1 Caltech Tossups, Round Six

1. Although he married, he carried on expensive affairs with courtesans. His salary couldn’t cover the costs, so he went to an old friend, Maximillian von Schwartzkoppen. Thanks to Hubert Henry of the Second Bureau and the “handwriting expert” Alphonse Bertillon, his resulting shenanigans were pinned on someone else. Georges Picquart tried to bring the blame back to this person, but was silenced and thrown into Africa. When accusations flew again, he demanded a court-martial, which proclaimed him innocent. But the case refused to die, and eventually the man accused in his stead was cleared of charges. He fled to England and wrote a confession of sorts. FTP name this French army major who died cursing “that Jew Dreyfus.”

Answer: Ferdinand Walsin Esterhazy

2. The actress in this role first won fame in the role of Takako Chigusa in Battle Royale. Three years later, Chiyaki [CHEE - yah - kee] Kuriyama plays this side character, dressed in white socks, pleated skirt, and navy blazer with a red bow tie. Her idea of “penetrating” doesn’t involve sex; it involves swords, but her violent days are cut short by a table leg to the head. For ten points, name this seventeen-year-old bodyguard, the ball-and-chain wielding Japanese schoolgirl from Kill Bill.

Answer: Gogo Yubari (accept either)

3. First mentioned in Genesis, this geographical feature was the boundary which Moses and every Israelite over the age of twenty could not cross. Later it was used both for healing and rituals, the latter especially in the New Testament. In the present day, its name has two identities: one in Utah that runs northwards into the Great Salt Lake, and the original one in the Middle East, which flows into the Dead Sea. FTP name this river that divides a namesake kingdom from Israel.

Answer: Jordan River

4. He married Lili Stumpf and died of sclerodermata [skehr-oh-DERM-ahta]. His ideal of painting supposedly came from German metaphysics. During his years at the Bauhaus, he wrote The Thinking Eye. He saw the world as a mechanical toy set up by God, which might explain the childish figures in his works. Indeed, some of his watercolor scrawls are grouped together under the name “children’s paintings.” FTP name the Swiss violinist-turned-painter of “Twittering Machine,” a member of Der Blaue Reiter.

Answer: Paul Klee

5. She was a highly educated woman who “left logic for the Gospel, Plato for Christ and the academy for the cloister” - although it was not completely voluntary. Her tutor fell in love with her and then seduced her. After a son, Astrolabe, was born, they were secretly married. When this was discovered,
her uncle had her lover castrated; their saga ends with her lover as a monk and she a nun and abbess. For ten points, name this French woman, niece of Fulbert of the Notre Dame and lover of Abélard.

**Answer:** Héloïse [Eh-low-AH]

6. This natural alkaloid has antipyretic and analgesic properties, and chemical formula $C_{20}H_{24}N_2O_2$. It was probably discovered by Peruvian Jesuits, who used this then-rare substance to treat various fevers, and today it is still a useful medicine. In 1944 Robert Woodward and William Doering found a way of synthesizing it from coal tar, which was preferable to cutting down cinchona trees from the Andes. The story goes that it was so good at treating a certain tropical disease, but tasted so bitter, that British colonels in India mixed it with gin to produce gin-and-tonic. FTP name this medicine, best known for preventing and treating malaria.

**Answer:** Quinine, do not accept or prompt on any derivatives.

7. He entered Kazan University at 15, and became the rector twenty years later; during his tenure as rector, an observatory was built, a center for Oriental studies was opened, cholera struck, and half of the university burned down. He, along with Dandelin [DAHNDE-leen] and Gräffe [GRAYFF-eh], developed a method for approximating the roots of algebraic equations. Even though Gauss and and Bolyai [BALL - yoi] had results first, he gets the credit because he had the foresight to get his interpretation of the fifth postulate published first. For ten points, name this Russian developer of non-Euclidean geometry whose name is desecrated in a Tom Lehrer song about plagiarism.

**Answer:** Nikolai Ivanovich Lobachevsky

8. Flores and Corvo to the Northwest. Faial, Pico, So Jorge, Terceira, and Graciosa in the center. So Miguel, Santa Maria, and the Formigas islets to the east. These nine islands were uninhabited before they were settled in 1432 by Gonalo Velho Cabral. Before the advent of weather sattelites, they were essential to forcasting the weather of Europe, and their strategic position made them hotly contested during England’s conflict with the peninsular powers. For ten points, identify this island group with capital at Ponta Delgada a thousand miles west of its owner, Portugal.

