PLACEMENT TIPS

For Placement Season - 2013



"Excellence has always been achieved by those who dared believe that something inside them is superior to circumstances"

Compiled By:

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ACKNOWLEDGEMENT

I would like to thank all the MCS 2011 students who took out some time from their schedule to fill the survey conducted by me (and curse those who didn't filled despite of multiple reminders. ... :D :D). This document contains some general placement tips along with experience of MCS 2011 students. Hope it helps you.

PLACEMENT TIPS

For Placement Season - 2013

Well, most of you are here in IIT Delhi to get a good job and believe me you will definitely get one. In this document I have listed few things that you should keep in mind while preparing for placements. You might find it useful. They are listed in order of their importance.

TECHNICAL KNOWLEDGE

Most of the companies come here to recruit for technical profiles (Software developer, Research etc.). They expect you to have sound technical knowledge. The questions that they will ask in the written tests or interviews might be tricky (like the one below :D).



"Which came first: the hardware or the software?"

The written test of most of the companies has technical section (or only technical section). The questions can be asked from any subject (Data Structure, OS, N/W etc). But most of the companies ask programming based questions. You should have at least basic knowledge of all the other subjects. For mastering coding skills you can use the following material:

 $Book: \underline{\text{Data Structures And Algorithms Made Easy: Data Structure And Algorithmic Puzzles}}$ by Narasimha Karumanchi (suggested by many students)

Website: http://www.geeksforgeeks.org/

In the technical interview, interviewer always asks questions about your major project topic and the associated field. Do prepare that well.

COMMUNICATION SKILLS

Having a sound technical knowledge is not enough. You should be able to explain your answers to the interviewer properly. If your comm. skills are below average start working on it from today itself. It's as important as technical knowledge;).



APTITUDE

Well few companies do ask questions (in their written and interviews) based on Verbal and Numerical aptitude. Companies like Samsung (R & D), Dell, Citi Corp, Works Apps etc had aptitude section in their written exam (or only aptitude section). Most of the questions were on data interpretation and verbal reasoning. You can use **R.S. Agrawal** for studying it.



"No, an aptitude test is not a test on your cell phone apps knowledge."

The other numerical aptitude questions were on speed and distance, Trains, Probability, Percentage, boats and streams.

RESUME

The resume should be prepared with a lot of care. The format of resume will be provided by TnP beforehand and it has to be filled online. Include only those things which you can justify in the interview.



GPA?

The most important question - "My GPA is less (less means below 7:D), will I be placed". The answer is yes, you will get a good job if you have good technical knowledge and Communication skills.



Though few companies do have a cut-off (Google – above 8 CGPA, Yahoo- 8, IBM IRL – 9). But even if your CGPA is below 7 you have a fair chance of getting a good job. Many companies (Amazon, Nvidia, Microsoft, Epic, Samsung (R n D), Worksapp, Epic etc) allowed everyone to appear in their written test. So don't lose hope even if you have a low GPA. But it doesn't mean that you should stop studying.

H R INTERVIEW

The HR interview is a test of your comm. skills. It has lesser weightage than technical interview. In this interview, they will ask about you, your strengths, weaknesses, they will tell you about their company, package and other non-important stuff: D. Be confident and tell them about your positive qualities and show them that you are interested in joining their company. Few standard HR questions are listed below:

"Where Do you see yourself in 5 years"

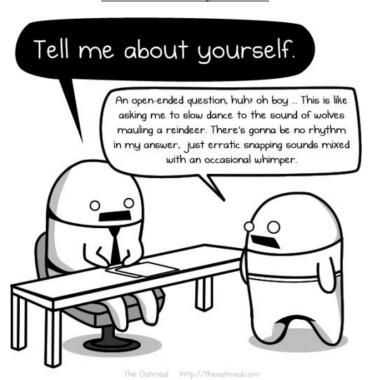


"So ... where do you see yourself in four million years?"

"Why should we hire you"



"Tell me about yourself"



This one is really important:

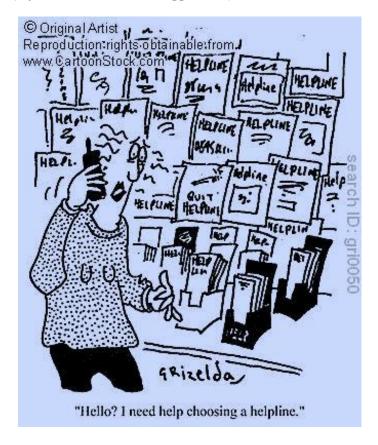
"Do you have any questions"



Do ask few questions, it shows that you are interested in their company.

