

The Questions Concerning Technology
By WB
Round 7

1. **One breakthrough model of the dynamics in one step of this general technological process incorporates the bisubstrate hypothesis and the death-regeneration hypothesis. That model is ASM1. The USB reactor used in this process forms blankets of a certain material. One method of checking the effectiveness of this procedure is using the Winkler test** to find the BOD of samples, with lower a BOD indicating that this is working. This process uses RBCs, which are rotating disks and trickling filters. Steps in it include degritting and flocculation. This process runs liquid through an aerated lagoon to encourage decomposition. Ozone and Chlorine are commonly used disinfecting agents in this process which often dumps its product into a river. For 10 points, name this process of cleaning up sewer fluid.

ANSWER: wastewater treatment [accept general equivalents; or activated sludge process before ozone]

2. **An effort to stop one of these events came to a halt when it was discovered that a 16 year old leather object had disintegrated. Prior to the first of these events, William Steiger checked out a book that today is one of the few surviving objects of its type to predate the first of these events. The first of these events took place at Blodgett's Hotel. At the time of the first one,** Henry Leavitt Ellsworth was in charge of the organization in question and ironically had set out to construct a facility to prevent these events. William Thornton was building an instrument when he heard about a plan that would caused one of these events, luckily Thornton successfully took action to stop this from happening. Items that were restored after the first of these occurrences were given an X designation. The two instances of this occurrence happened on December 15th 1836 and September 24 1877. John Ruggles received the first reset number after the first of these. The second of these destroyed a building built by Robert Mills. For 10 points, name this conflagrations afflicting the government agency that oversees claims of inventions.

ANSWER: U.S. Patent Office Fires

3. **This language supports a form of OOP using method receivers to associate methods and structs. Defer statements in this language allow the programmer to have another function run after the execution of the current function is ended. This language's panic and recover functions provide a form of exception handling. Formatted text is printed in this language through the fmt package. Concurrency tools in it include channels and a type of routine named after the language. The company behind this language has also recently developed Dart.** For 10 points, name this statically typed language developed by a certain search engine company.

ANSWER: Go

4. **The prelude to this shindig was some chitchat at a PRC 50th anniversary party in Tienanmen Square. Nina Munk's book *Fools Rush In* is about this event and that book includes speculation that one of the forces behind this event was the murder of one this event's leader's sons by Corey Arthur. In its aftermath, potential clients were scared off by comments like "What we like to do to a competitor that is damaged is drive the knife in their heart." It was preceded by one participant's failed Pathfinder effort. During the late stages of this happening, one party made an illegal deal with PurchasePro.com, which later lead to a major accounting scandal. Many executives who were originally based in Dulles were angered at having to move to New York because of this. Jerry Levin was made CEO of the product of this event. One motivation for this action was access to residential cable lines. This was the largest merger in U.S. History and also one of the worst. The two leaders of this event had previously met at a White House screening of *You've Got Mail*, a movie that was produced by one participant in this merger and titled after a sound-clip made by the other.** For 10 points, name this disastrous merger of a media company and an ISP.

ANSWER: the merger of AOL and Time Warner

5. **This machine can be summoned via telegraph wire by a man who "could, without missing it, pay the national debt of France." This contraption is illuminated by Ruhmkorff lamps and it contains a number of Rouquayrol apparatuses. One the interior of this machine is written "Mobils In Mobili" which was the motto of its designer. This device is sought by Farragut who launches an expedition to find it using the *Abraham Lincoln*. This machine contains a drawing room in which is an organ. This conveyance uses extracted sodium to generate electricity and this machine was thought initially to be a narwhal.** For 10 points, name this submarine commanded by Captain Nemo.

