

Tossups

0. One of these two people commented “Seldom have the planets aligned so beautifully” in response to the other’s tweet that he is on his way to a Nickelback concert. One of these people said if you can’t tell jokes about the other one, “comedy as we know it is dead.” One of these people accused the other of turning Times Square into the Ed Hardy district by opening his (*) American Kitchen & Bar there in 2012. The feud between these two people intensified when one vented in a GQ profile that the other “definitely gotta have issues” because “you have nothing else to fucking worry about than if I have bleached hair or not? I mean, fuck.” For 10 points, name these two celebrity chefs, one a guy with frosted tips who takes you to flavor town, the other the former host of *No Reservations*.

ANSWER: Guy Fieri and Anthony Bourdain <AG>

1. Using Gray codes with these algorithms avoids the "Hamming cliff." Avoiding a "takeover" is important for these algorithms, as explicated by David Goldberg in a famous book about them. An operator used by these algorithms can be k-point, uniform, order based, or partially matched. These intrinsically parallel algorithms combine items with "don't cares" and a short defining length, called schema, to "build" a solution from "blocks" of subsolutions. John Holland mostly developed the classical version of these algorithms, which maintain a set of binary strings that undergo crossover, mutation, and selection to maximize fitness. For 10 points, name this type of algorithm that operates on strings that represent chromosomes.

ANSWER: genetic algorithms [prompt on “evolutionary algorithms”; prompt on “machine learning”] <BM>

2. This poem says rather sexistly that “like untuned golden strings all women are, which long time lie untouched, will harshly jar.” A celebrated portion of this poem observes that “It lies not in our power to love or hate,” and asks “Who ever loved, that loved not at first sight?” It ends by describing a woman who “danged down to hell her loathsome carriage.” This poem is divided into two *sestia*s, a type of canto named for the city that it is partly set in. (*) Neptune mistakes one of the title characters of this poem for Ganymede and drags him to the bottom of the ocean. This poem, which was completed by George Chapman, ends after the naked second title character, a youth from Abydos, knocks on the tower of the first, a priestess of Venus, after emerging from the Hellespont. For 10 points, name this Christopher Marlowe poem that retells a Greek myth about a pair of lovers.

ANSWER: Hero and Leander <AG>

3. A Gentile Bellini painting titled after one of these places shows Andrea Vendramin retrieving a piece of the True Cross. During his reversion from Neo-Impressionism to Impressionism, Camille Pissarro painted one of these places partially obscured by a smokestack in Rouen. A top-hatted man gazes at a white-suited man while a dog walks in the other direction in a painting of one of these places by Gustave (*) Caillebotte. A preparatory sketch by Jean-Baptiste-Camille Corot shows a destroyed one of these places at Narni. One of these places dominates the view of James Abbott McNeill Whistler’s *Nocturne: Blue and Gold*. Claude Monet frequently painted one of these places at Charing Cross obscured by fog. For 10 points, name these structures, which also lend their name to a German expressionist art movement including Emil Nolde.

ANSWER: bridges <KG>

4. It’s not salt, but Tsar Alexis I faced a riot over this substance in response to Russia’s participation in the Second Northern War. Sumitomo, one of the Big Four *zaibatsu* of Japan, began by producing this resource. The Slovak city of Banská Bystrica was a center of this resource’s production, which Jakob Fugger the Rich

took advantage of. Historically, much of Europe's supply of this resource came from the Falun Mine in Sweden. Eduardo Frei (*) Montalva began a process of nationalizing the production of this resource, which was completed by his successor Salvador Allende. This resource takes its name from Cyprus, where much of it was mined in antiquity. For 10 points, name this element that makes up much of an Olympic bronze medal.

ANSWER: copper [or Cu; or cuprum] <KG>

5. The difference in the number of left and right-handed modes in this man's operator equals the topological charge in QCD according to the Atiyah-Singer index theorem. A left-handed and a right-handed object named for Weyl can be combined to form a four component object named for this physicist. Fermions which are *not* their own antiparticles are named for this physicist and contrast with (*) Majorana fermions. A distribution named for this guy is the derivative of the Heaviside step function. He used a set of anticommuting matrices to factor the Klein-Gordon equation in order to derive a first-order Lorentz invariant equation for spin half particles. For 10 points, name this English physicist whose equation predicted the existence of antimatter.

