

Syllabus for Microsystems (SCPH17)

Note:

- i. There will be one Question Paper which will have 100 questions.
- ii. All questions will be compulsory.
- iii. The Question Paper will have two Parts i.e. Part A and Part B
- iv. Part A will have 50 questions based on Research Methodology
- v. Part B will have 50 questions based on Subject-Specific Knowledge.

50% of the questions will be from Research Methodology and remaining from the other specified topics.

PART A

Research Methodology: Experimental Design; Fundamentals of Sampling; Data: types, quality measurement; Processing and Analysis of data; Hypothesis Testing (parametric, non-parametric), Theory of Probability.

Mathematics: Integral and Differential Calculus, Linear Algebra, Numerical Analysis, Modern Algebra.

PART B

Specific Syllabus for the Microsystems Stream:

Digital logic, electrons in solids, energy band theory, charge carriers in semiconductors, drift-diffusion theory, p-n junctions, MOS transistor, Basics of CMOS analog circuits, Basics of CMOS digital VLSI circuits, Basics of MEMS and VLSI Technology.