ANSWER: Nautilus

6. This work states that “We have been living on our fat,” and uses the image of millions of pay envelopes on a Saturday night. The author summarizes his points in “the five fundamentals.” Harley Kilgore proposed a slightly different plan from that given by this document. It claims that it should be “ability and not the circumstance of family fortune” that should determine if a person to receive an education. It states that the situation is different from the 19th century where we could rely on “Yankee mechanical ingenuity” to get by. It uses the example of famines caused by population increases and the battle against U-boats to argue for the importance of its topic. It called for fellowships for students to be offered. It quotes from the earlier Moe Committee to make its point that social sciences, humanities, and other studies should not suffer if this report is to be implemented. It was written in response to a letter sent by President Truman and brought the phrase “basic research” to prominence. For 10 points, name this 1945 document by Vannevar Bush that led to the creation of the NSF.
ANSWER: Science The Endless Frontier

7. While in Beijing, this man gave a \$500 bribe to have the robe of a former emperor stolen from the palace. At Christmas time, this man would stand on the roof of his building and throw chickens and turkeys to the crowds below. When this man ran for the governor of his state, he drove around in the Ammunition Train No. 1, which was equipped with a stage and a movie projector, and he supported Gerald Winrod's fascist Senate campaign by donating his mailing list. This man's practices were notably attacked by Morris Fishbein. He's not Bulgakov, but this man's work was influenced by Serge Voronoff. One political cartoon attacking this man shows Pan playing his pipe and dancing because of a certain newspaper headline. This man founded the radio station KFKB, but when that was shut down this man founded the border-blaster XER in Mexico that featured his Medical Question Box program. This man's medical empire was based out of Milford, Kansas. For 10 points, name this huckster that transplanted goat testicles into impotent men.
ANSWER: John Romulus Brinkley [or John Richard Brinkley]

8. Rumored names for this product included “Sholes” and “Tao.” One ad for this product showed a horse kicking a cowboy and fleeing because it had been scared by an object falling from the sky. The upper back of this device had a line of gold cross mesh which covered the speakers and a 3.7 inch display. This product was launched around the same time as its maker's Cliq. Surprisingly, this device with a keyboard did not come with multitouch enabled. It was the first phone to come with built-in Google Maps turn by turn navigation and the first to run Eclair. This product was the first phone using Google's OS on Verizon and its slogan was that it “does.” For 10 points, name this Motorola smartphone launched in October of 2009 whose name was licensed from Lucasfilm.
ANSWER: Motorola Droid [or Verizon Droid]

9. The development of this program is currently overseen by Junio Hamano. This program's cherry-pick feature allows user to choose individual events to move. This program's stash feature stores un-finished work and returns the state to the last added point. It helped popularize among similar programs the rebasing paradigm which allows for a cleaner resulting history. One website based around this program has a mascot called Octocat and charges users based on how many private repos they have. This is probably the best known example of a class of programs that include Bazaar and Mercurial. Common commands used in this program include clone, pull, and merge. This program is the core of a namesake social coding “hub” that recently received a \$100 million dollar investment. This program uses a decentralized approach unlike CVS or SVN. For 10 points, name this source code management system created by Linus Torvalds.
ANSWER: Git

10. One recently introduced power saving feature in this standard is DevSleep. Interfaces for controllers of this connective technology is specified by the AHCI standard. The connectors for this technology can have a right angled design. It supports Native Command Queuing. Versions 2 and 3 support up to 3 and 6 gigabits a second respectively. This technology which superseded IDE has more bandwidth than the output of many of the continuously whirling devices it supports. For 10 points, name this bus for connecting hard drives in modern PCs.
ANSWER: SATA [or Serial Advanced Technology Attachment]

11. One person with this last name remarked of Bell Labs, all you could get from them was “pictures of a man with a beard and somebody says You will invent the telephone or something.” People with this last name created a short film with a scene where an animated man walk along a beach and takes sea shells into his “active memory” accompanied by the sound of a cash register ringing. One person with this last name invented a Do-Nothing Machine, which was an impressive array of colored, spinning solar powered doohickies. IBM commissioned the aforementioned film *The Information Machine* by people with this last

name and that film is a primer about what computers are and how they benefit society. Those same people with this last name wrote *A Computer Perspective: Background to the Computer Age* and created the “Mathematica: A World of Numbers and Beyond” exhibit, also for IBM. People with this last name created the LaChaise chair and the 1956 Lounge Chair and Ottoman. A film by those people uses the distance a race car and supersonic jet can travel in 10 seconds to illustrate the size of squares overlaid on top of Chicago. Those squares get smaller and the camera zooms out to show a good chunk of the universe. For 10 points, name this husband and wife team that created *Powers of Ten*.

