

Tossups

0. A song about this person samples him saying “evil” and “Psalm 23” over segments of “O Fortuna.” That song is the first track on the album *Houses of the Molé*, which is part of a trilogy about this man that also includes *The Last Sucker* and *Rio Grande Blood*. A song by That Handsome Devil on *Rock Band 2* was featured on a compilation album titled *Good Riddance*, [this person]. With his opponent, this man appears as part of the mutant from the music video for (*) Rage Against the Machine’s “Testify.” In the song “Square Dance,” Eminem outlines a plan to ambush this man’s administration, which was heavily criticized by the band Ministry. According to a CNN report, the song “My Sharona” appears on this man’s iPod. During a benefit concert held after Hurricane Katrina, Kanye West stated that this man “doesn’t care about black people.” For 10 points, name this 43rd President of the United States.

ANSWER: George W. Bush [or George Walker Bush; accept Bush 43, Bush Jr. or anything that distinguishes him from George Herbert Walker Bush; prompt on “Bush”] <KG>

1. One type of these materials has robust edge state which in two dimensions are quantum spin Hall states. A strongly correlated example of these materials is samarium hexaboride, while other examples often involved bismuth. Strong interactions between bonding and anti-bonding orbitals make diamond a very good one of these materials. One class of these (*) materials exhibit their characteristic behavior in their interior but not on their surface. The Fermi surface of these materials is between bands and they are characterized by a large band gap. They allow current to pass above their breakdown voltage. For 10 points, name these materials which don’t allow current to pass, unlike conductors.

ANSWER: topological insulators <BM>

2. This composer adopted the canticle “Let them that also hate Him flee before Him,” in a piece featuring a solo trombone imitating the voice of a deacon. Tommy Dorsey adapted the jazz standard “Song of India” from one of this composer’s arias. A symphonic poem by this composer contains a “fanfare motif” of trombones and muted trumpets that is reprised in the last movement to depict a shipwreck. This composer experimented with unusual time signatures like 3/1, 2/1, and 5/2 in a piece based on the (*) *Obikhod* liturgical chants. A violin solo accompanied by harp represents the title character, and a solo bassoon represents the Kalendar Prince, in a tone poem by this composer that begins with “The Sea and Sinbad’s Ship.” For 10 points, name this composer of the *Russian Easter Festival Overture*, *Scheherazade*, and the frenetic *Flight of the Bumblebee*.

ANSWER: Nikolai Rimsky-Korsakov <AG>

3. This novel’s plot is the basis for that of *Empire of the Atom* by A. E. van Vogt. A character in this novel gives another a love potion which is actually a strong aphrodisiac, causing her to have affairs left and right and ultimately get exiled to an island. A number of characters in this novel are described as “crab apples” on the protagonist’s family tree. The narrator of this novel is told that he will “speak clear” nineteen hundred years in the future, and learns to love history from his tutor (*) Athenodorus. Its protagonist’s future is foreshadowed when a wolf cub falls into his arms as a child. Many characters consider this novel’s narrator unfit to rule because of his stammer and general sickness, but he ends up taking power after the assassination of Caligula. For 10 points, name this Robert Graves novel about a Roman emperor.

ANSWER: I, Claudius <WN>

4. A group working for this leader supposedly used the radu, a weapon meant to induce cancer. His government’s *Scinteia* newspaper printed a satirical congratulatory telegram from Salvador Dali. The Jiu

Valley miners' strike called for this leader's deposition. Under this man's rule, homeless and disabled children were kept at packed orphanages such as Cighid, as a result of the birth control ban enforced by Decree (*) 770. This man held back his country from participating in the Warsaw Pact invasion of Prague. This leader met his predecessor while imprisoned at Targu Jiu during World War II. This man and his wife, Elena, were shot by firing squad on Christmas Day 1989 after trying to flee the country via helicopter. For 10 points, name this successor of Gheorghe Gheorghiu-Dej and longtime Cold War-era President of Romania.

