

Questions mostly by UTC's David Moore with help from the usual suspects

1. The main fleet joined the Athenian refugees after the indecisive battle of Artemisium, after the Persians had occupied and burned Athens. The Greeks had 371 triremes and peneconters, while the Persians had a fleet over three times that size, but the ships were also larger and less maneuverable, and as Xerxes himself watched on, the Persian fleet was destroyed. FTP name this 480 BC naval victory of Themistocles.

Answer: **Battle of Salamis**

2. British physician John Snow earned renown for his work in ending an 1854 outbreak of this disease. After an incubation of about one day, the sufferer experiences diarrhea that can cause loss of 3-4 gallons of water in a 24-hour period. Usually spread by the consumption of contaminated water, FTP, name this bacterial infection of the small intestine.

Answer: **cholera**

3. Ivan conveys his lack of faith in a parable of his own invention, "The Legend of the Grand Inquisitor," which he relates to Alyosha. Dmitry is charged with murder, however it is the religious overtones of the work that are most remembered, with Alyosha's primary role as a foil to the views of Dmitry, Fyodor Pavlovich and Ivan. FTP name this novel by Fyodor Dostoyevsky.

Answer: **The Brothers Karamazov or Bratya Karamazovy**

4. A tattoo on her neck, which was written incorrectly and is therefore unintelligible, was meant to symbolize her newfound Kaballah faith, a faith that ironically frowns on tattoos. Both an episode of "Buffy the Vampire Slayer" and the first Pokemon movie featured her song "Soda Pop," off her phenomenally successful first album. FTP name this alleged singer whose release of...*Baby One More Time* launched a string of knockoff acts that plague our existence to this day.

Answer: **Britney Spears**

5. The eight-rayed star used as a symbol of the Ottoman Empire and later Islam originally was the emblem of this mythological figure. Child, and in some stories, also lover of Enki, that god intervened after she was besieged by sixty deadly illnesses by Erishkegal, goddess of death. Later her anger at being brushed off by Gilgamesh led her to send the bull of heaven to fight him and later to curse his friend Enkidu to death. FTP name this ancient Middle Eastern goddess of fertility associated with the planet Venus.

Answer: **Ishtar**

6. The stage for this battle was set after Bragg's defeat at Perryville, Kentucky, October 8, 1862, when he went into winter quarters in Middle Tennessee. Union Gen. Rosecrans followed Bragg from Kentucky to Nashville. Rosecrans left Nashville on December 26, with about 45,000 men. At dawn on December 31st, Bragg's men attacked the Union right flank, and drove the line back to Nashville Pike. Over the next several days, the two armies exchanged the upper hand often, until the Confederates were driven back from McFadden's Ford, and made their final retreat on January 5th. FTP, name this battle fought in Murfreesboro, chiefly significant because it boosted Union moral in the Western Campaign.

Answer: **The Battle of Stones River**

7. Born in Zlin, Czechoslovakia on July 3, 1937, his family moved to Singapore in 1939 to escape the Nazis. Then to Darjeeling, India in 1941 to escape the Japanese. At the age of 17, he left school and began working as a journalist, eventually moving into drama criticism and playwrighting. Among his contributions to the screen are screenplays for *Empire of the Sun*, *Brazil* and *Enigma*. However he might be better known for his stage works such as *Travesties*, *Jumpers*, and *Every Good Boy Deserves Favour*. FTP name this writer, best known for his Elizabethan-inspired fare, *Shakespeare in Love* and *Rosencrantz and Guildenstern are Dead*.

Answer: **Tom Stoppard**

8. If this quantity is equal to zero, a matrix is not invertible, and its value for a unitary matrix is always one. This value taken of the product of two matrices is equal to the product of the value for each matrix, and it is also equal to the product of the eigenvalues of a matrix. FTP name this quantity, which for a 2x2 matrix A B C D is equal to AD minus BC.

