

## Technical Interview-1

1. Introduce yourself
2. Draw SFD and BMD of simply supported beam with udl, point load, uvl?
3. What is entropy and its physical significance and what it tells about?
4. What is unavailable and available energy?
5. Tell about your role in your project?

My project is about design and fabrication of an All Terrain Vehicle and I am a designer, so they started asking questions about automobile side.

6. What are subsystems and mechanisms involved in your vehicle?
7. What are the parameters of each part that you have considered in designing?
8. What is the main difference between Ackermann and Davis Mechanism, advantages of Ackermann over Davis?
9. What is caster, camber, toe in and toe out and are their roles in steering?
10. How will you decide steering ratio of a vehicle?
11. What is dependent and independent suspension?
12. Track width and wheel base ratio and its effect?
13. What steering parameters effect turning ratio and how they will effect?
14. What is section modulus and its significance?
15. How will deal with a under vibration and what type of analysis you will perform?
16. What is Ergonomics and how will you decide the angles in ensuring good ergonomics?
17. How will u decide thickness of engine supporting plate and what type of stresses it will encounter?
18. Do you know any analysis software and what are the material properties that are needed for an analyzing software?
19. What is the governing equation of FEM?
20. Can you write a code for creating a tool on CAD platform?

## **Technical Interview-2**

1. Explain the process and importance of FEM?
2. Draw your vehicle views and in 3D too?
3. How do you design your vehicle explain?
4. What are the analyses that are performed on your frame and how do you calculate the forces?
5. How will you decide cross section of your frame pipes?
6. How will you calculate bending strength and bending stiffness?
7. What is piston slap?
8. What is the result of Ansys model represents?
9. How will you decide a material for part?
10. What will you contribute for Caterpillar?
11. What is difference between BS6 and BS4?
12. How to reduce NOx in emission?
13. What is your opinion on higher studies?