ANSWER: Nicolae Ceausescu <KG>

5. In a language from this family, comparatives and superlatives can be expressed with the elative, not to be confused with the elative case in other languages. Almost all languages in this family have a type of obstruents called emphatic consonants. A construction in which a phonologically reduced possessed noun is followed by a possessor noun, the construct state, is most common in this family. Alphasyllabary scripts are called (*) abugidas after the script used to write a member of this family, Ge'ez. Much nominal and verbal morphology in this family is based on triconsonantal roots. Tigrinya and Amharic belong to this family's Ethiopian branch. For 10 points, name this branch of the Afro-Asiatic family which includes Arabic and Hebrew.

ANSWER: Semitic languages [prompt on "Afro-Asiatic languages" before mentioned] <WN>

6. For some reason, this name was given to a follow-up to Pakistan's Operation Gibraltar, which seeks to retake Kashmir. A group inspired by a man with this name was led by Victor Polay. The forces of a man with this name kept their opponents in a burning church during the Battle of Sangarará. A man with this name fought against Francisco de Toledo shortly after the death of his predecessor, Titu Cusi. José Gabriel (*) Condorcanqui adopted this name. A "Revolutionary Movement" of this name raided a Japanese embassy in 1997 and often clashed with the Shining Path. Two men with this name were executed in Cuzco over two centuries apart. For 10 points, give this name of the leader of a 1780 revolt against the Spanish, who named himself after the last Incan Emperor.

ANSWER: Túpac Amaru [accept Operation Túpac; prompt on partial answer] <KG>

7. In a painting by this artist, a reclining ornithologist shows a stuffed bird of paradise to a group of children. This artist made a painting of a dog jumping up on a man with his arm in a sling who is embracing his wife, who hands a piece of paper to a guard. After ending her unconsummated marriage to John Ruskin, Effie Gray married this artist. This painter of *The Ruling Passion* and *The Order of (*) Release* sparked a controversy over realism with a painting in which wood shavings litter the floor of a carpentry shop where a red-headed boy is tended to by his parents. He also painted a Shakespeare character floating down a stream. For 10 points, name this Pre-Raphaelite painter of *Christ in the House of His Parents* and *Ophelia*.

ANSWER: John Everett Millais <WN>

8. This philosopher theorized that laughter was a response to a contrast between the abstract and the perceptive in a chapter called "On the Theory of the Ludicrous." The first English translation of this philosopher's magnum opus was co-produced by Richard Haldane. This thinker argued for a compassion-based ethical system in an essay which did not win the Royal Danish Society's essay contest, despite being the only submission. This author of *On the Theory of (*) Morality* argued that Kant failed to distinguish between abstract knowledge of concepts and direct perceptual knowledge of objects. His major book presents the first title concept as the fundamental reality of the universe and identifies it with the thing-in-itself. For 10 points, name this pessimist who wrote *The World as Will and Representation*.

ANSWER: Arthur Schopenhauer <WN>

9. An atom of this element is commonly substituted for by a xenon atom in order to make an organic xenon salt. The styx number characterizes a class of compounds named for and containing this element. Sassolite is

the mineral form of an acid of this element that can be used to treat conjunctivitis. Clusters incorporating this element form (*) deltahedra cages and often have three-center two electron bonds. Hydrides of this element have banana bonds and come in closo-, nido-, and arachno- types. Wade's rules describe hydrides of this element, whose trifluoride is a strong Lewis acid. This element violates the octet rule since it has six valence electrons. For 10 points, name this element with atomic number 5 and symbol B.

ANSWER: boron <SD>

10. This book discusses a set of persecutions in which people are tossed into prison, but the prison breaks in two. This book contains an extended allegory in which a servant repeatedly pleads with his master not to burn unripe olive trees. This text describes a brass ball with two spindles that acts as a compass, called the Liahona. This book describes a vision where the righteous hold onto an iron rod on their path to the "Tree of Life." A brief comment known as the (*) "words" of this text's author precedes a section discussing the wicked king Noah and his priest Alma. At a battle fought near Cumorah Hill in this book, the Lamanites wipe out their rivals. In this book, the ancestors of the prophet Ether, the Jaredites, live in the Tower of Babel and cross the ocean one day on barges. For 10 points, name this book written in "reformed Egyptian" on golden plates, and revealed by Moroni to Joseph Smith.