**Answer:** Azores

9. Some of the top US players in this sport are Peter Nicol and David Palmer, who in September competed in the U.S. Open. Its history traces back to London prisoners in the Fleet. Originating from a game called “rackets”, this sport eventually evolved into its modern form, with its modern name, at the Harrow school. They figured out that a punctured racket ball, hit against the wall, was more interesting than playing rackets. Today the sport is played with a hollow rubber ball. FTP, name this sport whose name comes from the compressing action of its ball, and is nothing like zucchini.

**Answer:** Squash

10. It helped spur the Luddite movement in Britain because it showed the weakness of a mercantile economy. First implemented by the Berlin decrees in 1806, it was furthered by the Milan decree in 1807 and was — along with the division of Prussia — an integral part of the Tilsit treaty with Russia. In response to the 24 Orders in Council, however, Russia and Portugal refused to implement Napoleon’s orders, thus prompting Napoleon’s disastrous Moscow campaign to ensure the end of trade with Britain. For ten points, identify this French attempt to restrict British trade with mainland Europe.

**Answer:** Continental System

Accept le Bloque continental

11. The title character of this book lives in a house with 365 rooms and 52 stairways. He gains the favor of many and varied court personages and enchants Queen Elizabeth, but later on, this character eventually marries Marmaduke Bonthrop Shelmerdine [shell-MER-deen], Esquire, whose name changes from “Mar” to “Bonthrop” to “Shel” depending on the mood. Another memorable suitor for the title character is Archduke Harry, who cross-dresses to become Archduchess Henrietta. This change, however, is a parody of the literal gender change undergone by the main character in, For ten points,
12. Nobody has heard of his weird Assyrian last name. There’s a dead man’s belongings in his tent. His friend falls in love with a whore, who then blames him for the friend’s death. He is continually haunted by the fragmented memory of a comrade’s entrails splattered all over his uniform while fighting in Avignon. He’s furious at being a bombadier even though he has finished all his missions. He’s the only sane guy left on Pianosa, but there’s just one thing that won’t let him leave the army. FTP name Joseph Heller’s protagonist from *Catch-22*.

*Answer:* John Yossarian

13. Its notable contributions include Duchenne muscular dystrophy, retinitis pigmentosa, and severe combined immunodeficiency. Its condensation in humans and other animals lead to the formation of Barr bodies, which results in calico and tortoiseshell cats having patches of color. Like the others of its kind, it is highly condensed and methylated. Unlike the others, it does not necessarily make up a homologous pair. FTP name this variant of chromosome #23, especially known for carrying hemophilia, and a pair of which biologically defines a human female.

*Answer:* X chromosome; smack anyone who answers “Y”.

14. The national anthem of this country claims that Bonaparte has shown its people the way to victory, and that said people will beat up the Swedes. Under Mieszko [MEES-koh] I, its people became Christian, and to this day its people are predominantly Roman Catholic. In the 14th century, they united with Lithuania with the marriage of Wladyslaw II [vlad-EH-slaw] and Jadwiga [yahd-VI-gah]. Although its modern-time military record is less than impressive, in the 15th century they defeated the Teutonic Knights at Tannenberg, and at least one of its past citizens earned, by military valor, his own holiday in certain American cities. FTP name the homeland of Casimir Pulaski with capital at Warsaw.

*Answer:* Republic of Poland or Rzeczpospolita Polska

15. The zone that it covers is called the “path of totality.” If the moon is near apogee, this will not quite touch Earth when Earth, Moon, and Sun align, resulting in an annular eclipse. This region, when dealing with a solar eclipse, is entered between “second” and “third” contact. FTP name this conical region of complete shadow, within which a total eclipse can be viewed, and which lies inside the larger penumbra.

*Answer:* Umbra

16. Three rough divisions of this type of music are cakewalk, bordello, and firework, though pieces tend to overlap. It is characterized by bass notes on the beat and melodic notes often off the beat. It was the title of a play by Terrence McNally and a book by Doctorow, which were adapted into a 1998 Broadway musical with songs like *Coalhouse’s Soliloquy* and *Wheels of a Dream*. For ten points, name this genre of music, most famously composed by Joseph Lamb, James Scott, and Scott Joplin.

