

### Tossups

1. **This man convinced his mistress to wear a bunch of rings in order to prevent her from being disgraced. This man once wins a race by laying sprigs of holly in the path of the opponent's horses. This man assisted the blind man Morda in one task. He was responsible for stoking the fire underneath a cauldron that had to be stirred for one year and one day. This man turned into a pile of wheat, which was scattered by a hawk, after which he turned into a single grain that was eaten by a rooster. This man acquired his abilities from (\*) three drops of a substance originally brewed for the ugly Morfran. This man was fished out of a river by Elphin, and his original name was Gwion Bach. For 10 points, name this Welsh bard with a name meaning "shining brow".**

ANSWER: Taliesin <EM>

2. **Description acceptable. This plan was partly exposed by Joseph Hamilton Daviess, who was serving as a state District Attorney. During the trial that followed this plan, the president was accused of "let[ting] slip the dogs of war, the hell-hounds of persecution" by Luther Martin. Erick Bollman and Samuel Swartwout served as message bearers in this plot, whose leader gathered troops at the private island of Harman Blennerhassett and surrendered to (\*) federal troops at Bayou Pierre. This plot was betrayed by the "Cipher Letter" sent from its leader to his co-conspirator, James Wilkinson. John Marshall presided over the trial of its leader, who was acquitted because he had not committed an "act of war". For 10 points, name this 1807 plot to create an empire from the Texas Territory by a former Vice President of the United States.**

ANSWER: Burr conspiracy [accept Aaron Burr's plot to create an empire or Aaron Burr's plot to overthrow the government or similar answers such as Burr's treason] <EM>

3. **A five-movement song cycle by this composer begins by recalling childhood stories of angels and was later orchestrated by Felix Mottl, including "Im Treibhaus" or "In the Greenhouse." This composer included "Traüme," or "Dreams," in his *Wesendonck Songs*, and a melody from that song is referenced in the duet "O Sink Hernieder" in one of his operas. Another work by him follows the last of the Roman (\*) tribunes, who dies in the burning Capitol building. This composer of *Rienzi* also wrote a work in which Telramund accuses the Duchess of Brabant of murder, and Elsa dies after asking the title knight of Arthur his name; this work includes his "Bridal Chorus." For 10 points, name this German composer of *Lohengrin* and *Tristan and Isolde*, best known for his Ring Cycle.**

ANSWER: Richard Wagner <JC, ed.>

4. **One character in this novel interrupts a sermon by stage-whispering "If that story about hell is a lie, we're all fucked, aren't we..." Another of its characters remodels the Hotel Christopher Columbus into a successful brothel and helps rescue one of the protagonist's daughters from the military. A third character in this novel makes money selling clay monster figurines to Canadians after escaping her marriage to Count Jean de Satigny and eloping with (\*) Pedro Tercero Garcia. This novel's central couple has a granddaughter named Alba and a daughter named Blanca. An early event in this novel is the accidental poisoning of the green-haired Rosa the Beautiful, as predicted by her psychic sister Clara del Valle, who then remains mute until her marriage to Esteban, the owner of Las Tres Marías. For 10 points, name this chronicle of the Trueba family, the debut novel of Isabel Allende.**

ANSWER: *The House of the Spirits* [or *La Casa de los Espiritus*] <RC>

5. **In the original scheme of the Jacobsen epoxidation, this compound donates an oxygen atom to the manganese reagent. Its conjugate acid is formed by the enzyme that is mutated in a disease which is *similar* to chronic granulomatous disease but shows a normal NBT test; that enzyme is myeloperoxidase. A mixture of this compound and boric acid is found in Dakin's solution. It's not ethanol or HCl, but a 0.1% solution of this substance is commonly used to destroy (\*) DNA and decontaminate lab surfaces used for PCR. This substance is generated in situ by reacting sodium hydroxide with chlorine gas in processes used to decolorize wood pulp. 3 to 6 percent solutions of this compound are found in Clorox. For 10 points, name this compound, the active ingredient in bleach.**

