

BARC INTERVIEW EXPERIENCE:

I went into the room at 3.27pm after lunch, it's a five-member panel where 5th one joined late(all male) panel no 4,

M1: Good afternoon sasidhar, Is this your interview,

ME: Yes sir, first one.

M2: what do you know about BARC interview?

Me: I told them what I know, they explained that they will ask in my favourite subjects only.

M1: Go to the board and write short forms of your favourite subjects in short forms,

Me: HT, BT, FM, SOM.

They started asking with FM.

Questions:

1. Draw a cylindrical container put a hole under it and draw a graph for level of water h vs time?
I started deriving by mass conservation, they told derivation is not required but later asked to explain the nature and steps for derivation.
2. Draw the same graph if the hole is in the side.?
3. Draw the graph if the container is conical with 1. Base is same as cylindrical and same initial level 2. The Volume is same as cylinder and level is same.
I explained they were very specific about points asked me to superimpose all the graphs with different colour chalk. They asked several questions about the initial and final slope and the time for emptying points for different cases.
4. Take the same cylindrical beaker open to atmosphere and start heating it, draw the mass vs time graph,
I've drawn upto saturation point, they explained me where is liquid +vapour, I answered since that is open to atmosphere liquid boils away.
5. Draw temperature vs time.
6. Close the container with lid and now draw the temp and mass vs time and grilled about the vapour dome for some time.
7. M3: does water boils at 100?
Yes sir water starts boiling at 100 but once its vaporised it exerts pressure there by increasing the remaining water boiling point a little above 100 degrees.
8. Explain how pressure cooker works? did
9. How Will the enthalpy of vapourisation varies in normal and pressure cookers? It decreases as we increase pressure.
10. Will super heat possible in closed vessel considered before.
11. M5:The Base of the vessel being heated has thickness, invert the diagram clockwise 90 degrees consider the water started boiling and now draw temperature profile for slab and water?
12. Drawn he asked why drop from base outside to base inside, why linear, why there is drop from inside to liquid, what is the temperature after some distance in liquid?

Explained about convective, conductive resistance and water temp at 100, bubbles of vapour collapsing at surface,etc:

13. Which has high heat transfer coefficient convection or the phenomenon you were explaining?

Said boiling

M4: what is its original name?

Me: nucleate boiling.

14. What is difference b/w boiling and vaporization?

Me: boiling occurs b/w solid and liquid

Vapourisation occurs b/w liquid and gas.

M5:ok

15 started something in Hindi, I looked at them confused, I said not good in hindi , they started laughing and asked in english to change the heat flux to twice the value and super impose the graph. Did

16.They started asking what slope , change base to copper etc. and asked some same concept questions.

17.Draw a hanging bar, draw stress, strain, deflection vs length, initially I have drawn deflection vs time inverted then they asked me to compare strain and deflections, I corrected it(I think so), then they asked if stress at free end is zero why deflection? And some random questions.

18. draw stress strain dia for mild steel.

Explain all points, why 2 yield points: Told due to Cottrell atmosphere .

19.What is Cottrell atmosphere?

Explained

20. Why its not there in high carbon steel?

Explained because carbon is every where along the dislocation movement, M1 said ok .

21. explain plastic region, why stress increases after plastic? Where is ultimate, where will necking?

Explained dislocation theory and told necking will be near to ultimate point.

22. What is ductility?

Ductility is post elastic strain sir.

23. indicate ductility from stress strain diagram.

Indicated.

The questions from my subjects are over and they started asking some random small questions,

24. What is diff b/w split and inverter ac?

Explained about placement of condenser and evaporator difference?

25 why do we place split ac above?

Explained about density of cool air.

26. M2 then why do we don't place window ac at top?

Me: window ac are designed to be placed at window, they are developed before split ac sir.

27. if you have space at top, will you put window ac at top?

Thought for some time and said yes.

28. M2:If you have same mass hollow and solid spheres how would you differentiate which is solid and which is hollow?

Me: hollow will have larger size sir.

M2: no same size, painted same colour and weighs same, now?

Me thought for a while and said , we will roll both of them on inclined plane since MOI is different one reaches first than other.

I answered wrong for which of them have higher MOI and failed to answer the MOI of hollow sphere.

M3:ok ok , that's all.

I came out and its 4.49 in the logbook.