

## Technical Competency Test Answers

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1. Can you list few techniques which you can use to make responsive websites as a frontend developer?

Ans. Following techniques can be used to make responsive websites:

- a. Eliminate friction by removing distracting visuals, especially the ones that are visually cluttered, inconsistencies, unnecessary actions, and decisions
  - b. Try to make the design mobile-friendly, keeping in mind thumb usage.
  - c. Make layouts fluid/adaptive by default.
  - d. Make typography and images responsive.
  - e. Rely on conditional loading or lazy load non-vital images and videos to improve the performance of the website
2. How can you test a website's responsiveness? Which tools in modern browsers you can use for that?

Ans. One can test a website's responsiveness using a wide range of devices, both desktop, and mobile, with different characteristics like screen size, operating system, device configurations, etc. One of the easiest methods to simulate mobile devices is by using the Google DevTools in Chrome. The same can be achieved using the Responsive design mode in Firefox. This helps us to see how the website appears across various screen sizes. It also provides an option to add different custom devices. There is also Google Resizer which supports different resolutions in both portrait (480-1,600 pixel) and landscape formats (360-1,024). Compared to other applications, however, this selection is a bit on the more limited side of things.

3. What is your favorite text editor, and why?

Ans. My favorite text editor is Sublime text editor because of its fast nature and customizable and extensible UI. Also, it has mediocre auto-complete, which makes it the right choice for me as I don't want to be overdependent on autocomplete editors, and Sublime helps keep that balance.

4. What is the one keyboard shortcut you wish everyone would know?

Ans. The combination of the Alt + right arrow/left arrow key takes you to the previous or next webpage without clicking on the browser specifically.

5. What was the last article or book you have read related to IT? What did you learn from it?

Ans. The last book I read related to IT was Human + Machine, Reimagining Work in the Age of AI by Paul R. Daugherty and H. James Wilson, which focuses on AI's business transformation. Due to previous experience and current Mater's specialization, I started this book which helped me learn how AI is being implemented by various organizations in an in-depth manner and helped me know about the domains where I did not know AI can be implemented.

6. Have you ever worked with API? Can you describe what it is for?

Ans. As Software Engineer at Tech Mahindra, I was instrumental in developing RESTful APIs for clients using Java in Eclipse IDE. API is a set of protocols and tools for building application software. If only Web APIs are considered, they can be defined as rules for interacting with a webserver.

7. Ignoring cookies, what other technology or approach can you use to store data on the client-side?

Ans. Besides cookies, one can store data on the client-side using WebSQL, IndexedDB, WebStorage API, and Cache API.

8. Pick a site you are familiar with and list 3-5 things you would do to improve its UI/UX.

Ans. Choice of the website: Internet Archive - <https://archive.org/web/>

Proposed improvements:

I. First improvement would be a dynamic, responsive, and fluid layout for the website to be viewed comfortably across all the devices.

II. Removal/Replacement of continuously running web page previews - The previews are not visible and are not updating themselves, acting just like useless elements. This can be removed entirely or replaced with webpages recently updated or top-viewed archive websites.

III. Too many items on the menu - The menu in front has an overabundance of choices that may prompt users not to choose at all. Demoting items in navigation to interior pages and removing the donate button in the menu as donation options are mentioned in front.

IV. Some of the elements, especially statistical graphs, take a long time to load. This loading time can be reduced using Auto accelerators like W3 Total Cache