ANSWER: Paul Dirac [or Paul Adrien Maurice Dirac] <BM>

6. The son of Matholwch and Branwen, Gwern, is named after one of these objects. According to the *Auraicept*, the letters of the ogham alphabet were named after these objects. Connla's well is surrounded by these objects. When Lleu Llaw Gyffes is sitting atop one of these objects, Gwydion lures him down with a magical song and turns him back into a human. Gwydion turns these objects into (*) warriors in the poem *Cad Goddeu*, which tells of a battle named for these objects. Pliny the Elder describes a ritual in which Druids climbed these objects. By eating the products of one of these objects, the Salmon of Knowledge gained its wisdom. For 10 points, name these plants often considered sacred by the Celts.

ANSWER: trees [accept alder trees or oak trees] <WN>

7. A knight serving under a man from this family was killed at the Battle of Teba after promising that man to take his embalmed heart to Jerusalem. Another member of this family was crushed by forces under John de Bermingham at the Battle of Faughart. Edward was a Head King of Ireland from this family, whose most famous member was excommunicated following his murder of (*) John Comyn at an altar. The Declaration of Arbroath tried to convince the Pope to lift that excommunication. A member of this family succeeded John Balliol on the throne after having earlier supported the efforts of William Wallace. For 10 points, name this family whose members include the victor at the Battle of Bannockburn, the Scottish king Robert.

ANSWER: Bruce [or Brus; accept Clan Bruce or Clann Brus] <SD/KG>

8. The animal instincts of this character's dog Hector are contrasted with the pomposity of Dr. Bat, who claims to have discovered a monster which turns out to just be a donkey. This character finds some ivory chess pieces in a chest, which he uses to ransom two men who have been kidnapped. He travels with Hurry Harry to an ark where Tom Hutter lives with Judith and Hetty. A scene in which this character is certain that he has hit a (*) target at a hundred yards in a shooting match is criticized as unbelievable in a Mark Twain essay. This character disguises himself as a bear to rescue a prisoner from a cave, and kills the villainous Magua, in a novel in which he is friends with the title character, Uncas. For 10 points, name this frontiersman, the hero of James Fenimore Cooper's *Leatherstocking Tales*.

ANSWER: Natty Bumppo [accept either name; or Nathaniel Bumppo; prompt on "Hawkeye," "Deerslayer," "La Longue Carabine," "Leatherstocking," "the trapper," or "Pathfinder"] <WN>

9. In 2001, Richard Posner participated in a debate on this topic on *Slate*. A seminal book on this topic makes use of the concept of "subjects-of-a-life" and was written by Tom Regan. Gary Francione espouses the abolitionist position on this philosophical topic. Books by Richard Ryder and Mary Midgley contributed to the growing interest in this topic in the late 1970s, influenced by the 1975 publication of a book arguing for

the principle of equal (*) consideration of interests. Philosophers working on this topic often discuss the “argument from marginal cases,” one premise of which is that infants and comatose people have moral status. A book on this topic by Peter Singer popularized the term “speciesism.” For 10 points, name this area of ethics concerned with non-human creatures.

ANSWER: animal rights [accept animal liberation or anything else reasonable mentioning animals; prompt on “ethics”] <WN>

10. University of Miami Law professor Mary Anne Franks has drafted many laws targeting this practice. It’s not murdering black kids, but in December 2015, George Zimmerman had his Twitter account suspended for performing this action. Horrifically, the only legal recourse available to victims of this practice may be to sue the perpetrators for copyright infringement, because only (*) twenty-seven states have passed laws criminalizing it. Hunter Moore’s website IsAnyoneUp? encouraged the proliferation of this practice. In 2015, Google announced that it would remove links to content of this kind upon request. Currently operating websites promoting this practice include MyEx.com. For 10 points, name this practice of distributing sexually explicit images or video of a person without their consent.