ANSWER: sodium hypochlorite [or hypochlorous acid; or bleach until it is read] <EM>

6. The narrator of this work dismisses the idea that the effect of music is experienced passively in a passage about his Saturday trips to see Giuseppina Grassini at the opera. In another section of this book, a servant drops a heavy trunk of books, endangering its narrator's attempt to escape from Manchester Grammar School. Its protagonist lives with a ghost-fearing orphan girl after moving to London, where he befriends a fifteen-year-old prostitute named Ann. Acute stomach (\*) pains prompt its narrator's first encounter with what he refers to as a balm for "the wounds that will never heal" and "the pangs that tempt the spirit to rebel". This book is divided into sections titled for the "pleasures" and "pains" of the title substance. For 10 points, name this autobiographical work detailing the fantastic visions and dreams inspired by Thomas De Quincey's laudanum addiction.

ANSWER: Confessions of an English Opium-Eater <RC>

7. One type of these entities are believed to be emitted by Zevatrons; one example of that subtype was detected at the Dugway Proving Ground and was called the "Oh-My-God" particle. The AMS instrument showed that these entities do not contain anti-helium atoms. The Auger Observatory was built to detect these entities. One method of detecting these entities relies on them striking stacks of polycarbonate, which are then dissolved in sodium hydroxide to reveal tracks. Their resonant interaction with the cosmic microwave background cuts (\*) off their energies at the GZK limit. They were originally detected using a set of three Wulf electrometers by Victor Hess in a balloon, and they mostly consist of protons. For 10 points, name these showers of particles that originate from space.

ANSWER: cosmic rays <EM>

8. This modern-day country is thought to be the home of a real-life tribe called the Blemmyes, who frequently allied with the Nobadae to attack the Romans. Several queens with the title *kandake* ruled in what is now this country, which contains the site of Kerma and what was the capital of King Piye. This country, whose site of Old Dongola was the capital of the Makurian kingdom, contains the ruins of Napata and (\*) Meroe. This modern-day country takes its name from an Arabic term meaning "Land of the Blacks." Rulers of a kingdom based in what is now this country established the 25<sup>th</sup> dynasty; that kingdom eventually fell to the invasion of neighboring Axum. For 10 points, name this modern-day country, home to the Nubian kingdom that controlled the fork of the Blue and White Nile.

ANSWER: Republic of the Sudan [or Jumhuriyat as-Sudan] <WA>

9. The first of these items was allegedly received by king Abgar V of Edessa, which is considered a miraculous example of them that came into existence "without hand." Our Lady of the Way is a type of these items, which are exemplified by one called Blachernitissa. "Red corners" are places in the home for the placement of these items, a wall of which separates the nave from the sanctuary and contains the (\*) Royal Doors. The Cretan school and Stroganoff school were styles of producing these items, which were destroyed *en masse* during the reign of Leo the Isaurian. These items are typically flat panels depicting motifs such as *theotokos* and her son, Jesus. For 10 points, name these religious works of art venerated in Eastern Christian traditions.

ANSWER: icons [or eikons; or eika; or ikona; or other translations; prompt on "relics" or "religious paintings"] <WA>

10. In October 2014, this country's new lustration law came into effect. One campaign against corruption in this country involves dumping corrupt politicians into trashcans while they're being filmed. Those attacks are often perpetrated by a nationalist group in this country, the Right Sector. This country used to have an elite police force called the Berkut. The escalation of a crisis in this country led (\*) France to delay a shipment of two *Mistral*-class helicopter carriers. This country's Maidan Square was the site of protests over a EU trade deal scuttled in 2013 as well as its 2005 Orange Revolution. "Chocolate King" Petro Poroshenko was elected president of this country after the ouster of Viktor Yanukovich. For 10 points, name this country that lost control of the Crimea to Russia.