NUMBER OF APPLICATIONS

Well you will be allowed to apply in 40 companies (which can be extended to 50 after citing appropriate reason). Be careful while applying. 40 will initially appear to be a small number (as more than 100 companies will come for recruitment) but you will be placed before that number exhausts (if you follow the above suggestions).



While applying for particular company do check the posting location, the job profile, Gross package etc. and then make a decision.

HELP FRIENDS

The placement process is cumbersome. You might have 7-8 interviews in a day followed by written test. If you are placed before your friends, do help them in finding their interview locations, motivate them, and check if they need any documents or other stuff. Make sure they don't miss any interview.



SENIOR'S EXPERIENCE

Well, I did a small survey in which I asked few general questions to MCS 2011 students. This section lists the responses (unedited) given by them: (Listed in the order they appeared in survey database)



"Been There, Done That"

#1

- Company in which you got placed.: Oracle
- Books, Study Material or any website used for studying: Data Structures- Karumanchi www.geeksforgeeks.com, C++ by Herbert Schildt.
- Company specific Tips (in which you got placed): Do not lose your confidence. Mine
 was a kind of stress interview
- Miscellaneous Tips (GPA, things to remember etc): Try not to forget what you studied for gate. It helps a lot in all companies.

- Company in which you got placed.: Nvidia
- Books, Study Material or any website used for studying: geeks for geeks (website) for algo data strucutre ... I had taken OS in my 2nd sem .. i got placed only bcoz of that
- Company specific Tips (in which you got placed): nvidia do lot of systems work ... so not
 just me for everyone who attended interview ... we were asked OS architecture parallel
 programmin kind of things ,,,,,, no algo or DS :)

• Miscellaneous Tips (GPA, things to remember etc): have 7+(CGPA) to be safe ... but thats abt it ... make sure u do good job in ur project it really matters..... few months bfore placements jus do algo DS in depth ... for DS(data structure) things like trees, list, heap ... cover a lot of problems in depth for algo do Dyanamic prog very important technical interview very likely will have it.... do some greedy ... sorting ... then u'll b good to clear any interview

#3

- Company in which you got placed.: Microsoft
- Books, Study Material or any website used for studying: geeksforgeeks.org. This is
 THE place to refer to. Contains almost everything- Karumanchi Book. Like a printed
 version of geeksforgeeks. These should be enough. careercup.com Look these up
 occasionally-- interviewstreet.com For hobbyists.. codechef.com, leetcode.com,
 codeforces.com, spoj.pl, topcoder.com
- Company specific Tips (in which you got placed): Prepare from interview experiences on geeksforgeeks. Think about design questions also. Like I was asked how would you design an ATM for illiterate people in rural areas. You just have to answer this at an abstract level, like what features would you include. Microsoft always (and actually always) asks you to give test cases for you code. So basically give inputs for which the code wouldn't work. If nothing you can always give integer overflow, null pointer exceptions, arrays going out of bounds for certain inputs to give segmentation faults. Rest is very easy. If you've read geeksforgeeks, you would have heard most of the questions
- Miscellaneous Tips (GPA, things to remember etc): It's good to have a GPA above 8.
 Although it only helps in getting you shortlisted for some companies. MS had no such criteria this time. Rest they'll keep you if they need you.;)

- Company in which you got placed.: Adobe, EPIC
- Books, Study Material or any website used for studying: geeksforgeeks.com, Algo (MAinly DP-Dynamic Programming). C (pointers). And I should have practices writing code on paper. It is different than writing on computers.
- Company specific Tips(in which you got placed): I am a perfect nobody to give tips. Here is the experience for MS, Adobe and EPIC.

*MICROSOFT:

1> a matrix is given, each cell is black or white. You have to find no. of objects. An object is defined by a spread of similar coloured boxes in 8 neighbourhood. ex. (4x6 matrix)

100001

011101

101001

000001

has 3 objects 2 1-type object. 1 0-type object.