ANSWER: posting revenge pornography [prompt on “cyberbullying”; prompt on “sexual harassment”; prompt on “posting pornography”; accept a basic description similar to what’s after “For 10 points” before the “For 10 points” is read] <AG>

11. A Hans Werner Henze piece about this character incorporates a recording of a dog’s heartbeat. A trilogy of works named after this character includes a piece whose “statue theme” is reprised in the fifth movement, “Joy of the Blood of the Stars.” A ten-movement piece with a Sanskrit name which makes heavy use of the ondes Martenot, *Turangalila Symphony*, is part of a trilogy by Olivier Messiaen titled for this character. This character’s corpse is the subject of the aria (*) “Mild und Leise.” A motif representing this character is jokingly quoted in “Golliwogg’s Cakewalk” by Debussy. The notes F, B, D-sharp and G-sharp make up a chord representing this character, the first chord in an opera which ends with the *Liebestod* aria. For 10 points, name this character who, in a Wagner opera, loves Isolde.

ANSWER: Tristan <WN>

12. Metal ions act analogously to hydrogen atoms when they participate in the superacid form of this process. One version of this process is studied by looking at a Tafel plot, which relates current density to overpotential. A common modification of this process involves tethering, where substances used in it are connected to solid supports. Ionic liquids are examples of the compounds used in its (*) biphasic variety, which combines its homogeneous and heterogeneous variants. Efficiency of compounds involved in this process can be estimated via the turnover number and turnover frequency. This process creates an alternative pathway that stabilizes a transition state which requires less activation energy. For 10 points, name this process by which the rate of a reaction is increased through the addition of the namesake substance.

ANSWER: catalysis <SD>

13. One of this author’s characters works 24-hour shifts as a harbor signalman and sleeps with a woman who gives him a medallion inscribed with the letter “N.” At the end of a novel by this author, a character inadvertently burns the protagonist’s villa down after he falls asleep smoking in bed. Two of this author’s characters painstakingly search a grassy area for a lost emerald ring. While visiting the Ajanta Caves in India, a lawyer created by this author is reminded of his friend’s promise to “see him... beneath the (*) falls.” In a series by this author, the Thai princess Ying Chan, the reactionary Isao Inuma, and the orphan Toru Yasunaga all have the same pattern of three moles clustered together, leading Shigekuni Honda to suspect that his friend Kiyooki is being reincarnated. For 10 points, name this Japanese author of the *Sea of Fertility* tetralogy.

ANSWER: Yukio Mishima <WN>

14. Tillich's autobiographical *On the Boundary* contrasts the effects that socialism had on his life with the effects of this man's ideas. The complete collection of this man's work is the Weimarer Ausgabe. This man's friend Johannes Bugenhagen was his town priest and helped this man with his translation of the Bible, to which he added the word "alone" in Romans. He wanted to remove the book of James because it violated his most important doctrine, (*) justification by faith alone. He notes that Christ called the title group a brood of vipers in Matthew and says "we are at fault for not slaying them" in *On the Jews and Their Lies*. This man was incensed to write his most famous work by a dispute with Johann Tetzel over the sale of indulgences. For 10 points, name this German theologian who posted his 95 Theses to kick off the Reformation.

ANSWER: Martin Luther <BM>

15. In a case arising out of Wisconsin, this Chief Justice's court held that state courts do not have the power to issue decisions contradicting rulings by federal courts. This man's court heard a case resulting from a congressman's arrest under the authority of General Order Number 38. A dissent in a case heard by this man's court cited *Marie Louise v. Marot*. Benjamin Robbins Curtis (*) resigned from this man's court because of his disagreement with one of its decisions. This man's court heard the cases *Ableman v. Booth* and *Ex parte Vallandigham*. He ruled that only Congress could suspend habeas corpus in the *Ex parte Merryman* decision. He wrote a decision stating that African Americans could not be American citizens. For 10 points, name this Chief Justice who delivered the majority opinion in the *Dred Scott* case.