ANSWER: Ukraine [or Ukrayina] <PL>

11. This economist argued that the Kuznets curve only appeared correct because of punitive taxes and political upheaval in the first half of the 20th century. Critically, this economist's theory assumes that elasticity between factors of production is high, disadvantaging labor. This economist argued that the economy should not rely on the "caprices of technology" to ensure a fair society in a book that cites *Pere Goriot* as an example of the "patrimonial capitalism" that will return. He argued that the life-cycle savings model is incorrect, and instead summed up his observations about accumulation with the empirical inequality (\*)  $r > g$  ["r is greater than g"]. In a recent book, this economist proposed a global wealth tax and progressive taxes of up to 80% in order to reduce income inequality. For 10 points, name this French author of *Capital in the Twenty-First Century*.

ANSWER: Thomas Piketty <WA>

12. A leader of these people promulgated a document that established a government led by twenty-four man council, half of whose members were chosen by these people and half by the king. These people refused to accept an arbitration given by Louis IX at Amiens. A pardon was extended to a number of these people in order to get them to surrender Kenilworth Castle. Clause 61 of a document supported by these people allowed a version of *distrain* in which twenty-five of them could overrule the will of the (\*) king. These people briefly held a king hostage following a victory at the Battle of Lewes, but their leader was later killed at the Battle of Evesham. These people forced Henry III to accept the Provisions of Oxford while led by Simon de Montfort, and earlier forced King John to sign the Magna Carta. For 10 points, name this group of rebellious English medieval nobility.

ANSWER: English barons [prompt on “nobility” or less specific terms] <WA>

13. After this artist’s request to “stretch his fingers” was granted, he created a painting in which a woman in black stares at a landscape while her male companion concentrates on some naked nymphs. A figure sketch titled *Seated Young Woman* is an example of highly skilled *trois-crayons* sketches by this artist, who was taught by Claude Gillot. Berlin’s Charlottenburg Palace contains the second version of one of this artist’s paintings which, unlike the first hanging in the Louvre, contains a (\*) mast in the background; however, both versions show a man in red with a staff on a hill. This artist’s painted a full-bodied Pierrot as “Gilles” as well as a scene in which a couple watches a painting of Louis XIV being boxed up. The French Academy referred to this artist’s scenes of dressed-up nobility in imaginary parks as *fêtes galantes*. For 10 points, name this painter of *Gersaint’s Shop Sign* and *Embarkation for Cythera*.

ANSWER: Jean-Antoine Watteau <WA>

14. These compounds’ receptors include AHK2 and AHK4. These compounds often contain a hydroxylated isopentenyl side chain, which is added by IPT. By binding to a namesake 70 k-d-a receptor, they are partly responsible for transforming etioplasts into chloroplasts. They can be created from the prenylation of recycled tRNAs, though most of the time they are synthesized by using dimethylallyl diphosphate to add groups to (\*) adenine. These compounds were first isolated from the milky endosperm of the coconut, and examples of these hormones include kinetin and zeatin. For 10 points, name these plant hormones that stimulates cell division and which often opposes auxin in controlling apical dominance.

ANSWER: cytokinin <EM>

15. One of these locations is the site of a conversation about the disappearance of Dimitrios Cotsakis, an Elvis expert. The Democratic Party is described as “the Snopes family married to Henry James” in a Norman Mailer article about the rise of JFK titled for Superman’s arrival in one of these places. A “dull unlocatable roar” is characteristic of these locations, which Murray Siskind compares to the Tibetan conception of reincarnation and death in the way they “spiritually recharge” visitors, in Don (\*) DeLillo’s *White Noise*. In poem set in one of these places, the speaker asks “Will we walk all night through solitary streets?” and remarks on the “peaches and penumbras” he spots while encountering Garcia Lorca and Walt Whitman. For 10 points, identify these places, the setting of both an Allen Ginsberg poem about one “in California” and of the John Updike story “A&P”.

ANSWER: supermarkets [accept “Superman Comes to the Supermarket” or “A Supermarket in California”; also accept equivalents like “grocery stores”; prompt on “stores” or equivalents] <RC>

16. A handwritten *ferman* issued during this period abolished the purchase of draft substitutes and required equal military service from each religious group. The Society of the Self-Sacrificers was accused of plotting during this period, during which the reorganization of *sanjaks* into units of equal population partially provoked a rebellion in Yanina. The Rescript of the Rose Chamber promised the end of tax farming during this period, during which changes in the (\*) millet system attempted to curb nationalism among religious minorities. The *jizya* tax was abolished during this period, during which the Phanariotes and Armenians were given equal status to majority Turks. For 10 points, name this series of 19th-century reforms in the Ottoman Empire.

