



ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS
PACKET BY MICHIGAN STATE

TOSSUPS

1. This man argued that, just as the Hebrews used treasures plundered from Egypt to build the wilderness tabernacle, Christians must use secular philosophical writings to answer theological questions, in his letter to Gregory Thaumaturgus who responded with an “address of gratitude” to this person. He provided a paragraph-by-paragraph refutation of a work called the *Alethes Logos*, or The True Word, and that refutation was copied into the *Philocalia* named for this man, compiled by Basil the Great and Gregory Nazianzen. That piece is his tract against Celsus. Gregory of Nyssa was inspired by this man’s teaching of *apokatastasis*, which, along with his doctrine on the pre-existence of souls, led him to be declared anathema at the Fifth Ecumenical Council of Constantinople. He also compiled six versions of the Old Testament side-by-side in the *Hexapla*. For 10 points, name this theologian who allegedly castrated himself, and was a Church Father from Alexandria.

ANSWER: ORIGEN of Alexandria [or ORIGEN Adamantius; do not accept or prompt on Adamantius]

2. This man’s wife sings “Do you ever think what life will be / Where you will go after you die,” on the track “Do You Ever” off of his band’s album *Musicmagic*. He joined John Patitucci on bass and Dave Weckl on drums on a series of sessions alternately performed by the Elektric Band and the Akoustic band. On recordings of “I Remember Clifford” and “Con Alma,” this man partnered with Stan Getz, who kickstarted his career by including him in his quartet. On the album *Light as a Feather*, this man introduced his signature piece, which he often performed with a prelude based on the *Concierto de Aranjuez*. In 1978, this musician and Herbie Hancock played “Liza” as the centerpiece of the popular “dueling pianos” tour. Along with Dave Holland, he was added to the “second great quintet” of Miles Davis, consequently appearing in the album *In a Silent Way*. For 10 points, name this jazz and fusion pianist of Italian and Spanish descent, who founded the band Return to Forever and composed the piece “Spain.”

ANSWER: Armando Anthony “Chick” COREA

3. In supramolecular polymer chemistry, ferrocene and beta-cyclodextrin make a popular pair because of their responsiveness to these reactions. The mechanism of one type of these reactions is often studied in the Creutz-Taube complex. Viologens repeatedly and reversibly change colors in these reactions. Depending on whether the participating species are covalently linked or not, either the inner- or the outer-sphere reactions of this kind happen in transition metal complexes. The free energies of species involved in these reactions are plotted in Frost diagrams, and a specific example of them drives the function of a “saturated calomel” device. The disappearance of iodine indicates the endpoint in a common titration of this type. Disproportionation is a subtype of reactions of this kind, whose simplest types involves a connecting salt-bridge and can be analyzed by writing two half-equations, representing what goes on at the anode and cathode. For 10 points, name these reactions characterized by the transfer of electrons.

ANSWER: REDOX [or OXIDATION-REDUCTION reactions; prompt on “electron-transfer” reactions; prompt on “oxidation” reactions; prompt on “reduction” reactions; reverse prompt on “inner-sphere” reactions; reverse prompt on “outer-sphere” reactions; reverse prompt on “disproportionation” reactions; prompt on “electrochemical” reactions]

4. One novel begins by describing a bar in this city where two mugs hang on a wall inscribed with the names Ram and Font commemorating two men’s futile quest to find Bass beer. The novel *Beer in the Snooker Club* begins in this city where in another book the son of a doorman tries to enter the Police Academy but joins a terrorist group when they ask for a bribe he can’t afford. An Art Deco building in this city has a shantytown develop on its roof where poor immigrants live in fifty iron storage units converted into dilapidated rooms. Another novel begins with a family from this city changing the location of its customary “coffee hour” after Fahmy is accidentally shot by British soldiers during a peaceful political demonstration.

The Yacoubian Building is an apartment complex in this city, where Amina is hit by a car the only time she leaves her house without her husband's permission and a typhoid epidemic hits the Shawkat family living on Sugar Street. In a series named for this city, Kamal is the youngest son of the Al-Sayyid family. For 10 points, name this city that provides the setting for a trilogy of novels beginning with *Palace Walk* by Naguib Mahfouz.

