***Rajanveer Mair***

1. ***Who invented the World Wide Web and when was it invented?***

* The person that created the world wide web was Sir Tim Berners-Lee. In March 1989, Tim laid out his vision for what would become the web in a document called “Information Management: A Proposal”

1. ***Where did Sir. Tim work?***

* After graduating from Oxford University, Berners-Lee became a software engineer at CERN, the large particle physics laboratory near Geneva, Switzerland.

1. ***What was his inspiration for the web and what problem was he trying to solve?***

* Scientists come from all over the world to use its accelerators, but Sir Tim noticed that they were having difficulty sharing information. Tim thought he saw a way to solve this problem – one that he could see could also have much broader applications. Already, millions of computers were being connected together through the fast-developing internet and Berners-Lee realised they could share information by exploiting an emerging technology called hypertext.

1. ***What were the three fundamental technologies that he developed?***

* HTML: HyperText Markup Language. The markup (formatting) language for the web.
* URI: Uniform Resource Identifier. A kind of “address” that is unique and used to identify to each resource on the web. It is also commonly called a URL.
* HTTP: Hypertext Transfer Protocol. Allows for the retrieval of linked resources from across the web.

1. ***What important decision “sparked a global wave of creativity, collaboration and innovation“ regarding the web?***

* As the web began to grow, Tim realised that its true potential would only be unleashed if anyone, anywhere could use it without paying a fee or having to ask for permission.

1. ***In addition to the technology of the web, what are five “revolutionary ideas” from Sir Tim’s work that are changing the way people and organizations are working with each other?***

* Decentralisation: No permission is needed from a central authority to post anything on the web, there is no central controlling node, and so no single point of failure … and no “kill switch”! This also implies freedom from indiscriminate censorship and surveillance.
* Non-discrimination: If I pay to connect to the internet with a certain quality of service, and you pay to connect with that or a greater quality of service, then we can both communicate at the same level. This principle of equity is also known as Net Neutrality.
* Bottom-up design: Instead of code being written and controlled by a small group of experts, it was developed in full view of everyone, encouraging maximum participation and experimentation.
* Universality: For anyone to be able to publish anything on the web, all the computers involved have to speak the same languages to each other, no matter what different hardware people are using; where they live; or what cultural and political beliefs they have. In this way, the web breaks down silos while still allowing diversity to flourish.
* Consensus: For universal standards to work, everyone had to agree to use them. Tim and others achieved this consensus by giving everyone a say in creating the standards, through a transparent, participatory process at W3C.

1. ***What are some ways that these principles could change society and politics for the better?***

* New permutations of these ideas are giving rise to exciting new approaches in fields as diverse as information (Open Data), politics (Open Government), scientific research (Open Access), education, and culture (Free Culture). But to date we have only scratched the surface of how these principles could change society and politics for the better.
* In 2009, Sir Tim established the World Wide Web Foundation. The Web Foundation is advancing the Open Web as a means to build a just and thriving society by connecting everyone, raising voices and enhancing participation.

1. ***What happens when you click on a link?***

* When you click on a link, your computer takes this URL. It wants to get a copy of the web page. There are a few different ways of doing this. The one I'm going to tell you about is just used for URLs which starthttp: .

1. ***Did Sir Tim invent the Internet? (Explain)***

* “No, no, no! When I was doing the WWW, most of the bits I needed were already done.” - Sir Tim Berners-Lee

1. ***What are some interesting math ideas that are connected to the web?***

* “Some of it is easy, some hard, but honestly which is which for you depends on what your mind happens to grasp, and how well it is explained! These are some of the bits I found interesting. This is NOT an explanation - you will need books and people for that . It is just a sort of list of places you might want to go.

Vectors are fun. Vectors are quantities with direction, like not just how fast something goes but which direction it is going in. They can be written as three numbers instead of one. (The examples in this FAQ will only work is your browser supports MathML, which is rare. If your browser supports MathML, the following will be vertical, not horizonal.)”- Sir Tim Berners-Lee

1. ***Explain how the Web is both a good idea and a bad idea.***

* Bad: some people point out that the Web can be used for all the wrong things. For downloading pictures of horrible, gruesome, violent or obscene things, or ways of making bombs which terrorists could use.
* Good: The Web is a tool for communicating.
* With the Web, you can find out what other people mean. You can find out where they are coming from.
* The Web can help people understand each other.