ANSWER: Tanzimat period/reforms [accept anything mentioning Tanzimat; prompt on “reorganization” or generic answers like “reform in the Ottoman Empire” until mentioned] <WA/CC>

17. A criterion for stability in these substances states that their relative velocity must be less than the minimum velocity needed to induce an elementary excitation. A form of these substances has the unusual property that its one particle density matrix does vanish as distances go to infinity; that property is called off-diagonal long-range order, which allows these substances to undergo Bose-Einstein condensation. Osheroff managed to create one of these substances from a bunch of bosons by using a method named for (\*) Pomeranchuk. Graphing the specific heat capacity versus temperature for one of these substances shows a discontinuity at a critical temperature, and rotating these substances quickly forms quantized vortices. These substances form Rollin films on the walls of their containers and exist below the lambda point. For 10 points, name these substances like super cold helium-3, which lack any viscosity below a certain temperature.

ANSWER: superfluids

18. A suite by this composer scored for either string orchestra or wordless chorus opens with the instructions "vague and mystic". This composer's *Twelve Etudes* were composed after meeting Andrés Segovia. The most famous piece by this composer consists of a night poem, with voice vocalizing on "Ah" to start the piece and concluding the last third by humming, sung over pizzicato cello. A massive 20-minute, single movement, solo piano piece of his is a "portrait" of Arthur Rubinstein titled (\*) *Rudepoêma*. The second of nine suites in a collection by this composer concludes with a movement subtitled "The Little Train of the Caipira". An aria subtitled "Cantilena" is the first section of the fifth of those suites, which is scored for soprano and eight cellos. For 10 points, name this composer who fused Bach and Brazilian folk music in *Bachianas Brasileiras*.

ANSWER: Heitor Villa-Lobos <CV>

19. An essay collection by Karl Popper about "The World" of this philosopher discusses the impact of the "well-rounded truth" that this man supposedly learned from a goddess. Although he isn't Heraclitus, Martin Heidegger delivered a lecture course on this philosopher, from whom he borrowed the term *aletheia*. A treatise named for this thinker includes argument that supposes a group of objects that have the form of largeness implies a form of largeness by one-over-many, leading to an (\*) infinite regress of the forms of largeness, in an attempt to refute the Theory of Forms. This student of Xenophanes distinguished between "The Way of Truth" and "The Way of Opinion," and also argued that change is impossible. For 10 points, the so-called "Third Man" argument can be found in a Platonic dialogue named after what pre-Socratic philosopher, the founder of the Eleatic school?

ANSWER: Parmenides <Ike>

20. The protagonist of a novel written in this language tours the world after accidentally buying seven-league boots at a market and acquires Fortunatus's fortune-bag by selling his shadow to the devil. In a novel written in this language, Prince Hector courts Princess Hedwiga despite the interference of Master Abraham in a story centered on a composer that becomes intermixed with the autobiography of a tomcat named (\*) Murr. This language was also used for a story in which Spalanzani builds the automaton Olimpia and Nathanael thinks Coppélius is the title eye-stealing creature. A poem in this language describes how "all men become brothers" due to an entity referred to as "beautiful spark of the gods" and "daughter of Elysium". For 10 points, name this language used by the authors Adelbert von Chamisso, E.T.A. Hoffmann, and Friedrich Schiller.

ANSWER: German [or Deutsch; the works are *Peter Schlemihl*, *The Life and Opinions of the Tomcat Murr*, "The Sandman", and "Ode to Joy"]

## Bonuses

1. This phenomenon may be explained as a sorites paradox, as people may be uncomfortable demarcating at which point something is no longer human. For 10 points each:

[10] Name this hypothesis, which holds that people are comfortable with things that are barely human or fully human, but experience revulsion when human features move similarly to, but not exactly like, those of actual humans.