ANSWER: Book of Mormon <AG>

11. Cole and Vishkin gave a distributed algorithm which runs on one of these objects in "log star" of n time. An algorithm which works on them assigns all values in a string to infinity except the source and then relaxes repeatedly. Laszlo Babai recently claimed to have an algorithm which solves a problem about these structures in quasi-polynomial time. That problem, which is not known to be in either P and NP-complete, is to find whether an isomorphism exists between two of these structures. Iterative deepening improves efficiency when (*) searching these objects, and bipartite ones may be colored with two colors. A greedy algorithm which works on these objects by always choosing the lowest weight is called Dijkstra's algorithm and finds a minimum path on them. These objects may be represented by an adjacency tree or list. For 10 points, name these directed or undirected constructs which consist of a bunch of vertices connected by a bunch of edges.

ANSWER: graphs [accept trees] <BM>

12. The speaker of a poem by this author regrets not enjoying "All forests - stintless stars" and "As much of noon, as I could take" before having an eye put out. Another poem by this author describes an entity that forces the landscape to listen and shadows to hold their breath when it comes, and inflicts a scarless "heavenly hurt." In another poem by this author, the "Dews grew quivering and Chill." One of this poet's speakers (*) "signed away / What portion of me be / Assignable" in a room where a creature arrives with a "Blue - uncertain - stumbling Buzz." The speaker of her best-known poem "first surmised the Horses' Heads / Were toward Eternity" while sharing a carriage ride with Immortality and a being who "kindly stopped for me." For 10 points, name this poet of "I heard a fly buzz when I died" and "Because I could not stop for death."

ANSWER: Emily Dickinson [or Emily Elizabeth Dickinson] <AG>

13. The T790M mutation in EGFR is linked to this disease. Cells affected by one form of this disease contain an abnormal fusion between the EML4 and ALK genes. In 1956, the British Doctors' Study provided statistical proof linking this disease to its major risk factor. Horner's syndrome may be caused by infiltration into the sympathetic nervous system by Pancoast tumors in this disease. SIADH and Lambert-Eaton syndrome are common paraneoplastic consequences of this disease. This disease is broadly classified into (*) small-cell and non-small cell types, with roughly 40% of cases being adenocarcinomas. Radon gas exposure is a second major cause of this form of cancer. Worldwide, this disease is the cause of the most cancer-related deaths in both men and women. For 10 points, name this form of cancer observed in a high percentage of smokers.

ANSWER: **lung cancer** [accept **lung** after “cancer” is read for the first time; accept the following before they are mentioned: **small-cell** cancer, **non-small cell** cancer; accept **mesothelioma** at all times; accept **large-cell** cancer before “small-cell” is read] <AG>

14. It's not the Battle of the Nile, at this battle, the 16-year-old “Boy” Cornwell was commended for standing and waiting for orders after everyone else around him had been killed. At this battle, the dying Francis Harvey became a hero by preventing a magazine full of cordite from exploding. The cautious strategy of a commander in this battle was supported by a prominent politician, who said he was “the only man on either side who could lose the war in an afternoon.” A chase during this battle is called the “Run to the South.” It is sometimes called the “battle of lost opportunities” because one side (*) crossed the T twice, but their opponents managed to retreat both times. Reinhard Scheer and John Jellicoe faced off in this battle, whose strategic victors were criticized for not destroying the German fleet. For 10 points, name this World War I naval battle that took place off a peninsula in the North Sea.

ANSWER: Battle of **Jutland** [or Battle of **Skagerrak**; or **Skagerrak**schlacht] <WN>

15. In the verse of a song composed by this man, the first two lines and the last line are all sung on the note G, while the third line is sung on A and A-flat; the repetition of notes in that song reflects its lyrics about the “tick tick tock” of a clock and the “drip drip drip” of raindrops. One of his compositions was initially unpopular, in part because of its unusual 108-bar length, until it was popularized by Artie Shaw. This man wrote a song which notes that “in olden days, a (*) glimpse of stocking / was looking on as something shocking,” but modern times are much more permissive. He wrote a musical with songs like “Too Darn Hot” and “Always True to You in My Fashion,” which was based on *The Taming of the Shrew*. For 10 points, name this composer of the songs “Night and Day,” “Begin the Beguine” and “Anything Goes,” and the musical *Kiss Me, Kate*.