ANSWER: Charles and Ray Eames

12. One man who experimented with a version of this technology based on an oscillating coil once gave a lecture at a Urodynamics Society meeting where he injected papaverine into his penis to demonstrate that the compound could cause erections. That version of this technology was developed by Giles Brinkley and it was applied to a 52 year old woman with receivers attached to her body. The patient Jerry was the test subject of a series of experiments into this technology using platinum wires conducted by William Dobelle. These devices are used to treat RP and AMD. The Argus II device of this type consists of a pair of glasses which transmits information to an array of electrodes implanted in the patient. For 10 points, name this technology that gives some relief to certain types of blindness.

ANSWER: Visual prosthesis [or artificial retina; or artificial eye or bionic eye; or cortical visual prosthesis ;accept equivalents]

13. A fake press release distributed on usenet attributed to a competitor of this product announced that the competitor would launch a "Cool User Program" to freeze users of this product until the competitor's product launched. That fake release in some ways parodies a TV ad for this product that uses the slogan "it's a totally cool way to run your computer." That ad begins and ends with distorted semi-psychedelic colors. A launch event for one version of this product featured Kate Mulgrew saying "This is going to take you where no man, woman or operating system has gone before." It stored data on HPFS and its GUI was called the Presentation Manager. This software lives on as eComStation. The third major release of this product was called "warp." Unlike an earlier system, this software introduced multitasking and memory protection. For 10 points, name this operating system, a collaboration between Microsoft and IBM, that until the success of Windows 3 was intended to be the replacement for DOS.

ANSWER: OS/2

14. One of these creatures is translated in a Youtube recording of a commercial as saying "What more do we need..Great Language" and "One for Two is" while dressed up as an angel. Another of these figures claimed his enemy was powered by the "blood of thousands of puppies being shoved into a hydroelectric dam." One of these figures admitted to spending one Halloween dressed up as Moses going around saying "Thou Shalt Not Steal Music." Tom Wilson, a character in *A Regular Guy* by Mona Simpson, is often considered to be one of these beings. In an Internet comic, one of these figures tells Calvin that "I Think I've Made \$64 Million Since We've Started Walking." The most well known of these figures told one executive to "fix your fucking shitty ass network you fucking shit-eating-grin-wearing hillbilly ass clown!" and told Yoko Ono "You know, if you're so into peace, then why have you a-holes been fighting me for 25 friggin' years." The Secret Diary belonging to one of these was written by Daniel Lyons. For 10 points, name these figures that did not actually invent "the friggin iPod."

ANSWER: Fake Steve Jobs [prompt on partial answer; accept things like False Steve Jobs]

15. Curran and Stull developed a duel mode version of this technology that allows the machine to act like a more primitive, related technology. In the 1960s, French researchers worked on this technology in the ESOPE project. Frederick S. Billig attempted to patent several technologies related to this paradigm while working on his Ph.D. Thesis, but the government ordered the developments be made secret. The Australian HyShot program sought to better understand the variables involved in operating this technology. One American study of this technology used a B-52 to lift a combination Pegasus rocket and test vehicle unit into the atmosphere. Unlike a related technology, the air stream does not have to be compressed to subsonic speeds. These machines must be accelerated to high speeds before they start working. The fastest and most successful example of this technology is the X-43, which reached over mach 9. For 10 points, name this aircraft propulsion technology that combusts fuel using atmospheric oxygen moving at supersonic speeds.