- 2> linked list represents number, add two numbers.
- 3> 2 linked list has sorted numbers, merge using only pointer manipulation. No extra node should be created.
 - 4> Project.
 - 5> Check for a tree being a subtree of another.
 - 6> find out least common ancestor from a tree. parent pointer is not available.
 - 7> innovate on alarm clock.
 - 8> normalize a number: 123.4567, $2 \Rightarrow 1.23 * 10^2$. there is catch, can you see?
- 9> given a matrix, you need to traverse the boxes in 4 neighbourhood. boxes are marked as 0,1 or 2 saying 0 cost, 1 cost and death. find whether it is possible to reach from (i,j) to (p,q). If so find min cost

*ADOBE:

- 1> Project
- 2> Some question on string finding in a big file that can't fit in memory. How to split and apply KMP. 1st round was really bad.
 - 3> Fav sub, basic ques on networks.
- 4> puzzle. A river like this, X width, you have two sticks of X-0.001 width, no ropes. How to build a bridge across.

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5> citi on both sides of river DP problem. reducible to finding maximal incr sequence problem. see **csail.mit** site. All dp questions come generally from here.

6> allocate space for matrix, and some minor variations.

7> check if a tree is a subtree of another. What if tree is big enough_not to fit in memory. How to split and merge results?

8> HR: std ones, 5 yr plan, why this, your hobby, any questions regarding job?

*EPIC:

1> binary search, merge sort.

2> you have one singly linked list, and you have pointer to one node, delete that node in o(1) time.

3> HR: std questions. it was 30 min tech + 15 min HR.

Miscellaneous Tips (GPA, things to remember etc): GPA matters in the first stage, i.e. short listing from resume. After that it does not matter a single bit. Even if you are in java, prepare C pointers. I found myself tangled many times while tackling pointer quesions.
 My mistake also, written proficient in C without really going through it before interview.

#5

- Company in which you got placed: Lexity
- Books, Study Material or any website used for studying: GeeksForGeeks, CodeChef,
 TopCoder, Codeforces
- Company specific Tips (in which you got placed): Every company wants problem solving skill, so Lexity too. Inspite of this they asked Database, little about Python(as I mentioned in Resume).
- Miscellaneous Tips (GPA, things to remember etc): If anyone say anything about GPA, just say to him, @#@\$!!@\$!!! Other interviews 1) Microsoft 2) Directi 3) Amazon. Try to improve Dynamic Programming.

- Company in which you got placed: **Oracle(ST)**
- Books, Study Material or any website used for studying: Codechef, revision of all graduate syllabus...

- Company specific Tips (in which you got placed): Don't worry about the interview a lot.
 It can be stressful. The panel might be very energetic! Be calm and try to answer all
 questions(right or wrong). Discuss your approach with the panel members. More of
 design questionsand databases and puzzles were asked in Oracle.
- Miscellaneous Tips (GPA, things to remember etc): Study more questions and practice
 past placement papers. Be ready to speak about the projects you have done in great
 depths. Be in touch with friends from other IITs and get hold of written test papers
 of companies. Some questions might get repeated. Brush up your coding skills in
 C/Java and be ready to code fast.

#7

- Company in which you got placed.: Microsoft
- Books, Study Material or any website used for studying: Data Structures and algorithms made easy by karumanchi www. geeksforgeeks.org, carrercup.
- Company specific Tips (in which you got placed): Data structure and algorithm, puzzles
 and about MTP (Major Project)
- Miscellaneous Tips (GPA, things to remember etc): -

#8

- Company in which you got placed.: NVIDIA Graphics
- Books, Study Material or any website used for studying: geeksforgeeks. com
- Company specific Tips (in which you got placed): Computer architecture based questions, OS related questions, Algorithms
- Miscellaneous Tips (GPA, things to remember etc): GPA doesn't matter

- Company in which you got placed.: TCS
- Books , Study Material or any website used for studying.: Data Structures class notes,
 Naveen Garg video lectures. Operating System Galvin DataBase Management System Internet
 - Company specific Tips (in which you got placed): 1. asked about Mtech project (be clear with the project before attending interview)
- 2. asked questions from the courses done in Mtech (as I am from ECE background they didnt find any computer subjects in my Btech)

Miscellaneous Tips (GPA, things to remember etc): CGPA is very important for those
who are poor in solving aptitude. I got shortlisted for interview through CGPA for TCS
company. -->start your preparation as early as possible