ANSWER: Roger Taney [or Roger Brooke Taney] <WN>

16. One of this director's characters says "Let it hang there too long, it'll get soft and fall off" to teach a high-class woman how to dunk a donut. A film by this director supposedly increased bus travel by women and decreased the sale of men's undershirts. In that film, a man's attempt to hitchhike is unsuccessful until his traveling companion attracts a passing car by flashing her leg. That film by this man includes a scene in which Peter strings up a (*) blanket, which he compares to the walls of Jericho, between his bed and Ellie's. He directed the first film to win all five major Oscars, a screwball comedy starring Claudette Colbert and Clark Gable. In his most famous film, George Bailey's suicide is prevented by the angel Clarence Odbody. For 10 points, name this director of *It Happened One Night* and *It's a Wonderful Life*.

ANSWER: Frank Capra [or Frank Russell Capra] <WN>

17. A work by Octave Mirbeau fabricates a story about this author being left to die while his wife had sex with her lover in the next room. This author used a squiggly line from *Tristram Shandy* to open a novel whose protagonist is told by a shopkeeper that the secret of human life consists of the words *vouloir*, *pouvoir* and *savoir*. That novel's protagonist woos a "woman without a heart" named Foedora. This creator of Raphaël de (*) Valentin wrote a novel whose title character lives in the Maison Vauquer and has two daughters, Anastasie and Delphine, who send empty carriages to his funeral. Both of the aforementioned novels feature this author's recurring character Eugène de Rastignac. For 10 points, name this author of *The Wild Ass's Skin* and *Père Goriot*, both part of his "Human Comedy."

ANSWER: Honoré de Balzac <WN>

18. Damage to this tissue is characterized using the Outerbridge classification. Accumulating homogentisic acid damages this tissue in alkaptonuria. Two developmentally-important tissues of this kind are named for Reichert and Meckel. Link proteins in this tissue stabilize interactions between aggrecan. Tietze's syndrome is characterized by inflammation of the costal type of this tissue. A variety of this tissue targeted by microfracture surgery is a subset of the most common type, which is named for its (*) glassy appearance. Collagen II makes up the vast majority of protein in the articular type of this tissue. This tissue, which comes in

hyaline, fibrous, and elastic types, consists of cells known as chondrocytes, and makes up the skeletons of sharks. For 10 points, name this flexible connective tissue present in the nose and ear.

ANSWER: cartilage [accept more specific types; prompt on “connective tissue”] <NC>

19. This ruler’s public works projects earned him the nickname *bani matim*, or “builder of the land.” One of this ruler’s surviving texts describes him as an “exalted prince” who was called by a god “to further the well-being of mankind.” This ruler broke his alliance with Zimri-Lim and conquered Mari, but unusually destroyed it instead of simply taking it over. This ruler defeated Rim-Sin I of Larsa after Larsa’s failure to contribute significantly to his effort to take over Eshnunna from the (*) Elamites. He took power after the abdication of his father Sin-Muballit, becoming the sixth king of the Amorite dynasty. His most lasting accomplishment is inscribed on a stele in the Akkadian language, and includes many “eye for an eye” type rules. For 10 points, name this Babylonian king known for his law code.

ANSWER: Hammurabi <WN>

20. A prominent defender of this policy is Arindrajit Dube, who argues against the idea that it has perverse effects. A study on this policy which used telephone survey data from New Jersey and Pennsylvania was criticized by Neumark and Wascher. A seminal study supporting this policy was written by the authors of *Myth and Measurement*, (*) Card and Krueger. George Stigler argued that this policy does not achieve its stated goal of reducing poverty. Neoclassical critics of this policy argue that it increases unemployment, particularly among unskilled workers. For 10 points, name this policy, which puts a floor on the amount that employers are allowed to pay workers.

ANSWER: minimum wage laws [or raising the minimum wage] <WN>

Tiebreaker: One enzyme in this pathway has very high sequence and protein fold similarity to the lens protein delta-crystallin. In the most common disease affecting this pathway, OTC deficiency, excessive amounts of the substrate are converted to orotic acid. N-acetylglutamic acid activates the starting enzyme of this pathway, an isoform of which is also used in pyrimidine biosynthesis. 3 ATP is hydrolyzed to 2 ADP and 1 AMP in this pathway, whose penultimate step produces (*) fumarate, allowing coupling to the Krebs cycle. The compound that enters this pathway condenses with bicarbonate via carbamoyl synthetase I. Citrulline is produced in the first step of this pathway, whose final step is a condensation reaction with arginine to yield ornithine and the namesake product. For 10 points, name this cycle that converts ammonia to the waste product excreted in urine.