Answer: **determinant**

9. Uninspired by most of the composers of his day, he instead collaborated with artists in other media, such as dancer Merce Cunningham, painter Robert Rauschenberg, and poet Allen Ginsberg. His early compositions often required the alteration of traditional musical instruments, as when he fastened plates and screws to the hammers inside a piano. But he soon moved beyond modified instruments to create "chance music," such as "Imaginary Landscape No 4" (1951), which used twelve radios played at once and depended entirely on the chance broadcasts at the time of the performance for its actual sound. FTP name this composer whose best-known work involved the pianist playing no notes at all, for exactly four minutes and thirty-three seconds.

Answer: **John Cage**

10. Ultimately responsible for the stability of the atomic nuclei, these particles have an electric charge of zero, a spin of 1, and are generally assumed to have zero mass. They are exchanged when particles with a color charge interact, and they carry anti-color charges for each of the quark's old and new color charge. Because of their own inherent color charge, they can also interact with each other, possibly creating clusters called "glueballs". FTP name these theoretical particles that bind quarks together to form protons and neutrons as well as other hadrons.

Answer: **gluons**

11. Begun in 1991 and projected to be completed by mid 2005, it is the largest public works project in U.S. history. The first section of it to open was the Ted Williams tunnel, completed in 1995, which connects South Boston with Logan airport. Two bridges over the Charles River were opened 1999, and an extension of I-90 from the south end of Boston to the beginning of the Ted Williams Tunnel was opened in 2003. But the main section of the project is an 8 to 10 lane underground expressway that opened in the winter of 2003/04 and replaced the decades old elevated central artery. FTP give the common collective name of this project, officially called the Central Artery/Tunnel Project.

Answer: **The Big Dig**

12. Returning home to bury a parent, the protagonist is suddenly confronted with several challenges. He must compete in a three-way battle of wits with a knight and a gravedigger. He must find his way over a bottomless chasm to seek the treasure and wisdom of a recluse. He must also navigate a maze of voyeuristic galleries that are run by Method Man. Andrew Largeman must overcome these and other obstacles in, FTP, what film, written and directed by, and starring Zach Braff?

Answer: **Garden State**

13. Five of them are denoted by the single letters E, F, K, Q, and W – which makes no sense, since unlike the other fifteen, none of those five even contain the letter used to designate them. "F" makes a little sense, since it's for phenylalanine, but why the put glutamine under "Q" is beyond me. FTP name this group of compounds that also includes tryptophan and alanine, the basis of protein synthesis via messenger RNA.

Answer: **amino acids**

14. All decisions of this group were made by Angka, or "The Organization." Ideologically communist, one of its tenets was that peasants, or "old people," were preferable to city dwellers, whom they called "April 17 people," after the date in 1975 when they established control of their nation's largest city, forcing inhabitants to evacuate to rural work camps. It wasn't until 1977 that Angka even admitted to the world they were in control in a five-hour speech by leader Saloth Sar, who is better remembered by his nom de guerre, Pol Pot. FTP what was this group that murdered hundreds of thousands of Cambodians in the 1970s?

Answer: **Khmer Rouge**

15. This author's birth name was O'Flaherty, and she didn't begin writing until she was 39. Her first novel, *At Fault*, sold tepidly, but her next two collections of short stories made her a popular writer. Her story "The Storm" was excised from the first of those collections due to its unashamed portrayal of a woman's infidelity. That controversy foreshadowed the outrage that greeted her best-known work, an 1899 novel about Edna Pontellier. FTP name this author of *Bayou Folk* and *The Awakening*.

Answer: **Kate Chopin**

16. Mentioned in Thessalonians 4:17, it is described vividly in the writings of St. Teresa of Avila. In mystical Christianity, the term is used for a “flight of the spirit” when a believer is carried away by the overwhelming power of God. Among millennialists, it’s a matter of dispute whether it will take place before, during, or after the period of tribulation described in Revelations 7:14. FTP name this prophesied action in which believers will be “caught up” to meet Christ at his second coming.

