Placement Interview Experience

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Department: Electronics & Telecommunication

Batch:2018-22

Company Name: Texas Instruments

Job Role:Analog Engineer

Domain of Your Role*(Software Development/Consulting/Core Electronics, etc)*:**Core Electronics**

Cut-off: 70% for Class 10 ,12 and UG till 6th Semester

Interview Process*(How many rounds were there and what were the rounds?)*:
2 Technical Interviews followed by HR Interview

Questions asked in the each stage of the process:

ONLINE TEST-:

The paper consisted of two parts , first one was Analog Section (20 Questions in 45 minutes) and second was aptitude (20 Questions in 30 minutes)
The Aptitude section was easy and no special preparation is needed for it .Just practice some questions from websites before the exam.
Analog section mostly contains questions on R-L Circuits with combinations of diodes,Op Amp questions, 1-2 questions from oscillator and control systems(Bode Plot) each .They can be practiced by attempting previous year GATE questions from these topics.

INTERVIEW-:

Technical interview can be further divided into 2 rounds based on your performance in the first round.I had 2 rounds of Technical Interview.

First round started with First order Low pass R-C Filter and I was asked to draw a step response of it.
Then he added one more resistor at the output and asked me to redrew the step response on the same diagram.He went on adding resistors and capacitors in the circuit[the circuit was always first order] and asked me to draw the step response

Then he shifted to OPAMP and asked me the gain of an Inverting OP AMP amplifier.Then he interchanged the terminals such that the circuit was in positive feedback and asked me to draw the transfer characteristics[Hysteresis loop vali].
Then he drew the following circuit and asked me to identify the charging and discharging path and the output of the circuit for a square wave .[Q No - 1 in image).

This round lasted approximately 45 minutes.

Second Round started with the following Op Amp Circuit and I was asked to find the input impedance of it [Q No -2 in image].

Then he showed me a network and asked me to calculate voltage at different nodes in the circuit diagram [Q No -3 in image].

Then , at last he showed a circuit consisting of many switches and the switches were operated based on a given waveform and asked me to find the steady state voltage of one of the caps.

Then , he asked some questions regarding my Family Background,why not MS/MBA,why analog over digital , any questions for him etc.

This round lasted around 55 minutes.

Reason behind selection results*(Which skills helped you the most to get the job?)*:
Analog Profile demands knowledge of Network Theory,Analog Electronics and Control Systems .So,try to complete these subjects before your test along with solving previous year GATE questions of these subjects(for practice).My GATE preparations helped me the most .

They want to test your basics and how you approach a new problem from a question you have already answered.They will provide you hints when you are stuck or approaching wrong.I was wrong at many instances but what matters is if you can proceed to a correct conclusion after provided with hints from the interviewer.

They will provide you plenty of time to think about the questions, so be positive and answer confidently and feel free to ask for hints when you get stuck.

Preparation Strategy*(How did you prepare for the non-interview rounds? How did your preparation evolve for the interview rounds?)*:

Practice Transient analysis of R-C and R-L Circuits and OPAMP as they are very important for online test as well as Interviews .

Resources to prepare from -

Necessary Resources*(Must Do)*: Previous year GATE questions from Analog Electronics and Network Theory[KCL,KVL,Transient,Network Theorems].Practice R-C and R-L circuits from Nagendra Krishnapura lecture series on Basic electrical circuits,also one lecture where he has explained how to assign polarity to OPAMP to ensure it is in Negative Feedback.

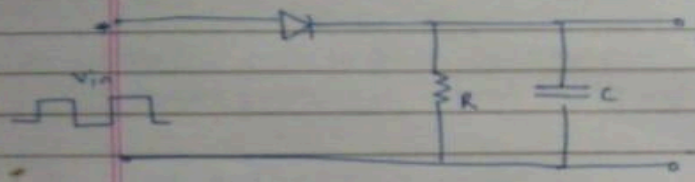
Advanced Resources*(Can Do)*: Razavi lecture series available on Youtube.

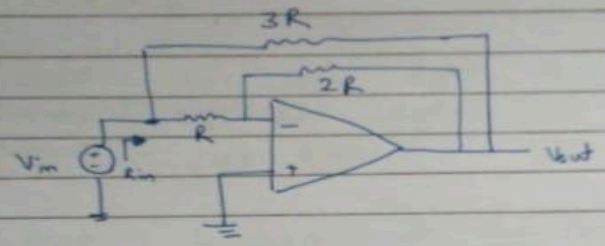
Anything else that you'd like to share with the students:

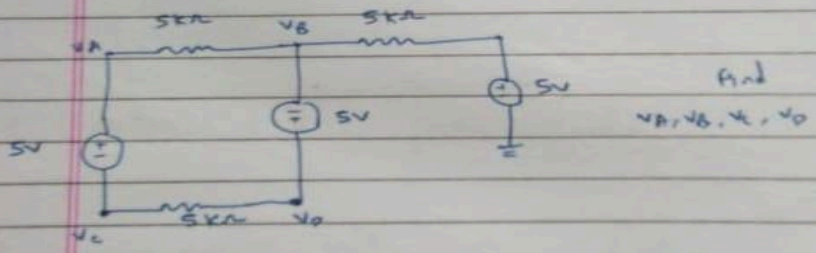
I am attaching an image consisting of some questions asked during Interview and a link to a Youtube channel for some good R-C circuit questions.

https://www.youtube.com/channel/UCoch0A28RtmnWZFtYiavuTQ/videos

http://coreplacementsnsit.blogspot.com/2018/08/hi-i-am-rachit_14.html?m=1
(Placement information for both Analog and Digital domains,contains a google drive link for questions).


V_{in}
R
C
+
Find
V_{out} ?


3R
2R
R
V_{in}
R_{in}
V_{out}
Find R_{in} ?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5V
5V
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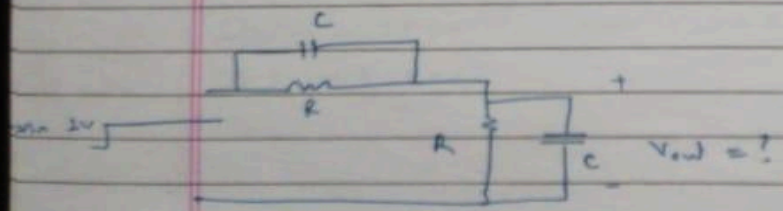
V_C
V_D
Find
V_A, V_B, V_C, V_D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