ANSWER: CAIRO

5. This battle was referred to in the last words of a ruler when he told his doctor, Henri Conneau, that “we were not cowards” here. Before this battle, another commander remarked “we are in a chamber pot, and about to be shit upon.” That man tried to take command after his superior was wounded, but a secret letter produced by general Emmannuel Felix de Wimpffen showed that he'd been appointed by the war minister to take over. He refused to surrender, even after three failed cavalry charges from general Margueritte on the village of Floing. This battle, a loss for the army under Auguste Ducrot, came shortly after battles at Beaumont and Gravelotte, and was part of a campaign to relieve the besieged Marshal Bazaine at Metz. For 10 points, name this contest where the army of General MacMahon was destroyed by Helmuth von Moltke, which was the decisive battle of the Franco-Prussian War.

ANSWER: Battle of SEDAN

6. One holder of this post burned himself alive to recover from illness, and another was a humble guy who was covered with sores. A rabbit was thrown at a figure that briefly held this post and who took advantage of a tiny window of time to walk through a bonfire. Another holder of this post was accused of faking kindness to earn praise, upsetting her so much that she cried blood for fifty-two years. In this role, one god created a hurricane, sending a bunch of monkeys scurrying towards forests and mountains. A deformed god who assumed this post was knocked out by a club, and in revenge, sent out a bunch of jaguars to eat everyone. That god later fucked with another holder of this post by seducing his wife Xochiquetzal, leading to a drought when that god of rain was too paralyzed by grief. After the reigns of four of them, Quetzalcoatl sprinkled his blood on bones to revive mankind into a viable and permanent form. For 10 points, name this post in Aztec mythology whose current holder rules the fifth incarnation of the world.

ANSWER: the Five SUNS in Aztec mythology

7. The rightmost figure in this work is a woman who grasps an alabaster jar of perfume and has barely noticeable tears running down her face. A cross bearing an excerpt from the Book of Sirach is located on the exterior of this work, which also features a sheaf of wheat above a skull resting against a brick. The central figure of this altarpiece holds a globus cruciger and is nearly identical to a depiction of the same figure in the artist's earlier *Last Judgment*. This work is notable for sinuous Latin inscriptions and talk balloons that flow around four of the five main figures and float toward the top of the canvas. John the Baptist holds a partially-open book on the right panel of this altarpiece, whose center panel contains a depiction of Christ Salvator Mundi flanked by John the Evangelist and the Virgin Mary. Completed seven years after its artist's *Miraflores Altarpiece*, for 10 points, name this small triptych, commissioned as a private devotional for the namesake Flemish family from Tournai, painted by Rogier van der Weyden.

ANSWER: The BRAQUE TRIPTYCH [or The BRAQUE FAMILY TRIPTYCH]

8. The decays of this particle are typically used to measure the angles of the “unitarity triangle” derived from the CKM matrix, and one of those angles is directly measurable from the decay of this particle's neutral form into a J/psi and a strange K. The charge of a lepton emitting the semileptonic decay of this particle is used to determine whether the heavy constituent of this particle is matter or antimatter, a technique known as a form of “flavor tagging” named for that heavy constituent. The ARGUS group used the decay of the 4S resonance of the upsilon meson to measure the oscillation between this particle's neutral variant's matter and antimatter states; those oscillations, like those of the kaon, make this particle useful for studies of CP violation. For 10 points, identify this meson studied in the BELLE and BaBar experiments, a bound state of a first-generation quark and an anti-bottom quark.

ANSWER: B MESON [“meson” not required after mention; prompt on “meson” before it is read]

9. This poem's speaker mentally inserts the words “the mouthful of bread” when his “good fat father” asks “will you renounce?” Earlier, its speaker states “take away love, and our earth is a tomb!” in between quotations of a folk song that goes “flower o' the broom... flower o' the quince.” This poem compares a woman to “the prior's niece who comes / To care about

his asthma,” and discusses how that woman complicates the title character’s dictate to “make them forget there’s such a thing as flesh.” The speaker of this poem descended a ladder to escape from his room, and, in a departure from historical accuracy, taught “Hulking Tom.” Its speaker chases “three slim shapes,” and lists “a skull and bones, two bits of stick nailed crosswise,” and “a bell to chime the hour with” as alternatives after asking “what need of art at all?” This poem’s drunk title character repeats the swear word “zooks!” as he is interrogated by guards employed by “Master Cosimo.” This poem is about the title monk’s struggle to “paint the souls of men.” For 10 points, name this poem about a Renaissance artist, a dramatic monologue by Robert Browning.