ANSWER: urea cycle <AG>

MLK 2016: Amusing Subtitle

Packet 2

Bonuses

1. Numerically-titled art exhibitions in this country have included $5 \times 5 = 25$ and 0.10 . For 10 points each:

[10] Name this country, home to the Suprematism and Constructivism movements, as well as a non-Italian Futurist movement.

ANSWER: Russian Empire [or the Soviet Union; or the USSR; do not accept “Russian Federation”]

[10] This artist proclaimed the end of painting after the $5 \times 5 = 25$ exhibition. His portrait of Lilya Brik inspired a Franz Ferdinand album cover.

ANSWER: Alexander Rodchenko [or Alexander Mikhailovich Rodchenko]

[10] Many of the Constructivists made works of this type, exemplified by El Lissitzky’s *Beat the Whites with the Red Wedge*. The poet Vladimir Mayakovsky also made many of these works.

ANSWER: propaganda posters <WN>

2. Answer the following about José Sanjurjo, for 10 points each.

[10] Sanjurjo was a general for Francisco Franco's Nationalist faction in this conflict.

ANSWER: Spanish Civil War

[10] Sanjurjo received the nickname "Lion of" this region after defeating Abd el-Krim's guerrilla resistance. This region is still home to the Spanish cities of Ceuta and Melilla.

ANSWER: Rif [prompt on "Morocco"; prompt on "Atlas Mountains"]

[10] Both Sanjurjo and this fellow general died in plane crashes, leaving Franco as the sole Nationalist leader. This man coined the term "fifth column" during the siege of Madrid.

ANSWER: Emilio Mola [or Emilio Mola y Vidal] <KG>

3. This theory promotes the QCD theta angle to a dynamical field with a spontaneously broken U(1) symmetry. For 10 points each:

[10] Name this theory which predicts the axion as the pseudo-Goldstone boson of the broken U(1) symmetry.

ANSWER: Peccei-Quinn theory

[10] The Peccei-Quinn theory is the strongest leading proposal to explain very low upper bounds on violation of this symmetry in the strong force. A flip of this quantity is equivalent to a time reversal by a certain theorem.

ANSWER: CP symmetry

[10] CP symmetry is broken by this force, as shown by Cronin and Fitch in 1964. This force mediates quark and neutrino flavor mixing.

ANSWER: weak force [or electrowweak I guess] <BM>

4. This city lies at the eastern end of the Jiaozhou Bay Bridge, a candidate for the world's longest bridge over water. For 10 points each:

[10] Name this Chinese city, whose remnants from German ownership include St. Michael's Cathedral and a large brewery founded in 1903.

ANSWER: Qingdao [or Tsingtao]

[10] Qingdao lies on the southern coast of the Shandong Peninsula on this part of the East China Sea. It shares its name with the second-longest river in China, which is known for frequently flooding and changing course.

ANSWER: Yellow Sea [or Huanghai]

[10] This Qingdao-based company, a major competitor of Whirlpool, owns the greatest share of the world's retail volume in home appliances.

ANSWER: Haier <KG>

5. A month after this agreement was signed, Dov Shilansky was arrested for carrying a pack of dynamite near the Foreign Ministry building. For 10 points each:

[10] Name this 1952 agreement that was signed, after five hours of intense rioting outside the Luxembourg City Hall, between Moshe Sharett and Konrad Adenauer.

ANSWER: the reparations agreement between Israel and West Germany [accept anything suggesting that West Germany was paying reparations to Israel; or Wiedergutmachung Agreement; or Heskem HaShillumim; accept restitution and other synonyms for reparations]

[10] Rallying the opposition to the agreement was this politician, who as Prime Minister tried to rehabilitate Mizrahi and Sephardi-inhabited slums in Project Renewal, and authorized the bombing of the Osirak nuclear plant in Iraq.

