

Self Assessment Questions (SAQs) 2

- Briefly can you describe what the main stages in fabrication of semiconductor devices?
- Can you think of disadvantages associated with different metal film deposition techniques?
- Explain the origin of tensile and compressive stress in film/substrate structure.
- Describe how dislocation and stacking faults are generated in heteroepitaxy.
- What are the potential reliability and failure issues generated by hillocks and whiskers?
- Explain the reasons for poor metal coverage and dielectric coverage in IC fabrication. What are the consequences of these limitations?
- Provide examples of defects or contaminants that can be introduced in each of the following stages in fabrication: 1) Photolithography 2) Chemical vapour deposition 3) Plasma processing and 4) Ion implantation.