ANSWER: the **uncanny valley** [or **bukimi no tani gensho**; prompt on “uncanny”]

[10] Masahiko Mori, the coiner of the term “uncanny valley”, was from this country. Advanced lifelike human robots from this country are often cited as examples of the uncanny valley in popular culture.

ANSWER: **Japan** [or **Nihon**-koku; or **Nippon**-koku]

[10] The concept of the “uncanny valley” was based on the work of this social scientist, who developed the work of Ernst Jentsch in his essay “The Uncanny.”

ANSWER: Sigmund **Freud** <WA>

2. A chess piece museum stands underneath one of these structures, whose walls are angled at 54.7 degrees. For 10 points each:

[10] Identify these dwellings designed by Piet Blom, which rest on top of hexagonal pillars. There are groups of them in both Helmond and Rotterdam.

ANSWER: **cube houses** [or **kubuswoningen**]

[10] Another structuralist dwelling is Habitat 67, designed by Moshe Safdie in this nation. This nation’s other architectural wonders include the CN Tower.

ANSWER: **Canada**

[10] This other architect used structuralist principles to design a building that contains the only Michelangelo painting in the Americas. That building by this architect is the Kimbell Art Museum in Fort Worth.

ANSWER: Louis Isadore **Kahn** [or Itze-Leib **Schmullowsky**]

3. Answer some questions about buckminsterfullerenes, for 10 points each:

[10] Fullerenes are the third allotrope of this element, whose other allotropes are diamond and graphite.

ANSWER: **carbon**

[10] Solutions of Buckminsterfullerene appear this color. This is also the color of a positive biuret test for peptide bonds.

ANSWER: **purple** or **violet**

[10] In 1996, three scientists working at Rice University and the University of Sussex won the Nobel Prize for discovering fullerenes. Name any one.

ANSWER: Harold **Kroto**, Richard **Smalley**, or Robert **Curl**

4. The narrator of this novel’s epilogue shoots its original narrator in the face in a so-called “hunting accident” prompted by jealousy over a half-Tamil girl named Maggie. For 10 points each:

[10] Identify this 1894 novel that depicts the course of a relationship between Edvarda Mack and Lieutenant Thomas Glahn, who has a dog named Aesop. It was written by Knut Hamsun.

ANSWER: **Pan**

[10] Hamsun’s Nazi sympathies probably wouldn’t’ve endeared him to this Danish-Norwegian woman, a prominent anti-Nazi who wrote the four-volume *Master of Hestviken* and the *Kristin Lavransdatter* trilogy.

ANSWER: Sigrid **Undset**

[10] Hamsun, Undset, and their countryman Bjornstjerne Bjornson all won Nobel prizes, unlike this chump, whose non-award-worthy plays include *Hedda Gabler*, *The Master Builder*, and *A Doll’s House*.

ANSWER: Henrik Johan **Ibsen**

5. For 10 points each, name these groups of people from Latin American history.

[10] This term derived from the Taino language was generally applied to indigenous chiefs and leaders the Spanish encountered in their conquests. It was also applied to local political bosses in Mexico and Spain in the late 19th century.

ANSWER: caciques [or caciquismo]

[10] This term is used for strongman political leaders in Latin America, such as Simon Bolivar and Juan Manuel de Rosas, who based their political power on charismatic authority and military force.

ANSWER: caudillos [or caudillos]

[10] This racial caste of people in Latin America consisted of people of European ancestry born in the Americas. This word was also applied to colored people born in French Louisiana, and to a language widely spoken in Haiti.

ANSWER: creoles [or criollos] <WA>

6. This deity joined Jupiter and Mars in the Archaic Triad, which preceded a better-known Capitoline Triad. For 10 points each:

[10] Name this Roman god who by the late republic became identified with a mythological figure who disappeared in a thunderstorm near a hill named for this god.