ANSWER: Menachem Begin

[10] This leader of the Mapai party and first Prime Minister of Israel argued that the reparations were necessary.

ANSWER: David Ben-Gurion [or David Grun] <AG>

6. Bright versions of these are called bolides, and their most common type is the chondrite. For 10 points each:

[10] Name these objects, one of which left the Chicxulub [CHEEK-shoo-loob] site in the Yucatán peninsula.

ANSWER: meteorites [or meteors; or meteoroids]

[10] Widmanstätten patterns are ribbons of kamacite and taenite found in this class of meteorites. They are often contrasted with chondrites and achondrites, and exhibit differentiation likely caused by radioactive decay.

ANSWER: iron meteorites

[10] Along with iron, a radioactive isotope of this element is primarily responsible for the melting and differentiation of iron meteorites. It is found with calcium in so-called “inclusions” that are some of the oldest objects in the solar system.

ANSWER: aluminum [or Al] <NC>

7. This novel’s title character is elected Pope of Fools during the Festival of Fools. For 10 points each:

[10] Name this Victor Hugo novel about the deformed bellringer Quasimodo.

ANSWER: *The Hunchback of Notre Dame* [or *Notre-Dame de Paris*]

[10] In *The Hunchback of Notre Dame*, Claude Frollo says “This will kill that,” expressing Hugo’s thesis that this thing would destroy the art of architecture.

ANSWER: the printing press [or the printed book]

[10] Quasimodo pushes Frollo from Notre Dame when Frollo laughs during this event. Quasimodo temporarily forestalls this event, but Frollo sets it in motion again by betraying the woman he is in love with.

ANSWER: the execution of Esmeralda [or the hanging of Esmeralda] <WN>

8. There is a thought experiment about one of these animals which is exactly halfway between a bale of hay and a bucket of water, and dies of hunger and thirst because it can’t decide which one to go to. For 10 points:

[10] Name this type of animal, the subject of a thought experiment named after Jean Buridan.

ANSWER: ass [or donkey]

[10] Nuccio Ordine wrote an essay examining this philosopher’s thought using the donkey as a metaphor. This Italian was burned at the stake by the Roman Inquisition in 1600.

ANSWER: Giordano Bruno

[10] This husband of G. E. M. Anscombe wrote about the peculiar type of anaphora in sentences like “Every farmer who owns a donkey beats it.” With Frege, he names a problem for expressivism.

ANSWER: Peter Geach <WN>

NOTE: Do not reveal the alternate answers to the first part if they miss it.

9. The opening notes of this piece introduce the recurring five-note figure G-E-F-D-C. For 10 points each:

[10] Name this string quartet whose second movement “Poco adagio; cantabile” in G major cut time is a set of variations on the hymn “Gott erhalte Franz den Kaiser,” which later became the melody of the *Deutschlandlied*.

ANSWER: Emperor string quartet [or Haydn’s opus 76, no. 3; or Haydn’s string quartet no. 62; or Erdody quartet no. 3 and equivalents]

[10] The *Emperor* string quartet is one of the most esteemed of the sixty-seven composed by this Austrian father of the symphony and string quartet.

ANSWER: Joseph Haydn [or Franz Joseph Haydn]

[10] This D minor quartet by Haydn which immediately precedes the *Emperor* features a “witches’ minuet” with a trio in D major, and is named for the falling interval that dominates its first movement.

ANSWER: Fifths [or *die Quinten*; accept Haydn’s op. 76, no. 2; or Haydn’s string quartet no. 61; accept the Erdody quartet no. 2 and equivalents] <AG>

10. This character “loved the Medici” although “he had never seen one,” and mourned both Romance and “Art, a vagrant.” For 10 points each:

[10] Name this “child of scorn” who lamented that he was born in the wrong generation and “kept on drinking” as a result.

ANSWER: Miniver Cheevy [accept either underlined part]

[10] Miniver Cheevy was created by this poet, who also described a rich man who shoots himself in “Richard Cory.”

ANSWER: Edwin Arlington Robinson

[10] While dreaming, Miniver Cheevy imagines two cities, along with “Priam’s neighbors.” Name either.