ANSWER: Cole **Porter** <WN>

16. This amendment was applied to a case whose plaintiff was charged by a Philippine court with falsifying documents, *Weems v. United States*. The Warren court case *Trop v. Dulles* has been influential in the interpretation of this amendment. In the case of *Harmelin v. Michigan*, Anthony Kennedy defended a “narrow proportionality” approach to the interpretation of this amendment; the application of the idea of proportionality to this amendment was also central to (*) *Gregg v. Georgia*. Non-originalist interpretations of this amendment often rely on the idea of “evolving standards of decency.” This amendment prohibits the imposition of excessive bail or excessive fines. In *Furman v. Georgia*, the Fourteenth Amendment and this one were held to be violated by the death penalty. For 10 points, name this part of the Bill of Rights prohibiting cruel and unusual punishment.

ANSWER: **Eighth** Amendment <WN>

17. A mythological depiction of one of these creatures shows it getting its head cut off by a knife wielding cat named Mau. One god appears in the form of one of these creatures in the seventh hour and is named Mehen. After sending his Eye to find Shu and Tefnut, a creator god replaces her but placates her by changing her into one of these creatures and giving her a new position. The goddess (*) Wadjet was often depicted as one of these creatures, which is also the form of the uraeus that represents Egyptian divinity. Isis uses clay and Ra's spit to create one of these creatures in order to find out Ra's secret name. On the solar barge, either Ra or Set repeatedly fought one of these creatures named Apep. For 10 points, name this often venomous reptile.

ANSWER: **snake** [accept **serpent**; accept **cobra**] <SD>

18. This novel's narrator recalls accidentally killing a butterfly by making it come out of its cocoon too soon. In this novel, a statue of “Our Lady of Revenge” is blamed for the death of a priest who lights a monastery on fire. It opens with the narrator mourning his “Great Separation” from a friend who has gone to the

Caucasus, and pulling out his copy of the *Divine Comedy*. The title character of this novel is compared to the Buddha by the narrator, who is writing a (*) manuscript about the Buddha. The title character of this novel sleeps with a widow, culminating in her public decapitation. This novel's title character gives the nickname "Bouboulina" to Madame Hortense, who he seduces with his cimbalom playing. That character works with the narrator at a lignite mine on Crete. For 10 points, name this novel by Nikos Kazantzakis.

ANSWER: *Zorba the Greek* [or *Vios ke Politia tou Alexi Zorba*; or *Life and Times of Alexis Zorbas*] <WN>

19. This animal appears in the name of an 1985 committee set up by Margaret Thatcher to investigate funding for the BBC. A love triangle between Lettie Beardsall, George Temple, and Leslie Temple is at the center of a D. H. Lawrence novel titled for one of these animals. This animal appears in the common name of Melek Taus, an avatar of Sheikh Adi ibn Musafir, the founder of (*) Yazidism. In Greek mythology, this animal's most distinguished feature is created by Hera after Hermes puts all of Argus's eyes to sleep and then kills the giant. Along with two diamonds, Nader Shah seized a throne named for this bird that was originally commissioned by Mughal emperor Shah Jahan. For 10 points, name these birds notable for their stunning tails.