#10

- Company in which you got placed.: Symantec
- Books, Study Material or any website used for studying: www.geeksforgeeks.org
 http://prepare.hackerearth.com
 http://www.careercup.com/
 http://www.codechef.com
 and Google!
- Company specific Tips (in which you got placed): There were two technical rounds and one HR. In the beginning of each technical round they gave me a form to rate myself (in a scale of 10) in different areas like Programming, Data structure, Operating system etc. Then they started asking questions from the areas which have higher ratings. Finally they gave their own ratings on those areas and that was reviewed by the HR. For me, their ratings were higher than mine. HR round was quite simple for me. A lady took the interview. She asked some few simple questions and my preference for the job profiles.
- Miscellaneous Tips (GPA, things to remember etc): Symantec didn't care about GPA or the M.Tech thesis. Interviewers were really nice people. During technical interviews I made some mistakes while writing programs but they always gave me a chance to compensate the mistake upon finding it and fixingit. Both round of technical interviews took almost 1.2 hours each. My message to juniors is during interview don't rush for a quick response, think and verify before providing a solution. And remember everyone will get placed, so good luck!

- Company in which you got placed.: Epic Systems
- Books ,Study Material or any website used for studying.: K&R C, C++ Stroustrup
 Websites careercup
- Company specific Tips (in which you got placed): 2 rounds of telephonic interview 1 technical (Indian), 1 HR (US national). 95% of the technical questions asked were in the online tests (2 rounds) before the interview; only about 5 minutes were spent in technical questions during the interviews. Those too were quiteeasy. Many questions were asked about my work experience: * describe the work you did in each team you worked with * name of manager if he were asked about you, what would he say were your greatest strength and weakness? * challenge faced at work and how you resolved it Project my

MTP is closely related with what Epic does, so I had to describe in detail regarding my project. **Other**: * areas of interest * are you willing to relocate to the US? Are your parents ok with this move?

Miscellaneous Tips (GPA, things to remember etc): GPA: <8.5 .Things to remember:
 keep your mobile fully charged before this interview!

#12

- Company in which you got placed.: Informatica
- Books ,Study Material or any website used for studying.: geeksforgeeks.org
- Company specific Tips (in which you got placed): observed that most of my project work
 is in OS and Compilers. started asking about synchronization and advanced topics like
 transactional memory
- Miscellaneous Tips (GPA, things to remember etc): you MUST be able to explain ur
 projects well. Dont be aggressive or arrogant in interview while being confident. dont say
 u hv to be in delhi or some particular place.itwill reduce ur chances of getting selected.
 DONT BE DISHEARTENED BY RESULTS.U WILL FACE BAD TIMES.WAIT FOR UR
 GOOD TIME.

- Company in which you got placed.: **Groupon**
- Books ,Study Material or any website used for studying.:
 http://www.geeksforgeeks.org , Introduction to algorithms (Cormen)
- Company specific Tips (in which you got placed): There were 3 rounds. 2 Technical and 1 HR. The first round was mostly on algorithms and data structures. The second round was on basic computer science concepts (OS and networks). He also asked some machine learning related questions as my project was in that area. Also all companies ask about your project.
- Miscellaneous Tips (GPA, things to remember etc): Some companies look at the GPA as a short listing criterion for their exams. But if you are allowed to write the exam, it seems that most companies don't care about GPA if you pass the written test. Regarding preparation, actually writing code for problems would help.

#14

- Company in which you got placed.: Amazon
- Books ,Study Material or any website used for studying.: www.geeksforgeeks.org.
 One thing which helped me most was discussing with friends who were far better prepared for placement questions;).
- Company specific Tips (in which you got placed): 1, Data structure and algorithms
 questions which can be found on www. geeksforgeeks.org.
 - 2, They asked about my project as well.
 - 3, Some general questions like; a, Have you ever done anything for your passion only Not for your curriculum that too basically when you have a busy academic life in IIT. b, How do you plan to continue the learning environment of IIT after graduating from here? c, What is it in computer science which excites you? (For this question i preferred to say which was not true but they must be looking for. I said mapping any reallife problem to computer science and then Finding an optimal solution for it, is something really exciting)
- Miscellaneous Tips (GPA, things to remember etc): For amazon GPA was not at all the criteria. Though you will definitely miss a number of opportunities if you have a low cgpa but still I would say based on our batch's experience that CGPA is much more overrated. Many awesome companies did not bother about CGPA at all. Few companies which we are sure hadGPA as a criteria were Google, Yahoo, Netapps, Intel. But the list of good companies which didn't bother about GPA is much longer. To name a few, it includes Microsoft, Epic, Amazon, Nvidia, Dell, Paypal, Flip-Kart, Directi, Groupon, Lexity, Symantec, Flytxt, Adobe etc. Off-course this list is not exhaustive. Finally I would say prepare well. Though ultimately your luck will matter most on the judgement day but you have to be very well-prepared. One last thing do not lose your calm neither during any interview nor during placement season when others are getting placed and you are still waiting for you lucky day.