ANSWER: Thebes or Camelot [accept either] <KG>

11. Answer the following about the Catholic mass, for 10 points each.

[10] Before the Gospel reading, parishioners make this sign, which involves touching the forehead, lips and heart, invoking the story of the death of Christ.

ANSWER: the sign of the cross [or crossing oneself; or blessing oneself]

[10] The preface to the Eucharistic Prayer begins with a dialogue known by this Latin name. It ends with the priest saying “Let us give thanks to the Lord our God” and the people responding “It is right and just.”

ANSWER: Sursum Corda

[10] The *Sursum Corda* is followed by a hymn which begins with this word repeated three times and ending with “Hosanna in the highest.”

ANSWER: holy [or sanctus] <WN>

12. In this state, the release of the contents of one man’s “little black box” prompted the indictment of several officials for corruption. For 10 points each:

[10] Name this state in which governor Edward Jackson was tried on bribery charges soon after the sentencing of Grand Wizard D. C. Stephenson.

ANSWER: Indiana

[10] D. C. Stephenson was a leader of this organization. Members of this group classically wore long white robes and a pointed hat.

ANSWER: Ku Klux Klan

[10] Stephenson was convicted of kidnapping, raping, and murdering this woman, who died due to a staph infection as well as from consuming six mercury chloride pills in an attempt to commit suicide.

ANSWER: Madge Oberholtzer <SD>

13. This book asks if Caesar or Napoleon would have wanted to conquer Europe if they could have “pop[ped]” a Prozac tablet now or then.” For 10 points each:

[10] Name this book, subtitled “Consequences of the Biotechnology Revolution,” which argues that genetic engineering could have major political consequences.

ANSWER: Our Posthuman Future: Consequences of the Biotechnology Revolution

[10] This thinker wrote *Our Posthuman Future*. He is better known for a book arguing that liberal democracy is the final stage in the evolution of government.

ANSWER: Francis Fukuyama [or Yoshihiro Francis Fukuyama]

[10] In the aforementioned book, Fukuyama proclaimed the end of this thing. Herodotus is considered to be the father of this field.

ANSWER: history <BM>

14. In a momentarily tranquil scene, this character contemplates the command “Fear no more” from *Cymbeline* as he stares at sunlight illuminating wallpaper in his home, while his young Italian wife Rezia makes a hat. For 10 points each:

[10] Name this shell-shocked World War I veteran who commits suicide by jumping out a window, darkening the mood of Clarissa Dalloway’s party when they hear the news.

ANSWER: Septimus Warren Smith [accept any underlined part]

[10] This British author of *To the Lighthouse* traced the stories of Septimus Smith and Clarissa Dalloway in her novel *Mrs. Dalloway*.

ANSWER: Virginia Woolf [or Adeline Virginia Stephen]

[10] The first narrative shift between Clarissa and Septimus in *Mrs. Dalloway* occurs when this event happens just outside a flower shop, prompting onlookers to imagine seeing the Queen or Prime Minister.

ANSWER: a car backfires [or a car breaks down; accept equivalents] <AG>

15. For 10 points each -- give the following about mythological fratricide:

[10] These two sons of Oedipus killed each other while fighting for control of Thebes during the Seven Against Thebes conflict.

ANSWER: Eteocles and Polynices [accept answers in either order]

[10] In the Mahābhārata, Arjuna unknowingly kills his brother when Lord Krishna convinces him to attack this King of Anga from behind. He was said to be the only warrior able to beat Arjuna.

ANSWER: Karna [or Vasusena]

[10] Sir Balin is the only knight in King Arthur's court able to draw one of these weapons, which he uses to unwittingly murder his brother Sir Balan. Balin dies from his own wounds shortly after.

ANSWER: sword <JM>

16. A grey-blue streak on the gums called a Burton line appears in this condition, mild cases of which are treated with the orally-administered succimer rather than calcium EDTA. For 10 points each:

[10] Name this form of heavy metal poisoning that affects children who live in old houses with chipped paint.

ANSWER: lead poisoning [or plumbism; or colica pictorum; or saturnism; or Devon colic; or painter's colic]

[10] Lead poisoning causes "basophilic stippling" of red blood cells by inhibiting the degradation of this type of nucleic acid, which makes up a 60S "large" subunit and 40S "small" subunit in eukaryotes.