ANSWER: peacocks [accept Peacock Angel or Peacock Committee or The White Peacock or Peacock Throne; prompt on "Indian peafowl"; do not accept or prompt on "peahen"] <JM>

20. A brilliant character in this novel named Cassia dies when she drinks the poison she prepared for her husband's maid. This novel opens with the couplet: "Truth becomes fiction when the fiction's true / real becomes not-real when the unreal's real." The protagonist of this novel becomes lethargic soon after a begonia tree inauspiciously blooms out of season. After a purse is found with an indecent picture, all of the maids in this novel come under suspicion of having an illicit affair. When the protagonist's sister First Spring gets promoted to (*) imperial consort of the second degree, the Rongguo and Ningguo branches of their family transform their adjacent compounds into one gigantic pleasure grounds. In this novel, the goddess Nuwa rejects a stone that eventually finds its way into the mouth of the protagonist Jia Baoyu. For 10 points, name this 18th century Chinese novel by Cao Xueqin.

ANSWER: *Dream of the Red Chamber* [or *The Story of the Stone*; or *Hong Lou Meng*; or *Shitou ji*] <AG>

Tiebreaker: A theorem due to Riemann and strengthened by Sierpinski says that some finite ones of these objects may be transformed to be infinity. One of this type of function named for Liouville and Neumann is a solution to the Fredholm equation. Solving ODEs by assuming the solution has this form and then plugging it back in to specify it fully is the Frobenius method. The limit of the difference between a log and one of these objects is the (*) Euler-Mascheroni constant. That one of these objects can be shown to be infinite by collecting its terms into groups which are each larger than one half; that is the harmonic one. In general one can use the root test, the integral test, or the ratio test to determine if one of these converges. For ten points, name these finite or infinite sums of the terms of a sequence

ANSWER: series [accept types like infinite, power, Taylor before series , accept summation] <BM>

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Packet 12

Bonuses

1. One deity with this name was an Oceanid who along with Thetis looked after Hephaestus after he was kicked off of Mount Olympus by Hera. For 10 points each:

[10] Identify the name of another figure who was a Titan Queen. That figure with this name was married to the serpent Ophion, with whom she ruled the world.

ANSWER: Eurynome

[10] In one Greek creation myth, Eurynome adopted the form of this bird and laid the Universal egg. Jason released one of these birds to see if she could cross the Symplegades.

ANSWER: doves

[10] Eurynome is also often said to be the mother of the three Graces, or Charites, with this Greek thunder god as their father. He ruled the gods on Mount Olympus.

ANSWER: Zeus <SD>

2. Answer the following about disembodied hands, for 10 points each.

[10] This group infamously severed the hands off of workers who failed to meet rubber quotas. This group was formed to suppress rebellions in the Congo Free State.

ANSWER: Force Publique [or Public Force; or FP]

[10] This region's flag features a mythologically-inspired severed red hand. This constituent of the United Kingdom experienced a thirty-year period of Protestant-Catholic violence known as "The Troubles."

ANSWER: Northern Ireland [prompt on "Ulster"; prompt on "Ireland"]

[10] In 1987, the hands of this leader were severed and robbed from his grave. Vicente Saadi, then a leader of the Justicialist Party, refused to pay the ransom to get them back, which may be why they remain missing to this day.

ANSWER: Juan Perón [or Juan Domingo Perón] <KG>

3. Howard Sanders developed the "rarefaction" technique to assess this measure in benthic ecosystems. For 10 points each:

[10] Name this measure of the variability of life of Earth, within species, between species, and between ecosystems.

ANSWER: biodiversity [or biological diversity]

[10] According to the Janzen-Connell hypothesis, predators and pests play a key role in maintaining the biodiversity of tree species in these ecosystems, which have no dry seasons, and cover much of the Amazon basin.

ANSWER: tropical rainforests

[10] This measure of diversity accounts for all the species absent in a study site, but present in surrounding regions, and capable of inhabiting the site in question. It is named for an analogous concept in astrophysics.

ANSWER: dark diversity <AG>

4. The Western Rising of the 1620s and 1630s took place in of these areas. For 10 points each:

[10] Identify these areas, one of which was where Walter Tirlé inadvertently shot William II with an arrow.

ANSWER: forests [accept obvious equivalents]

[10] The Western Rising occurred during this king's "Eleven Years' Tyranny," a period that took place after he forced Parliament to dissolve. He was later beheaded during the English Civil War.

