

ASIC INTERVIEW QUESTIONS

Ques.1-What is an Application-Specific Integrated Circuit (ASIC)?

Ans-An application-specific integrated circuit, or ASIC is an integrated circuit (IC) which is built to satisfy some specific need. As this is a customized IC it can improve speed, consumes less electricity and perform the specific task assigned to it very well. Though it is expensive particularly if only a few pieces are required.

Ques 2-What is a full custom ASIC?

Ans-These are made from the scratch. All photolithographic layers of these ASICs are predefined and there is no room for change during manufacturing.

Ques 3-What is Semi-Custom ASIC?

Ans-These are the application specific integrated circuits in which a little change can be made during manufacturing so that they can be used for general applications of similar types although the masks for the diffused layers are already fully defined.

Ques. 4-What is Platform ASICs?

Ans- These are designed and produced from a defined set of methodologies, intellectual properties and a well-defined design of silicon that shortens the design cycle and minimizes development costs. Platform ASICs are made from predefined platform slices, where each slice is a pre manufactured device, platform logic or entire system. The use of pre manufactured materials reduces development costs for these circuits.

Ques. 5-What are the various ASIC fabrication technologies?

Ans.-CMOS is currently the dominant ASIC fabrication technology. Others include Bipolar, BiCMOS and GaAs.

Ques. 6-Why CMOS is currently dominating in ASIC fabrication technology?

Ans.-CMOS is currently the dominant application specific integrated circuits fabrication technology due to its many advantages including cost, performance, density, and manufacturing / designer experience.

Ques. 7- What is a system-on-chip (SoC)?

Ans.- Application specific integrated circuits often include entire microprocessors, memory blocks including ROM, RAM, EEPROM, Flash and other large building blocks. Such an ASIC is often termed a SoC (system-on-chip).

Ques. 8- Which Hardware description language is used for ASICs?

Ans.-Verilog

Ques. 9- Which is the initially used technology for ASICs.

Ans-The initial ASICs used gate array technology.

Ques. 10-Give some examples of ASICs?

Ans- Microprocessors, memory blocks including ROM, RAM, EEPROM, and Flash.

