The Questions Concerning Technology
By WB
Round 8

1. **This was the cheapest option that was considered by the committee set up by Public Law 88-609. Nine different options for doing this action were considered in a 1959 study conducted by Luke Vortman. Projects Sturtevant, Buggy, and Cabriolet were initiated to determine the feasibility of doing this. President Eisenhower's science advisor George Kistiakowsky wrote in his diary that he believed Eisenhower would announce the project to do this at the UN General Assembly in September of 1960, but Kistiakowsky mistakenly believed that Mexico had agreed to help out with this effort. This was the most ambitious practical application considered by Project** Ploughshare. This effort was the non-military reason Edward Teller opposed the Limited Test Ban Treaty. By using the key technology of this effort as opposed to traditional construction techniques, the resulting structure could be built at sea level and not need locks. For 10 points, name this action that was never carried out where a new waterway would be built in Central America using the power of the atom.
ANSWER: **building a second Panama Canal using nuclear bombs** [accept anything indicating atomic explosives would be used to build a canal across Latin America; prompt on partial answer]

2. **From 1992 until 1998 this man was CIO of the restaurant chain that is today known as Boston Market. This man responded to the insult "two turkeys do not make an Eagle" by comparing his company to a Wright Brother. This man was CEO of Macromedia when Adobe bought the company. In one memo, this man stated that his company was standing on a** "burning platform." In January 2008 he became president of Microsoft's Business Division. He replaced Olli-Pekka Kallasvuo as head of one company. He has pivoted his company away from Meego and Symbian development. This CEO's company has placed much of its future in the market performance of the Lumia 900. For 10 points, name this current Canadian CEO of Nokia.
ANSWER: Stephen **Elop**

3. **TX-4 from Tuniq is designed to perform this action. Products made by Xigmatek that are used to do this include Dark Knight, Loki, and Colosseum. The method early G5's used to do this was based on a device made by Delphi. One type of component used to do this comes in** 80, 92, and 120 mm sizes. Arctic Silver makes adhesives that help in this action. In the context of computers, products that include a pump are intended to do this. CPUs have a certain "sink" attached on top to facilitate this. Proper airflow is a critical requirement for doing this effectively. For 10 points, name this action that is normally performed by a fan where heat is removed from a CPU component.
ANSWER: **cool**ing[accept answers like "removing heat" before mentioned]

4. **This philosopher believed that the colonization of time could lead to "perfect telegraphics," which would require both "internal" and "external" colonization. This philosopher attempted to bring the study of history to Ritter's formulation of geographical study in his *Universal Comparative Geography*. After writing a work on the "constitution of the despots and of constitutional freedom," this man was forced to move to Texas. In his only even remotely notable work, this man discussed how the inside of man becomes embodied in external tools, a state this man called "organ projection." For 15 points, name this man who was the first to use the phrase "Philosophy of Technology," doing so in the title of his work *Grundlinien einer Philosophie der Technik*.**
ANSWER: Ernst **Kapp**

5. **One method for making these materials mixes a certain compound with a chalcogenide reagent in a very hot solution trioctylphosphine oxide. That reaction for making these is the Murray-Bawendi method. Maxime Dahan pioneered the use of these materials in biomolecular tracking. The density of states in these substances are delta function like peaks. Probably the most common compound used to make these substances is** cadmium selenide. Ancient roman lead sulfide hair dyes worked in part because these materials would form around sulfur containing amino acids in the keratin. One problem encountered when using these substances is their habit of blinking. These objects composed of a core and a shell that confines a small number of electrons, much like atoms. The size quantization effect in these materials allows for the tuning of their unusual optical properties. For 10 points, name these zero dimensional structures that are sometimes called artificial atoms.
ANSWER: **quantum dot**s [or **nanocrystal**s]

6. **In high school this guy wrote a column for his school's newspaper, the Providence Journal-Bulletin, with his**

best friend James Wood. This man once yelled ""I don't give a fuck about your stock price!" at the former CEO of XM Satellite radio. One Youtube series that parodied this man had a title card with the words "I'll Stab You in the Brain." Those videos by Hoggworks Studios featured a puppet version of this man introducing himself and telling the viewer to "Shut-up." He was the subject of a piece in *Wired* titled "The Kingmaker." He conducted what is possibly the only interview where both Bill Gates and Steve Jobs were interviewed simultaneously. This man runs both a website and a conference called All Things Digital. For 10 points, name this technology columnist for the Wall Street Journal.
ANSWER: Walter "Walt" **Mossberg**

7. **General description acceptable. Several of these five stage machines, used Lu, Pz, and Ld instructions to read from a keyboard, store data, and output a result respectively. Raúl Rojas showed how to overcome one flaw in the architecture of one of these machines by giving it lots of memory and simulating indirect addressing. Their execution was fairly modern it that it supported microsequencing, however unlike current machines this was done through control wheels. Unlike other devices of the time, they used what was called "semi-logarithmic" representation which is similar to today's floating point. One of few uses of them was to calculate the critical frequencies of wing flutter. These devices lacked** conditional branch support which made it hard to implement arbitrary computable programs in the Turing sense. The first of them used metal sheets for mechanical memory and the third of them did not use vacuum tubes but instead used relays. Their designer created the language Plankalkül. The early ones were destroyed by Allied Bombing. For 10 points, name these early programmable computers that were designed by their namesake in Nazi Germany.
ANSWER: **computers designed by** Konrad **Zuse** [or **Z computers** ; take **Z1** or **Z2** or **Z3** or **Z4**; prompt on "German" or "Nazi" computers]