ANSWER: Quirinus [prompt on “Romulus”]

[10] These Roman priests wore the apex cap and were split into “maiores” and “minores” based on which of the fifteen official cults they served. When followed by the word “dialis” it means that they serve in the cult of Jupiter.

ANSWER: Flamines [or Flamen; or Flamen Dialis]

[10] Quirinus was formerly an epithet for this other god. Augustus was said to have closed the doors of his temple that were always open during war. This two-faced god lent his name to the first month of the year.

ANSWER: Janus [or Ianus] <PL>

**Note to moderator: do not read the alternate answers to the first part.**

7. In response to a drive-by shooting at a birthday party, this group arrested over 1400 people during a single weekend in Operation Hammer. For 10 points each:

[10] Identify these special anti-gang units created by Darryl Gates. The one assigned to the Rampart Division became notorious for bank robbery, brutality, and hiding evidence of their crimes.

ANSWER: CRASH [or Community Resources Against Street Hoodlums; prompt on “LAPD” or “Los Angeles Police Department”]

[10] The CRASH initiative was undertaken by the police department of this city. Four officers from this city were caught on video beating Rodney King, resulting in a gigantic series of riots.

ANSWER: Los Angeles [or LA]

[10] About two weeks after the Rodney King beating, this 15-year-old black girl was shot by a Korean store owner as she was attempting to pay for a bottle of orange juice.

ANSWER: Latasha Harlins <EM>

8. This work opens with a quote from Plato’s *Sophist* that states “We, however, who used to think we understood it, have now become perplexed” in reference to the first title concept. For 10 points each:

[10] Name this work of philosophy, which advocates an “authentic” orientation towards the “ownmost possibility” of one’s death. This book uses the example of a hammer to show how people see objects in terms of their usefulness.

ANSWER: Sein und Zeit [or Being and Time]

[10] *Being and Time* is a work by this German philosopher, who also wrote *The Question Concerning Technology*.

ANSWER: Martin Heidegger

[10] Heidegger’s *Being and Time* inspired his student Emmanuel Levinas to pen this “essay on exteriority,” which uses phenomenology to interpret Being and Transcendence.

ANSWER: Totality and Infinity: An Essay on Exteriority [or Totalité et Infini: essai sur l’extériorité] <Ike, ed.>

9. The BEAST technique uses the relaxed version of this technique, which was used to determine the route that HIV took to get to the United States in one controversial paper. For 10 points each:

[10] Name this technique used alongside phylogenetic trees and based on Kimura's neutral theory, in which the number of mutations can be used as a proxy for the time in which two species diverged.

ANSWER: **molecular clock** [prompt on "chronograms"]

[10] The molecular clock assumption was originally tested using this gene, which is a part of the electron transport chain that moves between complex III and IV.

ANSWER: **cytochrome c**

[10] Cytochrome c is released from this organelle in one pathway to induce apoptosis. This organelle contains the electron transport chain and generates a bunch of ATP.

ANSWER: **mitochondria**

10. A passage from this work beginning "When the Pleiades, the daughters of Atlas, begin to rise..." wins its author a poetry contest against Homer in a second-century text called *The Certamen*. For 10 points each:

[10] Identify this poem, whose more famous sections include an attack on the judges who ruled in favor of its author's brother Perses and an account of the Five Ages of Man.

ANSWER: **Works and Days** [or *Erga kai Hemera*]

[10] *Works and Days* was written by this ancient Greek poet, who described the origins of the gods in his *Theogony*.

ANSWER: **Hesiod**

[10] Both "The Shield of Heracles", which is commonly attributed to Hesiod, and the description of the shield of Achilles in book 18 of the *Iliad* are examples of this literary device, a detailed description of a work of art.

ANSWER: **ekphrasis**

11. This law can be used to show that the electric field within a thin conducting sphere is zero. For 10 points each:

[10] Name this law which states that the flux through a surface surrounding a charge is proportional to the net electric charge enclosed by the surface.

ANSWER: **Gauss' Law**

[10] Gauss' Law can be used to show that the electric field due to this configuration of charges is equal to the area charge density over two epsilon. This is usually calculated by drawing a perpendicular cylinder and noting the flux only goes through the end.

