

**D. J. SANGHVI COLLEGE OF ENGINEERING**  
**DEPARTMENT OF ELECTRONICS ENGINEERING**  
**Integrated Circuit Technology SEM VII**  
**Assignment 02**

**N.B. :**

[Total Marks: 20]

- 1) Write your **SAP ID** on the top of the first page.
  
1. What is Hall effect? Enlist important electrical parameters for which measurement is required before device processing begins. Explain the procedure for measuring Hall mobility. [10]
  
2. Describe the experimental setup for the four probe method for resistivity measurement and hot probe test for conductivity measurement with the help of a neat diagram. [10]
  
3. Describe the Haynes- Shockley experiment for measuring minority carrier mobility. [10]
  
4. Explain time of flight method for measuring drift velocity of carriers. [10]
  
5. Describe the experimental setup for Photo-conductive decay for measuring minority carrier lifetime. [10]
  
6. In MMIC, unique structures like air bridges and coil inductors are used. Explain them in details. [10]
  
7. Explain the process flow for a self-aligned double-poly bipolar technology. [10]
  
8. Explain process flow for an oxide isolated triple-diffused bipolar technology. [10]

B1 Batch : Q1, Q7

B2 Batch : Q2, Q3

B3 Batch : Q4, Q5

B4 Batch : Q6, Q8

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