

## Honeywell Paper General - other

Honeywell conducted a test in IIT and Interview was in their office at B'lore. Test contained 100 multiple choice questions divided into

- a) Verbal ability (15 ques)
- b) Numerical aptitude (15 )
- c) Logical and analytical ability (15)
- d) Elementary computer science (10)
- d) Programming languages (20)
- e) Operatins systems and Data structures (25)

Not sure about the number of questions.

Verbal ability questions contained 3 parts.

- a) One passage is given and U have to answer 5 questions
- b) Some words are given and their synonyms have to be written
- c)

Numerical aptitude and Logical questions were the usual stuff

I had 4 rounds of interview.

First round (around 45 minutes) contained, questions from Real-time

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Systems (my research area), operating systems and Software Engineering

Explain U'r research work.

- What is a Real-Time System ?
- What is the difference between Hard and Soft real-time systems ?
- What is a mission critical system ?
- What is the important aspect of a real-time system ?

Explain the difference between microkernel and macro kernel.

- Give an example of microkernel.
- Why paging is used ?
- Which is the best page replacement algo and Why ?

WHat is software life cycle ?

- How much time is spent usually in each phases and why ?
- Which one do U want to work if selected in Honeywell ?

( I said I don't like testing )  
They asked why ?  
I said it is a boring job. Then they tried to analyse the knowledge in testing.

- What is testing ?
- Which are the different types of testing ?
- Then they explained the way they do testing. They said that they are doing testing in requirement phase and design phase so that if any problem comes in those phases it is not necessary to go back and change the requirement or design. All the test processing is automated.

Why do U want to join Honeywell ?  
Ans : To get a practical feeling of Real-time systems.

- Do U know C++ ?
- How good are U in C and C++ ?
- Rate U'rself in both C and C++. ( 1 - 10 marks)

Second round (around 45 minutes )

They wanted a bio-data at the time of interview. I gave the placement office bio-data and in that one there was column 'Major subjects studied'. Many of the questions came from those.

Explain U'r research work. Lot of questions from it.

- What is a distributed system ?
- Some questions about CSP. ( I kept quiet)
- Which languages do U know ?
- What are the differences between Pascal and C.
- I said Pascal is a strongly typed language.
- Then what is typing and its advantages ?
- Then he asked some questions from Compiler construction and Lisp.

- WHich are the different computer architectures ?
- What is the requirement in MIMD ?
- What is the difference between RISC and CISC processors ?
- Difference between loosely coupled and tightly coupled systems ?
- What is an open system ?

- Still a lot of questions from software engineering .
- Which are the different phases in Software life cycle (asked again)
- Why is analysis and testing phases very important ?
- Which methodologies are U familiar with ?

- Have U worked in windows ? (Yes)
- What is the difference U have seen from a Dos environment ?
- I said it event driven .
- So what do U mean by event driven ?
- How do WinMain look like ?
- How the messages are processed in Windows ? (Queue of events)
- What are parameters needed to distinguish an event ?

- Have U done any network programming ?
- Why networks are layered ?
- What is the advantage of that ?
- How many layers are there in OSI ?
- WHy is it called OSI model ?
- Are U familiar with network topologies ?
- Which are the different network toplogies ?
- Tell an example of bus type network.
- I said ethernet.
- What is the Bandwidth of ethernet ?
- Explain the advantage and disadvantage of ethernet ?
- Which is the protocol used in ethernet. (CSMA/CD)
- Why is it called so ?
- If all stations tries to communicate at same time, what will happen.
- What is binary exponential backoff algo ?

- What is the advantage of Ring network ?
- Compare it with ethernet.
- In a real-time system which one do U prefer and why ?
- What is the basic requirement of a real-time network ?
- Which one is costly - ethernet of ring networks ?

- Some questions form OOSD and Digital signal processing.
- What is inheritance, encapsulation etc.

Third Round (15 minutes)

- Asked about the percentages and marks during SSC, PDC, B.Tech and MS.
- When can U join ?
- Who is U'r guide ?
- U are from which place ?
- Where is it in Kerala ?
- How do U perform in the first two interviews ?
- WHy have U given Honeywell as dream job ?
- Some more personal questions

Fourth Round (45 minutes)

- 1. Aptitude test : 15 Minutes, 20 Questions

Towards the middle questions are easy than from the front.

- eg. Product of three consecutive nos. 210. What is the sum of two least numbers?  
ans.:  $5 * 6 * 7 = 210$  , sum = 11 is answer

- eg. If the area of the square is increased by 69 % how much the length of the side will increase?  
ans.: 13 (i think)

- eg. if the sum of five consecutive nos. 35? how many prime nos are there :  
ans:  $5 + 6 + 7 + 8 + 9 = 35$  so two primes

- eg. if the length of the rectangle is reduced by 20% and breath is increased by 20 % what is the net change ?  
ans.: 4 % decrease 2

i. Electrical & Electronics

15 Questions and,nand...circuit related stuff, .....

ii.Data Structures, Algo., & Complexity theory : 5 questions

- a. if W is a sequence of strings without a and W' is its reversal then WaW' is generated by:  
ans. i think Context Free Grammmars

- b. Whether all recursive pgm can be written iteratively?

- c. What data strctues you will use if you want to go to first record from the last and vice versa?  
ans.: doubly linked circular list

- d. Given 10000 nos. and 48MB Memory. What is the complexity of the efficient sorting algo.? (the algo. is not mentioned)

- e. Given a C code and ask what it does?  
I think the code was something similar to Bubble sort and that particular code does the sorting in Descending order and the complexity is  $O(n^2)$ (which is the next question).

iii. OS : 5 questions

- a. If there are too many page faults what is the problem?

- b. To ensure one pgm. doesnt corrupt other pgm. in a Multi-pgm. enviorment what you should do?

- c. Which one you will use to implement critical section?  
Binary Semaphore

- d. Which one is not needed for Multi-pgm. enviorment?  
options are: virtual memory,security,time sharing,none of the above.

iv. Networks and Hardware: 5 questions

- a. Which one is not done by Data link layer ?  
bit stuffing, LRC,CRC,parity check

- b. Which one is not related to Data link layer?

- c. Which one is not suitable for client-server application?  
tcp/ip,message passing,rpc,none of the above.

d.

v. Databases and Misc.: 5 questions

- a. What SQL ..... (not the expansion)

- b. Indexing in databases give you .....

c.

vi. C Pgm. : 5 questions

- 1. `int a=1,b=2,c=3;`  
`printf("%d,%d,a,b,c);`  
What is the output?
- 2. `for(i=0; i<=10;i++,printf("%d,i);` +- (+- is there in the questions)
- 3. Scope of Static Variable .....
- 4. Given a C code and what is the output?

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