*Answer:* Ragtime

17. This role-playing game includes the “Fabtabulous Contrapulator,” a sidequest where you distill sewage into useful potions. Locations you may encounter include Faerun, Charwood, and Port Llast. Side characters include a sorcerer named Wanev, the almighty god Tyr, various magical familiars, and any of the henchmen you may hire to help your questing. As for you, you start out as a student under the elven Lady Aribeth, then pick and choose your way through modules of adventures that lead you to the ultimate secret of the title location. For ten points, name this AD&D-based game by Bioware, with a recent expansion pack called “Shadows of Undrentide.”

*Answer:* Neverwinter Nights

18. Her most common name implies an evil sorceress, although an older form of it, Niniane, carries more positive connotations. In most versions of her story, she is the foster mother of a great knight. However, in a more recent movie, she lives on a magical island and is the foster mother to a great sorceress instead. In all versions, her meddling and betrayal ultimately cause the fall of King Arthur. However, she really
did intend to help him, for she gave him Excalibur. FTP name this magical woman, student, scribe, and lover of Merlin, with the title Lady of the Lake.

*Answer: Vivian, also accept Nyneve, Nimue, and Lady of the Lake before it is said.*

19. Its name comes from a Cherokee name which, appropriately, means “place of death.” The first day, forces under Thomas and Polk fought an indecisive battle. Hood, acting under the orders of the newly arrived Longstreet, managed to break through the Union line, forcing Rosecrans to retreat, ultimately ending his career. This encounter between confederate troops withdrawing from Chattanooga encamped at the titular waterway saw the two bloodiest days of fighting in the Civil War. For ten points, name this creek in Georgia, also a short story by Ambrose Bierce.

*Answer: Chickamauga Creek*

20. This character is based on Jerry Dunphy, who died on May 20, 2002. He likes to keep exotic pets such as lizards and llamas, the latter of which once bit Ted Kennedy. This might explain his willingness to collaborate with insect invaders; he, for one, “welcomes our new insect overlords.” Homer sums up the situation by saying that even though he has all the money in the world from winning the hundred and thirty million dollar lottery, there is one thing he can’t buy, a Dinosaur. For ten points, name this husband of Stephanie the Weather Girl and Springfield’s Emmy-award winning anchor.

*Answer: Kent Brockman*
2 Caltech Bonuses, Round Six

1. Identify the following things related to studying proteins for ten points each.

(a) Proteins can be detected by probing with antibodies on this type of “blot”.
   Answer: Western

(b) One popular way of retrieving proteins for Western blots is to do a “pull down” using this technique that is generally performed using resin or agarose beads.
   Answer: Column chromatography or Binding-Affinity chromatography (either binding or affinity will do, but must include chromatography)

(c) As the first step in a Western blot, proteins are first run through this assay, which involves some amount of SDS, acrylamide, and electrodes.
   Answer: Sodium Dodecyl Sulphate Polyacrylamide Gel Electrophoresis or SDS-PAGE; do not accept or prompt on any answer involving “agarose”.

2. Answer the following about the first Opium War FTPE.

(a) For ten points, name either the minister charged with cleaning up China of opium or the British Chief Superintendent of Trade in China who called in the calvary after his stocks of opium were seized.
   Answer: Lin Zexu or Charles Elliott

(b) The treaty ending the war was signed in this Chinese city.
   Answer: Nanjing (accept Nanking)

(c) Five ports were opened as a result of the treaty ending the Opium War. Name any two FFPE.
   Answer: Guangzhou (accept Canton), Shanghai, Xiamen (accept Amoy), Fuzhou, Ningbo (accept Ningpo)

3. Name these people associated with exploring the North Pole FTPE.

(a) He is generally credited with leading the first expedition to reach the North Pole.
   Answer: Robert Peary

(b) This fictional sailor tried to reach the North Pole, but instead ran into Victor Frankenstein.
   Answer: Robert Walton

(c) This man is credited with being the first to fly over the North Pole.
   Answer: Richard Byrd

4. Name the Broadway musical from lyrics of songs, FTPE. If you need titles of other songs, you’ll get five points each.

(a) 10: “A song
     played on a solo saxophone
     it’s telling me
     to hold you tight
     and dance
     like it’s the last night of the world.”