ANSWER: Charles I

[10] This man drafted the Petition of Right, which Charles I grudgingly accepted despite its restrictions on his power. Earlier, he prosecuted Walter Raleigh and several conspirators in the Gunpowder Plot.

ANSWER: Edward Coke <KG>

5. These people are sometimes called directors of photography, or DPs. For 10 points each:

[10] Name these people whose job is to deal with cameras, lighting, and other technical and artistic aspects of the image during a film shoot.

ANSWER: cinematographers

[10] This Mexican cinematographer won back-to-back Oscars for his work on *Gravity* and *Birdman*.

ANSWER: Emmanuel Lubezki [or Emmanuel Lubezki Morgenstern; or Chivo Lubezki]

[10] Lubezki was the DP for this Terrence Malick film about a Texan family, which for some reason also features dinosaurs.

ANSWER: *The Tree of Life* <WN>

6. Operation Stack was implemented after a 2008 fire brought this route to a halt. For 10 points each:

[10] Name this underwater route on which Eurostar passenger trains run between Calais and Folkestone, near Dover.

ANSWER: Channel Tunnel [or Chunnel]

[10] Despite the opening of the Channel Tunnel, the UK opted out of this agreement, which established a namesake area free of border controls throughout the rest of the EU.

ANSWER: Schengen Agreement

[10] Until 2002, the town of Sangatte near the French end of the Chunnel was home to one of these places. Much larger examples include Dadaab in Kenya and Zaatari in Jordan.

ANSWER: refugee camps [accept equivalents] <KG>

7. This character struggles with his mortality in the play *Exit the King*. For 10 points each:

[10] Name this character who watches everyone around him turn into a rhinoceros in another play.

ANSWER: Bérenger

[10] In the play *Amédée*, both Bérenger and the title character make use of this ability. The fourth and final Bérenger play focuses on Bérenger's possession of this ability.

ANSWER: the ability to fly [accept anything indicating he can propel himself through the air; the play is called *A Stroll in the Air*]

[10] The Bérenger plays are by Eugène Ionesco, a member of this theatrical movement, characterized by existential tragicomedies such as Beckett's *Waiting for Godot*. It was influenced by the philosophy of Camus.

ANSWER: theatre of the absurd <WN>

8. This artwork was commissioned by André Malraux. For 10 points each:

[10] Name this project, completed in 1964, which surrounds a massive chandelier and depicts scenes from operas by composers including Mozart and Tchaikovsky.

ANSWER: the ceiling of the Paris Opera House [or the ceiling of the Palais Garnier]

[10] The ceiling of the Paris Opera was painted by this artist of *I and the Village* and the *White Crucifixion*.

ANSWER: Marc Chagall [or Marc Zakharovich Chagall]

[10] Chagall's works in this medium include one in the UN Headquarters, and a set of works in Jerusalem depicting the twelve tribes of Israel.

ANSWER: stained glass windows <WN>

9. The "Viverist" religion of these creatures teaches them that they are descended from the Tree of Life. For 10 points each:

[10] Name these creatures that can decide, as fetuses, whether they want to be born or not, and who eat the flesh of the unemployed. Their utopian society is visited by a psychiatric patient in a namesake 1927 novel.

ANSWER: kappa

[10] In this story by the author of *Kappa*, the criminal Kandata shows compassion to the title animal, but screws up the chance given to him to escape Hell using the title object produced by that animal.

ANSWER: "The Spider's Thread" [or "Kumo no Ito"]

[10] This Japanese author wrote *Kappa* and "The Spider's Thread," but is better known for the stories "In a Grove" and "Rashomon."

ANSWER: Ryunosuke Akutagawa <AG>

10. The extended version of this method was developed by Roald Hoffmann and calculations in it often use the Wolfsberg-Helmholz approximation to find off diagonal elements of the Hamiltonian matrix H. For 10 points each:

[10] Name this method from quantum chemistry that is an LCAO method that calculates energies taking only pi electrons into account. One sets overlap and resonance integrals between non-neighbors equal to 0 when using it.