Answer: the **Rapture**

17. Two figures, a woman and man, sit in the center and right of this painting, respectively. The man, wearing a hat, looks right, off the canvas, while the woman, dressed formally and also wearing a hat, stares vacantly downward. A glass filled with the titular greenish liquid sits before her. FTP name this 1876 work by Edgar Degas showing the deleterious effect of a powerful concoction of wormwood.

Answer: **L’Absinthe** (acc. “Absinthe,” “The Absinthe Drinker,” or “Glass of Absinthe”)

18. This mineral shares its structure with only one other mineral, called berlinite. Two of the more popular gemstones made from it are citrine and amethyst. This mineral has an average hardness of seven on the Mohs scale, and is composed of many helixes of silicon tetrahedrons. FTP, what is this most common mineral on earth, also called silicon dioxide, which greatly increased the accuracy of watches?

Answer: **Quartz**

19. At a recent speaking engagement in Nigeria, this man was misunderstood while relaying a story, and it was reported in at least one paper that he claimed to have opened a low cost family restaurant named Shoney’s. He is however, becoming quite successful in the business world. He is on the board at Apple, and he is a senior consultant to Google, receiving quite a windfall during their recent IPO. He also is trying to start a cable TV channel. He conducts all of this business from his new home in Nashville where he moved rather than returning to Carthage, TN. FTP name this man who, until 2001 lived at the Naval Mansion

Answer: **Al Gore** [or Albert Gore Jr.]

20. In the film version, Spencer Tracy played one of the title roles and during filming spent a great deal of time getting to know the book’s author. The other title role was played by the Pacific Ocean, off the coast of Peru, which is nowhere near the actual Gulf Stream. The author originally intended it as the first of four parts in a larger work, *Islands in the Stream*, but published it separately as a novella. FTP name this Pulitzer prize-winning big-fish story by Ernest Hemingway.

Answer: **The Old Man and the Sea**

21. This city lies at the junction of the Raccoon River and its namesake river, which rises in southwest Minnesota and empties into the Mississippi at Keokuk. Its educational institutions include Grand View College and Drake University. Famous natives include actresses Harriet Nelson and Cloris Leachman, and for a time Ronald Reagan was a radio sportscaster there. Its daily paper, the *Register*, is noted for its statewide political influence. FTP name this city, the capital of Iowa.

Answer: **Des Moines**

22. Firing chickens into the sun. Implanting a policeman with a squid brain. Sucking up all the Earth’s oceans into a humongous water balloon. Hypnotizing children with a zit puppet. Replacing items in the past with rubber piggies. Nearly destroying his own Irken homeworld in Operation “Impending Doom 1”. All of the previous plots took place in the life of, FTP, what little green alien with his own self-titled Nickelodeon TV series?

Answer: Invader **ZIM**

1. Identify the following quantities from thermodynamics for ten points each.

(a) Equal to the temperature derivative of internal energy, this quantity is a measure of the ability of matter to store heat, and is measured in units of Joules per Kelvin.

Answer: **heat capacity** (do not accept specific heat, as that is measured also per unit mass)

(b) A measure of the change of the internal energy of a system with a change in the amount of a substance in it, this quantity is often symbolized with μ and reaches an equilibrium during a chemical reaction.

Answer: **chemical potential**

(c) This quantity is technically a measure of the response of the internal energy with a change in the volume, and the gradient of this quantity is equal to the force density of the system.

Answer: **pressure**

2. Name the authors of the following early American literature for ten points each.

(a) *The Pathfinder, The Deerslayer*

Answer: James Fenimore **Cooper**

(b) *Magnalia Christi Americana, Wonders of the Invisible World*

Answer: Cotton **Mather** (don't need to prompt on Mather, but don't accept other Mathers)

(c) *The Sketch Book of Geoffrey Crayon, The Alhambra, Knickerbocker Tales*

Answer: Washington **Irving**

3. Stuff about early Australian history FSNOP.

A. First, name the explorer who charted Australia's east coast in 1770.

Answer: James **Cook**

B. On what ship did Cook do his charting in 1770?

Answer: **Endeavour**

C. Cook's scientific assistant, Joseph Banks, named this first landing spot of the Endeavour after the incredible wealth of flora he found there.