   Answer: Miss Saigon
(b) 10: “Think of me, think of me waking
   Silent and resigned.
   Imagine me, trying too hard to
   Put you from my mind.”
   5: “Music of the Night,” “All I Ask of You,” “Point of No Return”
   **Answer:** *The Phantom of the Opera*

(c) 10: “Matchmaker, matchmaker, make me a match / find me a find / catch me a catch / matchmaker, matchmaker look through your book / and find me a perfect match.”
   5: “If I Were a Rich Man”, “Do You Love Me”, “Now I Have Everything”
   **Answer:** *Fiddler on the Roof*

5. A river runs through it. It being a city. For ten points, name these cities from the river they straddle.
   (a) On the Mississippi, this tiny Illinois town – now an LDS tourist trap with little more than a rebuilt temple and visitor’s center – was the home to the Mormons before they trekked to the West.
   **Answer:** *Nauvoo*

   (b) More or less on the Wabash, this city is the home of Purdue University.
   **Answer:** *Lafayette*

   (c) At the crossing of Rhône and Seône, this city is France’s second largest.
   **Answer:** *Lyon*

6. Given a traditional book of Asian literature, tell whether it has a Monkey God, a talking pig, both, or neither. 5-10-20-30 basis.
   (a) The Water Margin or the Water Bandits
   **Answer:** *Neither*

   (b) Journey to the West
   **Answer:** *Both*

   (c) Ramayana
   **Answer:** *Monkey*

   (d) Sir Whong and the Golden Pig
   **Answer:** *Neither*

7. For ten points, name each of these novels by Michael Crichton based on a plot summary.
   (a) A guy who makes CD-ROM drives called “Twinkle” is sexually assaulted by a female superior, and quickly finds out she screwed him in more ways than one.
   **Answer:** *Disclosure*

   (b) This novel involves a bad tennis player who happens to be the king of 14th century France.
   **Answer:** *Timeline*

   (c) A woman, who was not pregnant, is killed by a botched “abortion”, and a pathologist goes to much pain to figure out what exactly happened.
   **Answer:** *A Case of Need*

8. Answer the following questions about the Hundred Year’s War.
   (a) What 1356 battle saw a massive French defeat and the capture of King John II?
   **Answer:** *Poitiers*
(b) What “black prince” lead the English troops in the battle?
   Answer: Edward III

(c) The battle allowed the English to negotiate a huge ransom and gained a huge swath of France via what 1360 treaty?
   Answer: Brétigny

9. Identify these Russian whores created by Dostoevsky FTPE.

(a) When Raskolnikov confesses his crime to her, she forgives him, advises him how to repent, and goes into exile with him.
   Answer: Sonya Marmeladova (accept either)

(b) Thinking herself unworthy of the Idiot Myshkin, she goes to Rogozhin. He promptly kills her, which is apparently supposed to give her dignity or something.
   Answer: Natasia Filipovna (accept either)

(c) The nameless protagonist in Notes from the Underground attempts to redeem this woman, who comes to him to receive help. She ends up inviting him to her house.
   Answer: Liza

10. Answer these questions about Scottish history FTPE.

(a) His seventeen years of rule were so secure that he went to Rome on a pilgrimage, and came back to be king again, unchallenged. Notice that this relatively peaceful picture is not the one painted in Shakespeare’s play.
   Answer: MacBeth

(b) This is the name given to the joining of Scotland and England, occurring in 1603 when King James IV of Scotland became King James I of England.
   Answer: Union of Crowns, do not accept “Act of Union”

(c) He is more or less recognized as the first king of all the area that is now Scotland, though it was called Alba at the time.
   Answer: Kenneth I

11. Given a description, name the ballroom dance FTPE.

(a) This dance is in three-four time, and evolved from a quicker form of it that was invented in Vienna.
   Answer: Waltz; do not accept Viennese Waltz

(b) This dance has a slow-quick-quick rhythm, is in four-four time, and is also a comic strip.
   Answer: Foxtrot

(c) This Latin dance evolved from the Mamba and has a quick-quick-slow rhythm. Famous singers of its music include Celia Cruz, who died in July 2003.
   Answer: Salsa