ANSWER: Hückel method [accept extended Hückel method; accept Hückel approximation]

[10] Hoffmann's extended Hückel method also takes into account orbitals designated by this letter. Single bonds are described by this letter, as opposed to pi bonds.

ANSWER: sigma

[10] The Hückel method studies conjugated systems; rules named for this man and Louis Fieser can also be applied to conjugated systems, and he also names a set of stereochemistry rules with Roald Hoffmann.

ANSWER: Roberts Burns Woodward <SD>

11. This melody is carried by an oboe and flute in the third movement shortly before a passage for four timpani representing thunder, and by an E-flat clarinet in 6/8 time in the fifth movement. For 10 points each:

[10] Name this motif from an 1830 programmatic symphony that represents the artist's love for his beloved.

ANSWER: the idée fixe from *Symphonie fantastique*

[10] This composer's *Symphonie fantastique* was inspired by his own infatuation with the Irish actress Harriet Smithson.

ANSWER: Hector Berlioz

[10] The *idée fixe* interrupts the waltz in the movement "Un bal," which is dominated by two of these instruments that only play in that movement. Berlioz supposedly had a hard time performing the symphony due to the lack of capable players of this instrument.

ANSWER: harp <AG>

12. A collection of Daniel Boorstin essays subtitled "Essays on the Unexpected" is named after this object. For 10 points each:

[10] Name this body part, of which a certain philosopher said that "had it been shorter, the whole face of the world would have been changed."

ANSWER: Cleopatra's nose

[10] That quote about Cleopatra's nose is from this collection of fragments defending Christianity. An argument from this book concerns a decision from which you stand to gain everything if you are correct, and lose nothing if you are wrong.

ANSWER: Pensées [or Thoughts]

[10] *Pensées* was written by this philosopher and mathematician, whose namesake "wager" is an argument for believing in God.

ANSWER: Blaise Pascal <WN>

13. This statistical technique was introduced by the biologist Ronald Fisher. For 10 points each:

[10] Name this very popular statistical technique that can be applied "one-way" or "two-way" and often involves computing a table with degrees of freedom, sum of squares, and mean sum of squares for the treatment and unexplained random error.

ANSWER: ANOVA [or analysis of variance]

[10] An ANOVA can be run to determine the p-value, which is compared to a chosen "level" of this thing to determine if one's results have this property. One can reject the null hypothesis if one's findings have this property.

ANSWER: statistical significance [or word forms]

[10] This test is the non-parametric equivalent of a one-way ANOVA.

ANSWER: Kruskal-Wallis H test <BM>

14. Answer the following about depictions of Jews in British fiction, for 10 points each.

[10] Perhaps the most notorious depiction is of the miserly and ugly Fagin, who leads a criminal gang joined by the title orphan of this Charles Dickens novel.

ANSWER: Oliver Twist

[10] F.R. Leavis wrote that a truncated version of this novel, removing the sections sympathetic to the suicidal Jewish singer Mirah Lapidoth, should be published under the title *Gwendolen Harleth*.

ANSWER: Daniel Deronda [by George Eliot]

[10] This novel makes the connection between the Wandering Jew and Cain explicit by portraying him with a burning cross on his forehead. In this novel, the cross-dressing Matilda seduces Father Ambrosio, who in turn rapes and murders his sister Antonia.

ANSWER: *The Monk* [by Matthew Lewis] <AG>

15. The Albigensian Crusade started under this king's rule. For 10 points each:

[10] Name this French king who defeated John Lackland at Bouvines fourteen years after signing the Treaty of Le Goulet with him.

ANSWER: Philip II of France [or Philip Augustus]

[10] Philip Augustus began a campaign against the continental lands of Richard the Lionheart, even though the two kings previously fought together during this conflict.

ANSWER: Third Crusade

[10] This location was built as part of Philip Augustus's wall around Paris. About a century after its construction, this location was supposedly where Blanche and Margaret, children of Philip IV, committed adulterous acts.

ANSWER: Tour de Nesle [or Nesle's Tower] <KG>

16. This novel's protagonist attacks Denver's employer with an ice pick because he reminds her of the slave traders who had earlier come to take her children away. For 10 points each:

[10] Name this novel in which Sethe's house is haunted by the ghost of her daughter.

