Qualcomm

PROFILE: Core

Name of the Role: Associate Engineer

Expected GPA requirement: 8+

Eligible departments: ECE, EEE, CSE

The process involved: 3steps: OT, 2 Technical Interviews, and 1 HR Interview.

Test Details:

Step 1 – Online Test: Aptitude, Basic Programming MCQs [OS, DBMS, Basics of C and C++, (refer GFG), Predict Output, Structures Union Enum, OOPs], Tech questions [CMOS (Small Signal + Digital Concepts), BJT (Small Signal), DACs and ADCs, Counters and Digital comprised of flip flop questions, boolean laws based, combinational design using nand/nor and FSM structure/design, few from signals and systems and CAO].
The difficulty level for aptitude questions is moderate (Einstein Puzzles, Data Interpretation, Blood Relation, General Aptitude Questions, Mixture Alligations etc.).

- **Step 2 – Interviews:**

Technical Interview: Questions were asked from digital, VLSI, STA(Questions like what is setup, hold time, how they are affected by clock skew, how they affect a latch, how between 2 clock domains sta is done).

Few questions were asked about SRAM Memory layout, Sense Amplifier & designing 6T SRAM Cells.
Example: Problems that can occur in SRAM and how to overcome it, CMOS Design for given boolean expression, CMOS Size and its relationship to leakage and threshold, ASIC Front End Flow, DFT, designing frequency dividers and Verilog coding of counters.
Questions were also asked based on the projects you have done.

- **HR Interview:**

Was asked common HR questions (Example: Tell us about yourself, why Qualcomm, why do you prefer placements over highers, future plans, about CGPA etc.).

Preparation:

- Solve the questions given in the CTC tests conducted by the seniors
- See relevant topics in detail in textbooks – Sedra and Smith for analog,
- Gate questions - Digits
- Finally, few websites like geeks for geeks can be used for preparation for software MCQs, the VLSI expert
- Practice Aptitude
- Basics from Analog, signals.
- https://drive.google.com/file/d/1Eci-7yleDXXKMFx3YbZeeVWLahY3ss3b/view?usp=sharing

JOB DETAILS:

A typical day in this role:

- Your work highly depends on your team (communication, processing, storage, development etc.) and your role (HW / SW).
- Look at the experiments planned / deliverables scheduled in the week and then talk to teammates (sometimes other teams) to decide your work plan.
- Writing code for implementation, monitor and analyse the ongoing experiments.
- Lots of exploration, understanding and analysis work.

Expectation vs Reality:

It has been an incredible journey, and there is a lot of scope for learning and working on cutting edge technology. Work might not be as exciting as you think, even if it's a famous company.

Your Growth in 1-2 years :

With each project comes a different kind of experience, and you learn something new. You also learn to work in an area where you don't know much. You learn to ask the right questions and go from there.

Projects and tasks given:

- In the initial days, the tasks are small and would have been planned by the manager. Most are smaller scripts and experiments that can be completed in -3 days. Also, we are made to own a small portion of a chip and are expected to implement it.
- The complexity grows as we start to work independently; we will be given the responsibility to communicate with the team and implement it.

- Each project is different, with a different scope for learning: Android development, image processing, design functionality tests for a proprietary piece of hardware.

Work culture, Employee benefits etc. and few points about the company:

- The work culture is excellent.
- Work-life balance is good.
- Qualcomm's insurance policies are very considerate and dependent friendly.
- Working hours can be bad depending on the team.

Any advice from your side:

- Know your resume well.
- Be thorough with Digital, VLSI and communication.
- STA is a must.
- Verilog project and deep understanding of it would be an advantage. Aptitude is essential for clearing OTs.
- The work done in the internships and projects needs to be known thoroughly because the panellists focus mainly on your understanding of the projects and the knowledge you have gained from them.
- Interviewers will try to be friendly, don't get scared and think out loud. Try to be silent during the interview, and they will want to see how you think.
- Be confident in interviews. Keep learning and have an open mind.

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