12. Name these Asian deities for ten points each.

(a) This member of the Hindu Trimurti is the preserver of the universe. His incarnations include Rama and Krishna.
   Answer: Vishnu
(b) This Japanese god washed the sun goddess Amaterasu out of his eye and sneezed the storm god Susanoo out of his nose.
Answer: Izanagi

(c) This Chinese goddess of healing, mercy, and compassion protects women and children, and is the patroness of sailors.
Answer: Guan-yin or Kuan-yin or Quan-yin or Kwan Yin or Kwannon or Kannon

13. Give the team from pitchers, 30-20-10.
(a) Bret Prinz, formerly of Arizona, has an ERA of 18.00.
(b) Jose Contreras, in his first year with the team, put up a respectable ERA of 3.30.
(c) The winner of the 2001 Cy Young award, Roger Clemens is also on this AL team.
Answer: New York Yankees

14. Given a year and some description, name the Olympic gymnastics champion. First and/or last name is acceptable.
(a) A Romanian, she was first gymnast to score a 10, she won the all-around in 1976.
Answer: Nadia Comaneci (accept either)
(b) A Ukrainian, in 1996 she won the all-around and the floor exercise.
Answer: Lilia Podkopayeva (accept either ... be lenient on that last name)
(c) A Russian, he won six medals in Atlanta and six in Sydney. For his good looks, a Russian newspaper said he was “the male Anna Kournikova, except that once in a while, he wins something”. You might remember him for taking off his shirt at the Atlanta Gala.
Answer: Alexei Nemov (grudgingly accept “Sexy Alexei”)

15. “Absalom, Absalom! O my son Absalom!” Test your knowledge about both the biblical account, and the novel.
(a) For five points, who wrote the novel “Absalom, Absalom”?
Answer: William Faulkner
(b) For five points, in which book of the Old Testament does Absalom appear?
Answer: Second Samuel or Samuel II
(c) For ten points, the dynasty of which family is covered by the novel?
Answer: Sutpen
(d) For ten points, In the Bible, Absalom named his daughter after this sister of his who was raped by his half-brother Ammon.
Answer: Tamar

16. FTPE, answer the following chemistry questions.
(a) In molecular orbital theory, this is defined as the number of electrons in bonding orbitals, minus the number of antibonding orbitals, all divided by two.
Answer: Bond order
(b) The bond order might not be a whole number if the molecule jumps among several different forms of itself, constantly switching its bonds. Name this phenomenon.
Answer: Resonance
(c) Resonance resulting in two circles of pi-bonds is the reason that this aromatic hydrocarbon is so stable. It is called a phenyl group when acting as a substituent.

**Answer:** Benzene

17. Identify these Object Oriented Programming languages.

(a) Named for the world’s first programmer, this language developed for the Department of Defense allows for encapsulation and polymorphism, but not true object-oriented design.

**Answer:** ADA

(b) Developed by Alan Kay at Xerox, this descendent of Simula is considered to be the first object-oriented programing language.

**Answer:** Smalltalk

(c) Developed by Bjarne Stroustrup in 1984, this is the second most widely used Object Oriented language after Java.

**Answer:** C++

18. Physical Geography from before you were born . . . for the stated number of points, name

(a) For five, the huge supercontinent that formed most of the Earth’s land area at the start of the Mesozoic.

**Answer:** Pangea

(b) For ten, the sea which separated Laurasia from Gonwanaland which shares its name with the sister and wife of the titan Oceanus.

**Answer:** Tethys

(c) For fifteen, the theorized supercontinent in the Neoproterozoic, a precursor of Pangea which means “homeland” in Russian.

**Answer:** Rodinia

19. Lots of things besides plants are green, at least supposedly. Name these three on a 5-10-15 basis.

(a) This is the chamber reserved for the cast of a production when they are not onstage.

**Answer:** Green Room

(b) This is a neongreen polypeptide found in the jellyfish *Aequoria victoria*, often used in biology.

**Answer:** Green Fluorescent Protein or GFP

(c) This is a semiprecious mineral, the state gemstone of Michigan.

**Answer:** Isle Royale Greenstone (accept “chlorastrolite”, “green starlight”, prompt on “pumpellyite”)

20. Given a useful medicine, name the poisonous plant from which it derives, for fifteen points each.

(a) Digitalis

**Answer:** Foxglove

(b) Belladonna

**Answer:** Nightshade