ANSWER: Beloved

[10] *Beloved* is by this African-American novelist of *The Bluest Eye*.

ANSWER: Toni Morrison [or Chloe Ardelia Wofford]

[10] *Beloved* opens with this three-word sentence, referring to the address on Bluestone Road where Sethe lives.

ANSWER: 124 was spiteful <WN>

17. You've stolen the cobalt 60-- now you just need the nukes. For 10 points each:

[10] To create a nuclear explosion, you'll need to get enough uranium in a small space to exceed this minimum amount of fissile material needed to for a nuclear reaction.

ANSWER: critical mass

[10] If your uranium is not very enriched, you might want to use a neutron moderator such as this substance. This slows down the neutrons and make them more likely to react with the nice fissile U-235 than the inert U-238. Its molar mass is about 2 grams per mole higher than a similar compound.

ANSWER: heavy water [or deuterium oxide; or D2O; do not accept or prompt on "water" or "H2O"]

[10] U-235 is fissile because this quantity for absorbing a neutron is greater than the amount of energy needed to split the nucleus. This quantity is the energy required to assemble a nucleus and is equal to c squared times the mass defect.

ANSWER: nuclear binding energy <BM>

Note to moderator: Do not reveal the alternate answer to the first part.

18. Volunteers for this campaign included James Chaney, Michael Schwerner, and Andrew Goodman, who were arrested, released, and then murdered. For 10 points each:

[10] Name this program led largely by Bob Moses that encouraged registration of black voters.

ANSWER: **Freedom Summer** [accept **Mississippi Summer Project**]

[10] Freedom Summer was aimed at registering African American voters in this state. James Meredith was the first black student admitted to its state university.

ANSWER: **Mississippi**

[10] SNCC, the same group that was instrumental in Freedom Summer, also organized a march on this city. The “I Have a Dream” speech was given in this city by Martin Luther King.

ANSWER: **Washington, D.C.** [accept **D.C.**, accept District of **Columbia**] <SD>

19. The zero lower bound refers to the impracticability of this situation, yet several central banks including the ECB have implemented it. For 10 points each:

[10] Name this situation which makes it very unattractive for investors to keep their money in the bank.

ANSWER: **negative** nominal **interest** rate

[10] In December, this US central bank hiked interest rates by a quarter percentage point. In the past it has been chaired by Alan Greenspan and Ben Bernanke, but now Janet Yellen chairs it.

ANSWER: **Federal Reserve**

[10] Lowering interest rates would be an example of this kind of monetary policy, the goal of which is to increase investing and spending.

ANSWER: **expansionary** monetary policy <BM>

20. Answer some things about immortality-granting substances, for 10 points each.

[10] The Rig Veda details how humans who consumed this intoxicating drink became immortal. The Vedic god that personified this drink is equated with the moon god Chandra.

ANSWER: **soma**

[10] This other word describes a Vedic nectar of immortality. It also names the holy water used to initiate Sikhs into the Khalsa order.

ANSWER: **amrita**

[10] This vessel contained the amrita that Vishnu dropped at four holy sites, including Haridwar and Allahabad. Those holy sites now hold annual mass bathings during an event named for this vessel.

ANSWER: **kumbha** [prompt on “**pot**”] <KG>

Extra: In a notorious scene, this novel’s title character masturbates with a piece of liver. For 10 points each:

[10] Name this novel structured as a monologue delivered by the title character to his psychiatrist, Dr. Spielvogel.

ANSWER: **Portnoy’s Complaint**

[10] *Portnoy’s Complaint* is by this author of *American Pastoral* and *The Human Stain*.

ANSWER: Philip **Roth** [or Philip Milton **Roth**]

[10] Roth was married to this actress, who wrote an unflattering account of their marriage in *Leaving a Doll’s House*. In revenge, Roth based the anti-Semitic Eve Frame in his novel *I Married a Communist* on her.

ANSWER: Claire **Bloom** [or Patricia Claire **Blume**] <WN>