ANSWER: scramjet

16. This man's algebraic machine used an "endless spindle" to compute the sum of log a plus b in order to find the roots of polynomials. He described how to improve upon Babbage's designs by using

electromechanical devices in his “Essays on Automatics.” His telekino was a remote controlled boat. He designed the Whirlpool Aero Car at Niagra Falls and the Astra airships used by France in WWI. His most famous invention dates to 1912 and used a king and rook against king end game. For 15 points, name this Spanish inventor of the first documented real chess playing automaton.

ANSWER: Leonardo Torres y Quevedo

17. Zen'ichi Kiyasu invented the reflected binary scheme used in some implementations of this technology. One of the co-inventors of this technology coined the term Transistor. C. Chapin Cutler invented the differential form of this. G.722 uses an adaptive form of this to increase the response range. It was invented by Bernard Oliver, John Peirce, and Claude Shannon. DS0 communication is based on the 8 bit form of this, and 24 of those DS0 lines are combined to form a T1 line. Direct Stream Digital does not use this type of encoding but instead uses a delta-sigma type method. Meridian Lossless Packing is one way to compress information stored in this scheme such as in one variant of the DVD. CDs store audio through the linear version of this scheme. For 10 points, name this technique where an analog signal into a time division multiplexed sequence of digital symbols based on the amplitude.

ANSWER: Pulse Code Modulation [or PCM; prompt on analog to digital conversion]

18. Julian Larcombe Schley, who had earlier served as an advisor to Panama, was one head of this organization. Another head of this organization, Raymond A. Wheeler, implemented the Pick-Sloan plan. One former procurement officer for this organization, Bunnatine “Bunny” Greenhouse won a whistleblower lawsuit against it. The short film *Operation Blue Jay* was about this group's work in Greenland in the 1950s. This organization did the initial work on the ALCAN in the 1940s. This group used Rome plows to destroy a jungle. NASA contracted this organization to help build the Kennedy Space Center. This organization designed and built the levees that failed during Hurricane Katrina. For 10 points, name this division of the Defense Department in charge of military construction and flood control.

ANSWER: US Army Corps of Engineers

19. One type of these schemes is detailed in IETF RFC 5053. One type of these schemes is optimized by using the robust soliton distribution. One method for doing this randomly choose a degree d and then chooses d random packets to take the bitwise sum of. These schemes produce a nearly unlimited number of possible outputs from the input meaning they are rateless. They developed out of the study of Tornado codes. These are near optimal for all erasure channels. They generate output symbols randomly and one can recover the original message with high probability given that the number of messages received is over some threshold. Examples of these schemes include Luby Transform and Raptor codes. Their name comes from the analogy that decoding these is like standing under the namesake object with a bucket collecting drops. For 10 points, name this family of codings schemes.

ANSWER: fountain codes

20. One of this company's subsidiaries uses a proprietary TruFilm video processing technology. This company is the exclusive seller of StraightTalk prepaid wireless plans. In 2009, its Durabrand DVD player had to be recalled because it would catch on fire. Its Soundcheck website streams performances of popular musical acts. In March 2012, it was announced that that this company would sell consumers Ultraviolet access to online copies of their DVD and Blue-ray collections. In 2010, this company bought movie streaming company Vudu. Starting in 2012, this company allows you to order online and then pay in store using cash. In what is starting to become an all too frequent occurrence, a woman pepper sprayed fellow customers to get an Xbox from one of these stores during Black Friday 2011. For 10 points, name this largest retailer in America.

ANSWER: Walmart Stores, Inc.

Tiebreaker:

This company makes a team collaboration platform called BeeHive. In August 2012, it lost a lawsuit to HP over this company's failure to produce more software for Itanium. It produces VirtualBox and declares many of its products to be “unbreakable.” Many university course registration and HR systems are designed by its PeopleSoft subsidiary. This company bought out Sun Microsystems, and thus currently owns Java. For 10 points, name this software company run by Larry Ellison.

ANSWER: Oracle Corporation