ANSWER: “FRA LIPPO LIPPI”

10. An independence movement among these peoples was known as the Mau movement, drawing from their word meaning “unwavering strength,” and members wore blue uniforms with white stripes. A civil war among these people broke out in 1886 after exile of their king Laupepa led to a contest between Tamasese and Iosefo for the right to rule. That civil war was written about in the book *A Footnote to History*, by a man who resided at Villa Vailima. These peoples witnessed a namesake “crisis” when the British warship *Calliope* failed to make peace between two other nations - those hostilities were ended by the Tripartite Convention of 1889, which stripped these people of independence and partitioned their territory after the Siege of Apia. For 10 points, name these peoples who, until 1962, had their homeland split between Germany and the United States, which still claims an American territory of these people centered at Pago Pago.

ANSWER: SAMOANS [or Western SAMOANS or American SAMOANS; accept anything which implies people from SAMOA]

11. The ZIMPOL instrument of the CHEOPS experiment is designed to perform this action by measuring a strongly polarized signal against a marginally polarized background. Campbell, Walker, and Yang used direct dynamical perturbation methods to perform this action in 1989. The Wolszczan-Frail and Mayor-Queloz teams both used irregularities in the periodicity of pulsar signals to perform this action; that method is known as the “pulsar timing method” for doing this. A popular method for performing this action is to measure Doppler shifts due to radial velocity changed. The TESS satellite is a next-generation experiment that will use transit-time variation to perform this action, which can be performed directly by observing a dip in the light curve of a star. For 10 points, identify this action carried out over the last four years by the Kepler satellite, the location of objects of a certain size orbiting stars that aren’t the sun.

ANSWER: FINDING EXOPLANETS [accept anything that indicates the search for EXTRASOLAR PLANETS]

12. This paper quotes Thomas Gray’s “Elegy Written in a Country Churchyard” to explain a possible objection to its description of reality in a section which also claims that approximations of the speed of light using different methods will converge. This paper distinguishes between questions of facts and questions of arrangements of facts in asking whether a diamond surrounded by cotton can be considered hard. This essay compares the distinction between immediate and mediate consciousness to the relationship between notes and airs and uses the notion of path to explain the “parallelogram of forces.” It suggests rejecting a certain “ornament of logic,” and claims that realizing that our conception of an object’s practical effects is the whole of our conception of the object is the “third grade of clearness of apprehension.” For 10 points, name this essay which succeeds “The Fixation of Belief” in a series by Charles Sanders Peirce.

ANSWER: “HOW TO MAKE OUR IDEAS CLEAR”

13. This author wrote about an orphan who joins Tony, Danny and Gilbert in a group that call themselves the “Minna Men” after low-level mobster Frank Minna, who owns a seedy detective agency before he’s mysteriously stabbed to death. This author wrote about a mysterious tiger that sporadically appears and destroys buildings including the apartment of eccentric critic Perkus Tooth, who forms an unlikely friendship with washed-up child actor Chase Insteadman in another novel. The protagonist of his most famous novel is the son of the former lead singer of a band called *The Subtle Distinctions*, Barrett Rude. This author of *Chronic City* wrote about Lionel Essrog, a young detective with Tourette’s, in *Motherless Brooklyn* and wrote about the teenage friends, Dylan Ebdus and Mingus Rude, discovering a magic ring in a novel titled for Superman’s headquarters. For 10 points, name this American author who often writes about Brooklyn and penned *The Fortress of Solitude*.

ANSWER: Jonathan LETHEM

14. A popular conspiracy theory for who caused this event was started by Mordecai Foy and David Stewart, who charged that it was set up by Mississippi Senator George Poindexter, whose false association with this event caused him to be defeated for

reelection. This event, which occurred at the funeral of Warren Davis, was done by a man who stood on his porch yelling at neighborhood children and likely had lead poisoning or schizophrenia from his job as a house painter. He claimed he was owed money because he was the King of England, and said he “could not rise” until he got his money back by performing this event. That perpetrator, Richard Lawrence, was thwarted partly by Davy Crockett and partly by his intended victim, who beat him with a cane. For 10 points, give this event where, after two pistols misfired, the Democratic president who hated the national bank was not shot.

