(b) Verification is the peredictive analysis to ensure that the synthesized design, when manufactured, will perform the given I/O function.

Verification is done before silicon development. It is done at the time of product development for quality checking and bug fixing in design. Verification is done at the physical synthesis phase in manual gomens

(C) Semiconductors are materials which have conductivity between conductors and monnon-conductors or insulators. Semiconductors are made from price elements, typically silicon or germanium, or compounds such as gallium des arsenide.

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- · BJTs have low thoumal stability
- · BJTs have a low switching frequency.
- · They have a very complex base control and so requires skilful handling.
 - . They produce more noise.
- . There is more power dissipation and current leakage.
 - · Power dissipation limits device density.
 - . BITs are bulky requiring more space in the jo Ic. hubudahi
- (b) There are two pkinds of power dissipation in CMOS- static and dynamic. The statice dissipation prefers to the time when the CMOS is not in the process of switching states. The static power dissipation is very less because the current flowing through the IC is nearly zero. But, there is dynamic Loss as well. It is the loss which occurs while the circult switches from one logic state to another. Some power is used to charge the capacitors as well which is known as load capacitance. All these losses together pesults in power dissipation in emos.

In static condition the current through a CMOS is zero. However there is a small amount of static power consumption due to reverse bias. leakage between diffused regions and substrateof a CMOS. The source-drain diffusion and the n-well diffusion from povesitic diodes in the CMOS between n-well and substrate. These parasitic diodes contribute to power loss as they