BARC shortlisted students for interview from both Gate score and its individual test.This year in 2019 Barc shortlisted 288 students and there were 25 vacancies. In Barc there is no reservation.Barc chemical engineering gate score cutoff this year was 725 and from test cutoff was 150 out of 300. My gate score was 747 and Barc test score was 177 out of 500 . In barc you have to select the slot for Interview.This year slot filling from was from 13th may to 14th june 2019.

From which college are you.
Where are you presently staying in Mumbai?
You were selected for interview from gate score or barc paper.
How was the barc paper?
Have you prepared for interview?
How many subjects have you prepared ?
Wrote Mass transfer , Heat Transfer ,Fluid Mechanics ,Chemical reaction engineering
What is the driving force in all these subjects?
What is driving force in heat transfer ,mass transfer,fluid mechanics?
Lets start with mass transfer
Appliaction of mass transfer
What is distillation.
They gave 4 examples how to separate (salt +water,ethanol +water ,oil+water, ammonia +gas).Distillation se konsa mixture separate karoge aur kyun.
Other mixture kaise separate karoge .
Which mechanism are the separation based on.
Explain other mass transfer operations.
What is extraction? Driving force for extraction.What property solvent should have in extraction?What is separtion factor? What is selectivity? What is solvent power?What is partition coefficient?
Now coming to distillation design column.How to design column? What parameters you need in designing.
What is Mcabe thiele assumption?Explain assumption in details.
Derive operating line equation.
How you Calculate efficiency of tray and column?
What is Rmin ,Ropt ,q ?
What is feed location?
How to decrese number of plates without manipulating reflux ratio?
What is volatility,relative volatity,formula ,variation of relative volatility with pressure?
Where is maximum minimum temperature pressure in column?
How vapor and liquid flow in distillation column?
High pressure gas kaise milegi.Why pressure drop occurs?What is difference between blower and compressor?
Then shifted to heat transfer.

Draw temperature profile for flow in pipe keeping heat flux at wall constant.
Profile linear or parabolic.
What will happen to profile if flowarate double will change or not?
What is h and on what factor h depend ?
How will you calculate heat flux in case of flow in pipe?
Draw the graph of heat flux variation for flow in pipe.
What is ditus bolter? Write ditus bolter.What is prandtl number,Reynolds Number,Nusselt number?
Dependency of heat transfer coefficient on reynolds number.
Drew two slabs in parallel with different conductivity draw temperature profile in slabs ,whether the temperature profile feasible or not?
Then they drew a frustom conical expander with its end at different temperature with sides insulated draw the temperature profile variation with length,heat flux variation with length,heat energy variation with length,variation is linear or quadratic.

Then fluid mechanics.
What is npsh,caviation?
What will vapor bubble do in pump ,their effect?
What is the difference if liquid and gas is used in pump?
Why volute is used,what is the disadvantage of high kinetic energy at outlet why we convert it?
Why we convert kinetic energy into pressure energy in volute only when the fluid with high kinetic energy will go up in pipe there will no problem (ignore losses) then automatically it will convert into pressure energy?
Explain working of centrifugal pump.
How impeller increase pressure energy?
Variation of density on head explain for oil water mercury ,draw there difference performance curve.
What are Fan laws?
Ganga mein paani kaise behta hain.

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They drew 3 combination of mfr and pfr in series of same volume gave second order kinetics and explain physically in which conversion will be more and why?
What will happen at 0 order 1st order explain physically no maths ?
Single pfr mfr of same volume conversion difference .
Write performance equation of all reactor draw their graphs explain graph.
What is ideal pfr mfr batch reactor?
How concentration varies in ideal mfr along the length.
What are nonidealities in mfr pfr?Is laminar flow a nonideality in pfr?
How to predict nonideality in pfr?
What is 1 parameter model?
What is axial dispersion?
What is dispersion coefficeint?What is its value for ideal pfr mfr?

What will happen if laminar flow in pfr?
Why we need flat velocity profile in pfr?
What is ph ,molality ,molarity,normality,graph x3 and x2?
Which graph is increasing in which interval? What is composition of steel
Asked about college location,about college ,when it was open,campus placements,which psu you applied for,npcil mein interview diya
You can go thanku.