ANSWER: ATTEMPTED ASSASSINATION of Andrew JACKSON [or obvious equivalents, do not accept just “assassination of Andrew Jackson” because he didn’t get assassinated]

15. This author describes lying on a snakeskin for 69 hours while having “5 psychic experiences” in a book that was set in a location chosen because of this author’s memories of men swapping stories at Joe Clark’s store. One of this author’s books was called “anthropological gossip” by Alain Locke, and another describes “toe-parties” and drinking “Coon Dick” in Polk County. That book by this writer includes appendices describing the “Prescriptions of Root Doctors” and “Paraphernalia of Conjure.” Charlotte Osgood Mason sponsored the work of this thinker, who studied ethnicity in Puerto Cortes, Honduras and used the metaphor of anthropology as a “spy-glass.” This scholar of the diaspora researched for Franz Boas. One of her anthropological works is based on travels in Florida and New Orleans, and another describes religious beliefs in Haiti and Jamaica, including Vodun and hoodoo. For 10 points, name this author of *Mules and Men* and *Tell My Horse*, a “native anthropologist” who did research in Eatonville, Florida, which was also the setting of some of her fiction.

ANSWER: Zora Neale HURSTON

16. The damming of this river led to formation of Lake Caspe, which is known for its large carp and catfish. While praying on the banks of this river, a certain religious figure was given a column of jasper, which led to the building of The Basilica of Our Lady of the Pillar on this river’s shore. Its left bank is dominated by the cliffs of the Cardó Massif, and it is dammed at Flix and Mequinenza after being fed by the Nela near its source at Pico Tres Mares. Historically, the capture of Segundum south of this river prompted the Second Punic War, after the signing of a 226 BC treaty which named this river as the boundary between Rome and Carthage. This river, which flows through Tudela, also provides the name for the bloodiest battle of the Spanish Civil War. For 10 points, name this river which flows through Zaragoza, and after the Tagus River, is the second longest in Spain.

ANSWER: EBRO River [or Iberus or Ebre or Hiber or Iberus Flumen or Iber]

17. A controversial hypothesis suggests that these cells take part in a “shuttle” in which they feed another kind of cell with lactate produced through glucose metabolism. Even though they’re not located in or around the kidney, these cells strongly express aquaporin-4. Pilocytic, fibrillary, and anaplastic are respectively the WHO Grade I, II, and III types of cancers originating from these cells. One subtype of these cells is generally not present in adulthood, apart from cells named for Bergmann. When blood flow rises, a calcium wave propagates through these gap junction-connected cells. Immature cells of this kind secrete TSP 1 and 2 to promote the development of new synapses. There are fibrous, protoplasmic, and radial varieties of these cells, whose reactive types proliferate to form scars after neurons are damaged. The foot processes of these cells against blood vessels comprise the blood-brain barrier. For 10 points, name these glial cells in the central nervous system, so-named because they are shaped like stars.

ANSWER: ASTROCYTES [or ASTROGLIA; prompt on “glia”l cells until they’re mentioned; accept BERGMANN glia or astrocytes before he’s mentioned, accept FIBROUS, PROTOPLASMIC, and RADIAL astrocytes before they’re mentioned]

18. During one episode in this conflict, the exiled oligarchs of Rhodes made a plea to be restored to power, resulting in the dispatching of Ecdicas. Later on, the commander Gorgopas was killed when his fleet was ambushed by a force under Chabrias. This conflict began with a failed siege on the walls of Haliartus, which was quickly avenged at the Battle of Nemea. The conflict ended after a mission led by Antalcidas convinced his former enemy Tiribazus to call a peace conference, resulting in a treaty called the “King’s Peace.” One year into this conflict, Thrasybulus began rebuilding the Long Walls of Athens, but Conon finished the job because he was given funds in this conflict by Artaxerxes II, who allied his Persians with Athens and Thebes to try to stop Spartan expansion into Asia. Fought from 395 to 387 BC, for 10 points, identify this war named for a certain Greek polis whose port of Lechaemum was captured during the conflict.

ANSWER: CORINTHIAN War [do not accept or prompt on “Corinth” or “Corinth War”]

19. In one speech from this play, a woman challenges the maxim “misfortunes must be cowards because they only come in crowds” by countering that misfortunes must be courageous since “who ever charges with them may dare all things because they’ll never desert him.” In the first act, a man describes his wife’s delirious vision during childbirth of “the human viper of this century” bursting out of her entrails, before he recalls a prophecy predicting a day when the “bright sun stained in blood [would] duel with the moon.” One lady in this play adopts the name Astrea while working for Princess Stella, who beseeches her to discover the identity of the woman depicted in a locket belonging to Stella’s beloved Astolfo. In this play’s first scene, a woman disguised as a soldier travels to a tower fort in the mountains, where her life is spared after she shows a sword to Clotaldo that makes him recognize her as his lost daughter Rosaura. Before the action of this play, King Basilio imprisoned his son at birth fearing he’d become a tyrant. For 10 points, name this play that ends with Prince Segismund’s ascent to the Polish throne, written by Pedro Calderon de la Barca.

