of transmission line and its types.
 - ❖ Perform calculation form finding out performance parameters of transmission line like losses SWR.
 - ❖ Understand the modes of transmission in waveguides and other components involved in microwave communications.
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Control Systems

(Group B Paper I)

Course Learning Outcomes (CLO)

- ❖ Understanding the concept of closed loop control systems.
- ❖ Analyze the stability of closed loop systems.
- ❖ Apply the control techniques to any electrical systems.
- ❖ Compute and assess system stability.





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**Computer Networks
(Group B Paper II)**

Course Learning Outcomes (CLO)

- ❖ Understand the fundamentals of computer networks and issues involved.
- ❖ Understand the set of rules and procedures that mediates the exchange of information between communicating devices.