ANSWER: infinite **plane** [or infinite **sheet**]

[10] Gauss' law can be used to find boundary conditions for this inhomogeneous form of Laplace's equation. This equation states that the Laplacian of the potential is equal to negative free charge density over permittivity.

ANSWER: **Poisson** equation

12. Various performances of this offstage action cause a character to monologue at her servant Cathleen and to hallucinate about Catholic school while holding a wedding dress, and instances of it correspond to that character going upstairs. For 10 points each:

[10] Identify this recurring habit of a character in a 1956 play, originally begun in the aftermath of the difficult birth of her son Edmund.

ANSWER: Mary (Cavan) Tyrone **taking morphine** [or obvious equivalents, as well as things like "being a **dope fiend** or **morphine addict**"]

[10] The morphine addict Mary appears in this Eugene O'Neill play about the Tyrone family, a fictionalized version of O'Neill's own family.

ANSWER: **Long Day's Journey Into Night**

[10] This elder scion of the Tyrone family is, like his father, an actor. He appears in *Long Day's Journey Into Night*'s sequel, *A Moon for the Misbegotten*, as the even-more-alcoholic landlord of Phil Hogan.

ANSWER: **Jamie** Tyrone [or **Jim** Tyrone; or **James** Tyrone **Jr.**; prompt on "Tyrone"; do not accept or prompt on "James" alone]

13. The prices of these things were so insane that some sold for the value of 10 years' labor from a skilled craftsman in 1637. For 10 points each:

[10] Name these items, which caused what is generally considered the first speculative bubble in modern history when their prices reached astronomical levels and then collapsed in the Early Modern Netherlands.

ANSWER: tulips [or tulip bulbs; or Tulipa; prompt on "bulbs"]

[10] Tulips became a fad in Europe after an ambassador to this empire's ruler, Suleiman the Magnificent, brought them back to Ferdinand I of the Holy Roman Empire.

ANSWER: Ottoman Empire [or Turkish Empire; or Turkey; or Osmanli Imparatorlugu]

[10] This journalist discussed tulipmania, alchemy, and Nostradamus in Volume I of his book, *Extraordinary Popular Delusions and the Madness of Crowds*.

ANSWER: Charles Mackay <WA>

14. This piece's first theme is first played by the bassoon and violas, which uses the notes F, E-natural, D-flat, and C to descend to the tonic note of B-flat. For 10 points each:

[10] Name this single-movement patriotic piece written after the onset of the Serbo-Turkish War, which quotes "God Save the Tsar" and no other national anthems.

ANSWER: Marche Slave, Op. 31 [or Slavonic March]

[10] This Russian composer of *Marche Slave* included cannons firing blank shells in his *1812 Overture*.

ANSWER: Pyotr Ilyich Tchaikovsky

[10] This Tchaikovsky symphony opens its B-flat minor Andantino second movement with an oboe melody and has an entirely pizzicato 3rd movement. Its Allegro con fuoco finale is interrupted by the same brass fanfare on repeated A-flats which opens this symphony.

ANSWER: Tchaikovsky's Symphony No. 4 in F minor, Op. 36 <MJ>

15. Answer some questions about creationism, for 10 points each:

[10] Young-earth creationism relies extensively on the genealogy presented in this book of the Bible, not to mention all the other stuff in it about God creating everything in 6 days.

ANSWER: Book of Genesis

[10] Young Earth Creationism is championed by this Australian-born president of Answers in Genesis, who recently held a debate with Bill Nye in his Creation Museum.

ANSWER: Kenneth Alfred Ham

[10] Another prominent advocate of creationism is this Turkish pseudo-scientist and borderline cult leader, whose "Atlas of Creation" incorrectly posits that species have stayed identical over millions of years by comparing pictures of fossils with pictures of modern-day animals. Very high-tech.