8. **One character on this show, Alvin Quiles, wanted to bring skating to people who did not want to skate. Another person, Peter Ortiz, had a stated goal of relieving people in distress and would walk around in a piece of clothing that looks like the offspring of a poncho and a straight jacket. According to Wikipedia, this show is similar to the** *Dragons' Den*. The second season of this show was won by Greg Chavez and Guardian Angel, which would sit under a Christmas tree. The judges on the first season of this show were Ed Evangelista and Doug Hall, while George Foreman was brought in during the second season. For 10 points, name this canceled ABC show where people could try to get backing for the knick-knacks and gizmos they came up with.
ANSWER: **American Inventor**

9. **In this framework, command event types include MARKER, UNMAP_MEM_OBJECT , and MAP_BUFFER. Address spaces in this framework include _local (underscore local) and _private. The device fission extension to this language allows more fine tuned partitioning of units.** Work groups in this framework based on C99 contain its equivalent of threads. Like an older language, a kernel in this language is a functions that is executed many times at once on different pieces of data. This framework works on more platforms that the rival CUDA. For 10 points, name this cross platform GPU computing framework.
ANSWER: **OpenCL**

10. **New Zealander Dr. Alastair Kenneth Senior died in an attempt to use his homemade machine of this type. Designs of these devices are based of A.A. West's single layer theory. These machines are sometimes confused for devices that operate on the WIG effect. The enormous *Aist* and *Zubr* classes of these machines were employed by the Soviet military. The father of this type of machine is Christopher Cockerell and his efforts lead to the development of the SR.N1 . The U.S. Military uses the LCAC type of these to** land troops. They have a skirt around their bottoms. For 10 points, name these vehicles that ride over land or water on a cushion of air.
ANSWER: **hovercraft** [or **air cushion craft** before mentioned]

11. **This hot property features a library where one can read books like "With the century – Complete" and "THE PRESENT TIMES AND THE TASKS FACING YOUNG PEOPLE." To apply for this location's official membership card, one must prove their identity to Mana Sapmak, who seems to be some random guy from Thailand. This website works in conjunction with an organization run by Mr. Alejandro Cao de Benos. An earlier version of this website informed readers that its organizers wear both superior and inferior clothing. This website extols that the organization running this website can supply "highly …** motivated personnel", low labor costs, and "stability." This website has a souvenir shop run by Cafepress that features iPhone cases appropriately named "Propaganda 1", "Propaganda 2", "Propaganda 3", and so on. On this website you can listen to "Sunday of the General", "No Motherland Without You", "Raise Your Weapons to Wave the Supreme Commander." For 10 points, name this website that offers would-be tourists with information about the Tower of

Juche and Kim II Sung Square.
ANSWER: **North Korea's website** [or "Official Webpage of the DPR of Korea"; or "http://www.**korea-dpr.com**/"; accept equivalents]

12. **PIT is a mutation system for analyzing these methods. Kent Beck and Erich Gamma developed a framework for doing this. Cobetura is a program for assessing on quality aspect of these methods. One popular framework for making these has** @before and @after annotations along with setUp and tearDown methods. Mock objects are used with these methods to deal with the artificial nature in which code is being run. The amount of code that these check is called the coverage. They will usually make use of assert statements. For 10 points, name these methods for validating the behavior of a program, whose unit form acts on individual components of the code.
ANSWER: unit **tests**

13. **One business park with this defining property is the home of AJL Opthalmic and is an integral part of the COPIT program. This type of meteorological intelligence is apparently responsible for the "Technological Upgrade of Hydro-Meteorological and Civil Protection Equipment in Honduras" project. The products of CIE Automotive are examples of this tradition as are the trains of CAF. Because of the pedigree of its discoverers, Tungsten can be considered an example of this. One example of dubious historical veracity is the Kutun, which had medical applications. Based on the etymology of its inventor's last name, an early technique using a silver plated copper plate to** develop photographs is believed to be an example of this. That aforementioned technique is the Daguerreotype Process. This tradition gave rise to the once admired Gipuzkoan shipyards. A culinary example of this is the production of Idiazabal cheese. Another legendary example of this allows one to turn stolen gold into coal, that example of this tradition might have been patented by Mari, if patents existed in mythical times. For 10 points, name this engineering tradition that created the *xistera* (chistera) used in jai alai.
ANSWER: **Basque** Technology