ANSWER: LIFE IS A DREAM [or La VIDA ES SUEÑO]

20. In one of this composer’s pieces, the orchestra uses a fugal style to weave around voices which constantly repeat the three-note phrase A, B-flat, A, in the seventh movement, after which trombones, flutes, and male voices dominate the “Hostias” movement. He made a choral arrangement of an organ piece, then tricked critics by passing it off as the work of the imaginary 17th century composer Ducre, before finally incorporating that piece, “The Shepherd’s Farewell,” into the “Flight into Egypt” section of an oratorio. This composer instructed timpanis to play sextuplets in thirds at the start of a movement with a single fortissimo G major chord, in a composition in which four bassoons and two tubas join to play a parody of the *Dies irae*. A cor anglais and an offstage oboe trade melodies, imitating shepherds, in that piece by him, in which a solo clarinet theme in the fourth movement represents a man’s last conscious thought before the drop of a guillotine. For 10 points, name this composer of *L’enfance du Christ*, who used four offstage brass bands in his *Requiem*, and included a “March to the Scaffold” in his *Symphonie Fantastique*.

ANSWER: Hector BERLIOZ

TIEBREAKER

21. One military officer from this country led a force which tried to help the emperor Lebna Dengel defeat the Adal Sultanate, but he arrived too late to stop the emperor’s death.. Then, he was killed at the Battle of Wofla, being beheaded by Ahmad al-Gazi. Another general from this country used the help of a local chief named Thimayya to stage an attack upon Yusuf Shah. This country built the Diu Fort and defended it for centuries from attacks of rulers including Mahmud III. The admiral Piri Reis ousted this nation’s forces from the ports of Aden and Muscat around 1550. Its forces defeated the Bijapur sultans in 1510 to take control of old Goa, which it held for over four centuries, thanks to its general Afonso de Albuquerque. For 10 points, name this county which fought the Ottoman Empire over trade routes after its explorer Vasco da Gama sailed the Indian Ocean.

ANSWER: PORTUGAL

BONUSES

1. All sets that are not made from the union of two nonempty open sets have this property in topology. For 10 points each:
[10] Name this property, which is also said to be had by a graph on which each pair of vertices are joined by a path. Intuitively, spaces in which any two points can be joined by a path have this property.

ANSWER: CONNECTEDness

[10] This type of topological space is defined as one in which the intersection of any family of open sets with another open set is also open. While finite families of open sets that intersect always have an open intersection, in this space, it can be infinite.

ANSWER: ALEXANDROV-discrete topological space

[10] This term denotes topological spaces in which any two disjoint closed subsets of the space can be separated by neighborhoods. Uryson's lemma says that a space has this property if and only if two disjoint closed subsets can be separated by a function, and in algebra this term designates subgroups that are invariant under conjugation.

ANSWER: NORMAL

2. This neighborhood was home to a philanthropy of improv actors called the Diggers, including Peter Coyote, who were known for holding mirrors up to tourists and shouting "Know Thyself!" during the Summer of Love. For 10 points each:

[10] Name this San Francisco neighborhood, named for the intersection of two streets, which was an epicenter of hippie culture.

ANSWER: HAIGHT-ASHBURY [prompt on partial answer, prompt on "HASHBURY"]

[10] This January 1967 charity concert, which occurred at the Avalon Ballroom, was a Hare Krishna fundraiser. It included performances by the Grateful Dead and Janis Joplin, and was attended by Allen Ginsberg and Timothy Leary.

ANSWER: MANTRA-ROCK Dance

[10] This 1969 concert, which was located inland, in Tracy, came to represent the end of the counterculture as it devolved into violence, including the stabbing of Meredith Hunter by the Hell's Angels security guards during the Rolling Stones' performance.

ANSWER: ALTAMONT Speedway Concert [or obvious equivalents that mention Altamont]

3. In an influential article on "The Strength of" these things Mark Granovetter described how these links bridge closely knit social groups, and thus play a major role in how people find jobs. For 10 points each:

[10] Name these links between social actors introduced to describe how people who share a mutual friend are more likely to know each other, thus avoiding a "forbidden triad."

ANSWER: WEAK TIES

[10] The concepts of strong and weak ties originated in the analysis of these structures made up of actors and the set of dyadic relations between them. This term is also used for websites like Facebook and LinkedIn.