Answer: **Botany Bay**

4. This one is a computation bonus, so get ready. You will have fifteen seconds per part. Calculate the derivatives of

(a) Cosine of the quantity x squared plus x with respect to x .

Answer: **$-(2x + 1)\sin(x^2 + x)$ [negative quantity 2 x plus 1 times sine of x squared plus x]**
[or in reverse order, **sine of (x squared plus x) times (negative quantity 2 x plus 1)**]

(b) e to the power of x squared with respect to x .

Answer: **$2x e^{(x^2)}$ [2 x times e to the power of x squared]**

(c) x squared minus e to the x .

Answer: **$2x - e^x$ [2 x minus e to the x]**

5. Give it your best! Yes, that's right, we're talking about the freakishly popular dance arcade game, Dance Dance Revolution. Test your knowledge of DDR by answering the following questions FTPE.

What item does DDR use to show you how difficult a song will be?

Answer: **Feet**

What's the proper name for DDR's newest addition, an arrow that requires you to hold your foot on the pad for the duration of its appearance on the screen?

Answer: The **Freeze** arrow

What's the name of the company that makes DDR?

Answer: **Konami**

6. Answer these questions related to the Great Depression for ten points each.

A. Headed by Harry Hopkins, this agency erected over 4000 new school buildings, built 130 hospitals, and built or refurbished over 2500 sports stadiums.

Answer: WPA or Works Progress Administration

B. During its two-year life, this agency oversaw the development of so-called "codes of fair competition," which suspended antitrust laws. It was struck down in the Schechter "sick chicken" case in 1935.

Answer: NRA or National Recovery Administration

C. This agency was established during the Hoover administration to provide liquidity to and restore confidence in the banking system. Under FDR it funded many projects, including the Export-Import Bank, Fannie Mae and numerous World War II projects.

Answer: RFC or Reconstruction Finance Corporation

7. Sure you've heard of it, but do you really know Carmen? FTPE:

A. What Frenchman who died at 36 composed it?

Answer: Georges Bizet

B. This aria celebrating a bullfighter and sung by a baritone is featured in Act II, though you may know it better from The Bad News Bears.

Answer: Toreador Song

C. Almost as well-known as the Toreador Song is this song from Act I, the name of which comes from the rhythm of the Cuban dance with which it shares its name.

Answer: Habanera

8. Five points for the formula, five points for the charge, identify the following polyatomic ions.

A. Ammonium

Answer: NH₄, +1

B. Sulfate

Answer: SO₄, -2

C. Cyanide

Answer: CN, -1

9. Identify these Central Asian 'stans from their capitals F5PE or 30 for all 5 correct:

A. Tashkent

Answer: Uzbekistan

B. Kabul

Answer: Afghanistan

C. Bishkek

Answer: Kyrgyzstan

D. Astana

Answer: Kazakhstan

E. Ashkabad

Answer: Turkmenistan

10. Identify these characters from Homer's Odyssey FTPE.

A. This Phaeacian (fay-ee-shen) princess finds Odysseus after he's nearly been drowned by a storm and presents him to her father, Alcinous.

Answer: Nausicaa

B. This enchantress turns Odysseus's men into swine.

Answer: Circe

C. This son of Odysseus helps him kill the suitors of his wife, Penelope.

Answer: Telemachus

11. Stuff about the founding of the redheaded stepchild of the US: Georgia. FTPE:

A. This man accompanied the first boat of settlers in 1732 and through his military leadership against the Spanish became de facto leader, though not officially governor.

Answer: James **Oglethorpe**

B. Oglethorpe laid out this planned city above the river of the same name on Yamacraw Bluff; by 1754 it had 600 inhabitants and 150 houses.

Answer: **Savannah**

C. The state was finally named for this mostly useless English monarch.

Answer: **George II**

12. Rookies. FTPE name these first-year NFL quarterbacks from clues:

a) Out of Ole Miss, he was drafted 1st overall and promptly traded to the Giants, where he's currently backup to the surprisingly effective Kurt Warner.