14. **One device used in this activity uses electrodes to generate primary and secondary coalescent regions in an effort to control electrolytes, however the formation of rag layers can disrupt that step of this activity. UOP makes large industrial machinery for this process. One of the first steps in this process is to run the feed material through a desalter. Cyclones and stripping streams are used to accomplish the FCC part of this activity, which is one of the most economically feasible components. One step in this process is accomplished by a** catalyst consisting of platinum on either an alumina or rhenium base. The central devices used in this activity are VDUs and CDUs. Visibreaking reduces viscosity during this activity. Delayed coking is used to handle resids in this activity, which are heavier inputs. Zeolites are used as a catalyst in the cracking part of this process where long molecules are chopped into smaller units. This process can produce Naptha and Parafins. For 10 points, name this activity by which fractions of hydrocarbons are separated and processed for use.
ANSWER: **oil refining** [or fractional **oil refining**; prompt on **hydrocarbon refining**]

15. **Brazilian priest Bartolomeu de Gusmão is one of the first people known to have come up with this invention but there isn't any evidence his full scale version was ever built. Major von Parseval and Captain von Sigsfeld developed an elongated version of this device. Charles Green invented a stabilizer for this device and experimented with using coal products in conjunction with them.** Sophie Blanchard made her career through her use of these objects which eventually led to her death. Major L'Homond was the head of a special task force under Napoleon that investigated how to invade England using these devices. Jacques Alexandre César Charles, of Charles's Law fame, showed how to make them work with hydrogen. For 10 points, name these transports pioneered by the Montgolfier brothers.
ANSWER: hot air **balloon** [or lighter than air transport]

16. **Kevin Gilbertson began one of these services in order spread his unicycle riding agenda.** Another one of these services has a pufferfish as a mascot. 301Works.org, a service of archive.org, is dedicated to preserving the fruits of these services' labor. That website's name is a reference to one mechanism these services use, the 301 response code. Hoot Suite's service of this type is unsurprisingly named for the owl. Usually they produce output in a size 36 or 52 charset and own domains from unusual nations. These services are popular on media like Twitter that have length limits. Examples of these services include Bitly and TinyURL. For 10 points, name these services that convert a web address into more compact address and often cryptic address.
ANSWER: **url shortener** [accept reasonable equivalents; prompt on "url redirectors"]

17. **A 2004 NY Times article suggests that one could synchronize the movement of the W.1 version of this product to "Will Smith's gunplay in 'I, Robot." A non mechanical construct of roughly the same name as this type of machine was developed by David Palmer and Stephen Pizzella. In 2001, Time Magazine named the H.9 example of this an invention of the year for its innovative use of infrared sensors. OSIM's uDream and Udivine are examples of this product.** Fujiiryoki and Family Inada are Japanese powerhouses in the design of these products. One marketing ploy use by the makers of this product is to claim that they based their designs on *Shiatsu*. The iJoy line of these contraptions is designed for people approximately 5'10" in height according to its manufacturer, Human Touch. Fine retailers like Brookstone and Sharper Image sell "whole body" ones that supply heat as well. For 10 points, name these pieces of furniture that knead your spine.
ANSWER: robotic **massage chair** [prompt on partial answer]

18. **The creation of this specification was motivated by a problem discovered by Steven Bellovin. This protocol starts by setting the DO flag bit to true. A "third" version of one component of this specification can be used for denial of existence. This specification uses** zone signing keys. This protocol seeks to stop cache poisoning. Key RR and RRsig are examples of cryptographic signature records in this protocol that augments records like MX and A found in an earlier protocol. For 10 points, name this protective add-on to the specification for looking up domain names on the Internet.
ANSWER: **DNSSEC** [or **Domain Name System Security Extensions**]

19. **A technique for optimizing the production of these objects is Chemical Maturity Monitoring. One rather stupid application of these objects that requires two of them was invented by Bill A. Borst. One version of this object was the first major invention of** Luther Burbank. In one common K12 science demonstration, these objects or lemons are used to produce electricity. For 10 points, name this agricultural product that George Crum is believed to have developed into an edible chip.
ANSWER: **potato**

20. **This company's founder was inspired to start it when he went to a barber shop and overheard about the opening of a new TV station. Before selling it to Bell Canada, this company owned InterTAN and consequently a chain of stores called "The Source." For a time, this company operated a mall based store called Impulse. This company's brand was proceeded by The Loading Dock brand and it began when Sam Wurtzel founded Wards. This company's former headquarters were at Deep Run 1. In what I(Will B.) consider to be one of the most ridiculous mergers to almost happen, Blockbuster tried to buy this company for 1 billion dollars. Its slogan once was** "where service is state of the art." This company developed but later spunoff Carmax. This corporation once attempted to take on the DVD market with its strange rental based DIVX platform and its in-home support division was FireDog. In the 80s and 90s, this company's branding was based around a giant plug. Many of this company's locations are now hhgregg stores. For 10 points, name this defunct Richmond based electronics retailer.
ANSWER: **Circuit City** [prompt on **Wards**]

Tiebreaker:

This product was codenamed Castle and the software it ran was codenamed Albacore. One strange ad for this product features a person saying bing over and over again. That ad for this device has a creepy lady stand in a field and tell viewers to "go with the flow." It was announced at CES 2009 and its operating system used a card based multitasking scheme. One of the many problems with this device was that it launched on Sprint. For 10 points, name first of the Palm smartphones to run webOS.
ANSWER: Palm **Pre**