- Company in which you got placed.: ORACLE
- Books ,Study Material or any website used for studying.: problems on interview street; puzzles; some standard c/c++ problems (available on net) but keeping in mind time & space complexity.
- Company specific Tips (in which you got placed): To me, the questions asked were not so difficult but they gave time complexity as a bound, for example some C problem usually done in O(n^2)) to be done in (O(n)). Linked List questions and programs related to that. Then puzzles to solve.

Miscellaneous Tips (GPA, things to remember etc): GPA won't matter much until and
unless there is a criteria set up by some company. What matters is how you perform at
that time.

- Company in which you got placed.: GroupOn
- Books ,Study Material or any website used for studying.:
 - http://www.geeksforgeeks.org/ http://prepare.hackerearth.com/tests/
 - http://sameerbsws.blogspot.in/ http://www.indiabix.com/placementpapers/companies/
 - http://www.cplusplus.com/doc/tutorial/
 - http://www.techvyom.com/forum/Thread-MCQ-s-On-Operating-System
 - •http://www.go4expert.com/forums/showth
- Company specific Tips (in which you got placed): Written test followed by a on paper coding test. Written test questions related to C/C++ and aptitude. Coding round 3 problems. Interview: 3 technical rounds + 1 HR round. In technical rounds first they asked about MTech project. Then they asked questions related to tress, heaps, strings, stacks. They also asked to write small pieces of codes for the solutions I told them. HR round (sort of technical again) was cool. They basically asked about my areas of interest and whether I would like to join them etc
- Miscellaneous Tips (GPA, things to remember etc): Do coding practice as much as u can. (I could not do much but I advise you to do so). Start solving various problems available on various sources Understand concepts of C/C++ . Do practice for aptitude questions also, specifically questions related to time/work, time/distance, permutation/combination and probability, Series completion. A lot of questions needed some tricks rather than working from first principle . Practice solving different types of puzzles. Company specific details:.
- Microsoft No CGPA shortlisting. Written test (about 30 questions in 30 mins) followed by coding test (on paper,2 ques,45 mins)
- DirectI No CGPA shortlisting. 1.5 hour online coding test (C/C++). one simple question and one a little bit difficult.
- Goldman Sachs CGPA shotlisting. Written test (3 sections) . A lot of mathematics and probability (I found these questions really difficult) and then some CSE questions (also difficult ones).

- Amazon Written test (about 30 questions in about 45 mins) followed by coding test (on paper,2 ques, about 45 mins)
- Adobe CGPA shortlisting. 2 hour online coding test (C/C++)
- NVDIA 105 mins written test . 4 sections (Data Structure, OS , C/C++ , Aptitude)
- Samsung Labs- Written test. Speed and accuracy test. Manage your time. aptitude questions (No technical in 1st round).
- Oracle online 2 hours test. Almost everything. C/C++ , Aptitude, English test, Computer Science questions.
- Walmart Labs Written test (aptitude, technical) + coding (on paper)
- Cisco Written test (aptitude + technical)
- Dell Written test(technical + aptitude).
- Yahoo CGPA shorlisting (>=8.0)
- Google >= 8.0
- IRL >= 9.0
- StrandLife Science Subjective aptitude (mathematics/probability questions)
- FlipKart- Online test(technical+aptitude) + online coding (2 questions)

Interview experiences

- ** Adobe (2nd Day) -
- 1st round (Technical) + Decription of MTech Project; Quesstions related to C and onetwo problems and puzzles.
- 2nd round Decription of MTech Project again + question related to strings. Problems were related to substrings finding in a very large file efficiently and onetwo puzzles.
- **GroupOn (3rd Day) I have written already about this.
- **Oracle (3rd Day) 3 Technical rounds + 1 HR rounds.
 - 1st round Decription of MTech Project + simple C programs + their codes

- 2nd round Question on strings, linkedlist etc. Its pseudocode also.
- 3rd round Questions on Databases' concepts basically related to Indexing, Hashing, B/B+ Tree.
- HR round A formal introduction, questions about myself, my hobbies and whether I would join Oracle?
- **WalmartLabs (3rd Day) I could appear only in 1st round. Oracle kept me busy for a long time so that I could not give interviews of 2nd round of Walmart, Cisco and Dell. So On that day decide very carefully which company you should give interview first, what are your preferences and interests. Questions on data storage and retrieval on large systems.
- **NVDIA (3rd Day) Questions on my MTech Project and then some problems to solve and their pseudocodes, also some questions on C. Questions related to Computer graphics concepts also.