Answer: **Eli Manning** [prompt on Manning]

b) Out of North Carolina State, he was drafted 4th overall by the Giants and promptly traded for Manning, going to the Chargers, where he's currently backup to the surprisingly effective Drew Brees.

Answer: **Philip Rivers**

c) Out of Miami of Ohio, he was drafted 11th overall by the Steelers but has beaten the other two to the punch, starting in place of the not-so-surprisingly injured Tommy Maddox.

Answer: **Ben Roethlisberger**

13. Deutschland ist groß! [*gross*] Identify the following German authors of the twentieth century from works FTPE.

(a) *End of a Mission* and *The Clown*

Answer: Heinrich **Böll**

(b) *All Quiet on the Western Front*

Answer: Erich Maria **Remarque**

(c) *Magister Ludi: The Glass Bead Game* and *Siddhartha*

Answer: Hermann **Hesse**

14. Identify the geologic time period from description, FTPE.

A. Flowering plants appear; many groups of organisms including dinosaurs become extinct.

Answer: **Cretaceous**

B. Emergence and radiation of most modern animal phyla. This period has an "explosion" of life forms named for it.

Answer: **Cambrian**

C. This period is currently characterized by ice ages and the emergence of humans.

Answer: **Quaternary**

15. Answer the following about joints, FTPE.

A. This type of joint allows for movement and rotation in several planes. Examples include the connection of the humerus to the shoulder and the femur to the pelvic girdle.

Answer: **ball and socket**

B. This type of joint restricts moving to a single plane such as the bending of the elbow or knee.

Answer: **hinge**

C. The rotation at the elbow joint is an example of this type of joint.

Answer: **pivot**

16. Match the ship with the other ship it famously battled, FTPE.

(a) *CSS Virginia*

Answer: USS **Monitor**

(b) *HMS Serapis*

Answer: USS **Bonhomme Richard**

(c) *HMS Hood* and *HMS Prince of Wales*

Answer: DKM **Bismarck**

17. Name these poetic devices FTPE:

(10) The use of extravagant exaggeration for a specific purpose

Answer: **Hyperbole**

(10) A figure of speech by which a part is put for the whole, the whole for a part, or the name of the material for the thing made

Answer: **Synecdoche**

(10) Using the name of one thing for that of another of which it is an attribute or with which it is associated.

Answer: **Metonymy**

18. Name the architect from buildings designed FTPE.

(a) *St. Paul's Cathedral* in London

Answer: Sir Christopher **Wren**

(b) *Seagram Building*

Answer: Ludwig **Mies van der Rohe**

(c) *Statue of Liberty* (yes, it's a building too.)

Answer: Frédéric **Bartholdi**

19. Listen: Billy Pilgrim has come unstuck in time. FTSNOP:

(10) Name the Kurt Vonnegut novel that begins with this line

Answer: **Slaughterhouse 5**

(10) Name the actual historical event that *Slaughterhouse 5* dramatizes

Answer: Dresden Fire Bombing (accept equivalents)

(10) 5 for 1, 10 for both, give the alternate title & the subtitle to *Slaughterhouse 5*; you don't have to say which is which.

Answer: The **Children's Crusade** and A **Duty-Dance with Death**

20. Answer the following regarding the concepts of the Great Dane Soren Kierkegaard FTPE.

A. Kierkegaard's master's thesis was an investigation into this titular concept.

Answer: **irony**

B. This massive, two-volume work, perhaps K's best known, explores the "aesthetic" phase of existence in the first book and the "ethical" in the second.

Answer: **Either/Or**

C. Kierkegaard's great work Fear and Trembling involves a deep meditation on the Old Testament story about this patriarch's near sacrifice of his own son.

Answer: **Abraham**

21. Given two cities from opposite ends of a state's coast, name the state for fifteen points, or from a more recognizable city on that coast for 10 points.

a. (15) Currituck, Oak Island

(10) Cape Hatteras – **North Carolina**

b. (15) Port Arthur, Port Isabel

(10) Galveston – **Texas**