ANSWER: rRNA [or ribosomal RNA; prompt on "RNA"; prompt on "ribosomes" or word forms]

[10] By interfering with the synthesis of PBG, lead disrupts this biochemical pathway, whose committed step is the condensation of glycine with succinyl CoA to form delta-aminolevulinic acid.

ANSWER: biosynthesis of heme [or biosynthesis of porphyrins; accept any answers that indicate making heme or making porphyrins] <AG>

17. This composer released six volumes of his namesake *Standard Time* album, though strangely not in numerical order. For 10 points each:

[10] Name this director of Jazz at Lincoln Center, whose oratorio *Blood on the Fields* was the first jazz piece to be awarded the Pulitzer Prize in Music.

ANSWER: Wynton Marsalis [or Wynton Learson Marsalis]

[10] Wynton Marsalis plays this highest brass instrument, an unusually bent version of which was played by Dizzy Gillespie.

ANSWER: trumpet

[10] This lead vocalist on *Blood on the Fields*, the "James Joyce of Jive," joined Dave Lambert and Annie Ross in a famous trio that promoted vocalese, the vocal arrangement of instrumental songs.

ANSWER: Jon Hendricks <WN/AG>

18. Name some Tony-winning plays, for 10 points each.

[10] The "Millennium Approaches" and "Perestroika" sections of this Tony Kushner play about homosexuality and AIDS won the 1993 and 94 awards.

ANSWER: Angels in America: *A Gay Fantasia on National Themes*

[10] The French civil servant Rene Gallimard falls in love with the Chinese opera singer Song Liling, who is actually a man masquerading as a woman, in this David Henry Hwang play inspired by a Puccini opera.

ANSWER: M. Butterfly

[10] Catherine takes care of her father Robert, a math professor struggling with mental illness, while herself struggling to claim authorship of a new finding about prime numbers in this play by David Auburn.

ANSWER: Proof <AG>

19. Thasos tried to leave this alliance after a dispute over gold mines. For 10 points each:

[10] Name this alliance of city-states which dissolved as a result of the Peloponnesian War.

ANSWER: Delian League

[10] The Delian League was led by this city-state, which opposed Sparta in the Peloponnesian War.

ANSWER: Athens

[10] A city-state on this island also tried to leave the Delian League. Earlier, Aristagoras tried to conquer this island with the assistance of the satrap Artaphernes.

ANSWER: Naxos <WN>

20. The REDOR form of this technique provides dipolar coupling info, which can be used to calculate internuclear distances, and magic angle spinning is employed to improve resolution. For 10 points each:

[10] Name this technique characterized by broad peaks, as opposed to the sharp peaks found in a similar method. The broadening occurs due to the presence of anisotropic interactions.

ANSWER: solid state NMR [or solid state nuclear magnetic resonance; accept SSNMR; prompt on just "NMR"]

[10] In addition to dipolar coupling, SSNMR also involves a type of anisotropy named for this two-word term. More commonly, this value is 0 for tetramethylsilane and is measured in parts per million for molecules in NMR.

ANSWER: chemical shift

[10] Fluorine-19 is a common one of these things used for protein NMR. These are variants of elements that differ in neutron number but have the same number of protons.

ANSWER: isotopes <SD>

Extra: Jean-Baptiste de Laumoy advocated surrendering this city as it did not have enough fortifications, which would prove prophetic. For 10 points each:

[10] Name this city, which survived an attempt at capture by Peter Parker thanks to Colonel Moultrie's efforts at Sullivan's island, but which was later captured by Henry Clinton.

ANSWER: Charleston

[10] This American general eventually surrendered Charleston. On behalf of George Washington, he accepted the British surrender at Yorktown. He would later help put down Shays' Rebellion.

ANSWER: Benjamin Lincoln

[10] Benjamin Lincoln was also active at this battle, which ended with John Burgoyne's center. The American victory here was crucial in turning the tide of the Revolution, as France joined the war soon after.

ANSWER: Battle of Saratoga <SD>