ANSWER: Harun Yahya [or Adnan Oktar] <EM>

16. This man's government has links to the hardline anti-Muslim group Bodu Bala Sena, or Buddhist Power Force. For 10 points each:

[10] Name this despotic president of Sri Lanka whose family controls between 50-75% of the country's budget. He defeated the Tamil Tigers in 2009 and is the current Chairperson-in-Office of the Commonwealth of Nations.

ANSWER: Mahinda Rajapaksa

[10] In this country, Ashin Wirathu's 969 Movement urges Buddhists to oppress the marginalized Rohingya Muslim ethnic group. The Rohingyas are concentrated in this country's Arakan valley in Rakhine state.

ANSWER: Myanmar [or Burma]

[10] Nissho Inoue, a Nichiren Buddhist monk in this country, started the League of Blood incident. Aum Shinrikyo, a pseudo-Buddhist syncretic cult from this country, released sarin gas on subways in Tokyo.

ANSWER: Japan [or Nippon-koku; or Nihon-koku] <PL>



17. Cauchy names a second-order one of these that is used to describe three-dimensional stresses. For 10 points each:  
[10] Name these mathematical entities whose order is the dimensionality of the array required to represent them. Their scalar components are indicated by subscripts and superscripts, and contraction reduces their order by 2.

ANSWER: tensors

[10] Tensor contraction can be seen as a generalization of this matrix operation, in which all of the diagonal elements of a matrix are added together.

ANSWER: trace

[10] For a given transformation represented by the matrix A between two coordinate systems, a linear functional's components can either transform with A or with the inverse of A. Name either term for those components, of which tensors can have both.

ANSWER: covariant [or contravariant]

18. This poet asked "What of the leafage, what of the flower?" and wrote "Come then, complete incompletion" in his poem "Wanting is — what?", the introduction to his collection *Jocoseria*. For 10 points each:

[10] Identify this poet whose "Home-Thoughts, from Abroad" opens with the lines "Oh, to be in England / Now that April's there".

ANSWER: Robert Browning

[10] The most famous of Browning's dramatic monologues may be this one, whose speaker examines a portrait by Fra Pandolf of the title woman, who had a heart "too soon made glad", presumably causing the speaker to have her killed.

ANSWER: "My Last Duchess"

[10] The speaker says that he will "summon age / to grant youth's heritage" in this Browning poem, a dramatic monologue that begins "Grow old along with me! The best is yet to be."

ANSWER: "Rabbi ben Ezra"

19. A Roman province named for this city oddly included Crete. For 10 points each:

[10] Name this most important Greek colony in Libya, often known as the "Athens of Africa." Plutarch described how one of its noblewomen, Aretaphilia, overthrew the tyrant Nicocrates in *On the Virtues of Women*.

ANSWER: Cyrene

[10] Eratosthenes of Cyrene was the first person to have calculated this value with accuracy. Columbus' inaccurate ideas about this value led him to think he could reach India quickly by sailing across the Atlantic Ocean.

ANSWER: circumference of the Earth [or obvious equivalents]

[10] A sculpture of this deity unearthed at Cyrene in 1913 was returned to Libya by Italy in 2008. Another sculpture of this deity was unearthed in the Aegean in 1920 and depicted in Pablo Picasso's *Hallucinogenic Toreador*.

ANSWER: Venus [or Aphrodite] <WA>

20. This mural shows a man with a blonde beard in a white robe pointing out into the sea, into which he is being carried by a raft of snakes. For 10 points each:

[10] Name this massive mural found in the Baker Library at Dartmouth College. Appropriately, this mural depicts dead academics and books begetting more academics and books in its panel, "Gods of the Modern World."

ANSWER: *The Epic of American Civilization*

[10] Jose Clemente Orozco, the artist of *The Epic of American Civilization*, was from this country. Diego Rivera, another muralist from this country, controversially showed Lenin in *Man at the Crossroads*.

ANSWER: United States of Mexico [or Estados Unidos de Mexico]

[10] This Marxist, Mexican muralist painted the largest mural in the world, *The March of Humanity*, on an irregular octagon for a cultural forum at the World Trade Center Mexico City named for him.

ANSWER: David Alfaro Siqueiros <WA>