#17

- Company in which you got placed.: **Dell**
- Books ,Study Material or any website used for studying.: geeksforgeeks , sameerbsws. blogspot.com
- Company specific Tips (in which you got placed): dere were 4 rounds of interview. frst technical,2nd managerial, 3rd nd 4th HR. Technical was easy. they asked some questions abt project nd 2-3 data structures related questions. managerial nd HR were straightforward
- Miscellaneous Tips (GPA, things to remember etc): remember to have a certi fr nething
 u wanna mention in ur CV attend PPTs, u myt get sum goodies try to make ur CGPA
 above 8 nd evn if ur CGPA is nt above 8, take d cue from sum of ur seniors, who made it
 big... all d best

- Company in which you got placed.: **Epic**
- Books ,Study Material or any website used for studying.: www.geeksforgeeks.com, www.geeksforgeeks.com, <a href=

- Company specific Tips (in which you got placed): Well in the written test, they described a new programming language and asked questions based on that. If your programming basics are good you will be able to do the questions, it also had aptitude section which was easy. Interview was elephonic, they asked questions related to my major project. The other technical question they asked was based one of the question of written test, they wanted to know the approach used by me to solve it. In HR interview they were making sure whether I'll join their company or not, whether i am fine with relocation etc.
- Miscellaneous Tips (GPA, things to remember etc): If you have knowledge GPA
 doesn't matters. Most of the companies asks questions based on dynamic programming,
 strings and greedy approach. Do prepare them well.

- Company in which you got placed.: NVIDIA
- Books ,Study Material or any website used for studying.: data strcuctures and algorithms made easy by narsimha karumanchi some aptitude questions of probability and permutation and combinations from internet codechef for some coding questions whenever I got free time.
- Company specific Tips (in which you got placed): I had one interview of about 1 hour 45 mins. They covered many things from algorithms to riting code and architecture and parallel programming because I worked in parallel programming. Questions very good and different from what other companies asked because they also focussed on understanding of the subjects like architecture and operating systems. I didn't revised the subjects but they then helped me by giving hints so that I am able to recall. Also a good understanding of bit manipulation is necessary for cracking nvidia's interview.
- Miscellaneous Tips (GPA, things to remember etc): Just buy narsimha karumanchi and start solving the questions whenver you get time. You won't get dedicated time for preparation of placements so try starting your preparation as early as possible even if you are solving only one or two questions a day. Also don't get bogged down into preparation from multiple sources. Like karumanchi and geeksforgeeks are essentially the same so choose one of them (I recommend karumanchi because it is much structured). Also learn C++ because it first of all reduces your coding effort and also it was being asked in many companies including google. These two things: karumanchi and C++ are enough according to me for placements so finish them first. Then if time is left with you solve some aptitude questions of probability and P&C and some commonly asked questions of

OS, architecture and DBMS of GATE because these things are asked in the written exams of companies.

MISCELLANEOUS

What to wear: I'll suggest you to wear a suit; this shows your interest in a particular company.



It was a mistake for Eric to wear a t-shirt to his job interview, and it was a bigger mistake to wear that particular t-shirt.

Be in touch with friends at other IITs: The placement season starts in all IITs more or less in the same month. So be in touch with friends at other IITs, because there is a chance that the questions asked by a company in one IIT may get repeated in other. And you may also get the idea of difficulty level of questions.

Placement Stats:

Company	Number of selections *
Epic	4
NVIDIA	4
Dell	3
Oracle	3
Groupon	2
Adobe	1
Amazon	1
Arista Networks	1
Flipkart	1
Informatica	1
Lexity	1
Microsoft	1
Symantec	1
Syncapse	1
TCS	1
Yahoo	1

^{*}Few students were placed in more than one company. This table shows their final choice.

Note: The average package was more 10 lakhs P.A.