ANSWER: SOCIAL NETWORKS

[10] This German sociologist developed a precursor to social network theory, besides writing "The Stranger" and explaining how city living cultivates a blasé attitude in *The Metropolis and Mental Life*.

ANSWER: Georg SIMMEL

4. This author wrote about his vision of a political leader sitting silently on a throne before getting up in disgust "to untie / a canticle which will not die". For 10 points each:

[10] Name this author of the Napoleonic ode "The Fifth of May," whose most famous work was adapted into an opera by Amilcare Ponchielli and features the brave Capuchin monk Fra Cristoforo.

ANSWER: Alessandro MANZONI

[10] Alessandro Manzoni is best known for writing this historical novel inspired by *Ivanhoe* in which Don Rodrigo attempts stop the marriage of Renzo and Lucia.

ANSWER: The BETROTHED [or I PROMESSI SPOSI]

[10] Manzoni fictionalizes this historical figure as the nun Gertrude who is blackmailed by her lover Egidio to help kidnap Lucia. This historical figure murdered another nun to cover up her affair and two illegitimate children with a count.

ANSWER: The NUN OF MONZA [or LaMONACA DI MONZA; accept SISTER VIRGINIA MARIA; or MARIANNA DE LEYVA Y MARINO]

5. The original aim of invading this country was to prop up Hafizullah Amin of the Banner Party, or Parcham, but he failed to gain popular support. For 10 points each:

[10] Name this country disastrously invaded by the Soviet Union in 1979, leading to rebellion by American-backed Mujahideen.

ANSWER: AFGHANISTAN

[10] One group funded by the U.S. and Pakistan was the Sunni-led “Seven Party Mujahideen Alliance,” which included Jamaat-i-Islami. Those seven were named for their base in this city, where they countered the influence that Iran gained by supporting the Shia Tehran Eight.

ANSWER: PESHAWAR

[10] At the end of the Soviet Occupation, this man became leader of Afghanistan. He promoted National Reconciliation, but was overthrown in 1992 and lived in the UN Embassy for 4 years until he was killed by the Taliban.

ANSWER: (Doctor) Mohammad NAJIBullah Ahmadzai [Najib or Najibullah is acceptable - prompt on Ahmadzai]

6. This man was the first to develop the notion of “occursus,” in which two voices approach a unison, which he did while discussing parallel organum in his *Micrologus*. For 10 points each:

[10] Name this medieval music theorist who names a “hand” mnemonic for a system of hexachords, and is credited with inventing musical staff notation.

ANSWER: GUIDO of Arezzo

[10] Guido used syllables from the hymn “Ut queant laxis” to come up with this system of teaching pitch, which comes in “movable” and “fixed” varieties of the starting syllable “do.”

ANSWER: SOLFÈGE [or SOLFEGGIO, SOLFEO, SOL-FA; prompt on “solmization” or word forms thereof]

[10] Guido’s hand and solfège were developed to ease performers into developing this initially daunting skill, involving playing or singing written music one has never seen before.

ANSWER: SIGHT-READING [or SIGHT-SINGING]

7. The cubic form of this compound is insoluble in iron and nickel, and is commonly used as an abrasive, especially in machining steel. For 10 points each:

[10] Name this badass diatomic compound, whose sphalerite polymorph is just a little bit less hard than diamond, a shortcoming it makes up for by having an even better chemical and thermal stability than the carbon allotrope.

ANSWER: BORON NITRIDE [or BN]

[10] The fact that boron nitride has similar physical properties to carbon lattices isn’t surprising, since the two compounds have this relationship, sharing the same electron number and electronic configuration. Carbon monoxide and diatomic nitrogen also have this relationship, since they both have 10 equally-shared valence electrons.

ANSWER: ISOELECTRONICITY

[10] The hexagonal form of boron nitride consists of several sheets held together by these intermolecular forces, which are present in pretty much every molecule, and encompass the London dispersion forces and other dipole interactions.

ANSWER: VAN DER WAALS forces

8. At the end of this story the psychologist David McClean returns to “The HappyLife Home” where he can’t find George and Lydia but sees their children eating lunch alone. For 10 points each:

[10] Name this story in which the siblings Peter and Wendy become obsessed with a nursery that provides a virtual reality for their imagination and allows them to train virtual lions to kill their parents.

ANSWER: “The VELDT”

[10] This author included “The Veldt” in his collection *Illustrated Man*, and his other works include *Farewell Summer* and *Something Wicked This Way Comes*.

ANSWER: Ray BRADBURY

[10] This Bradbury story describes a house programmed to take care of human needs that continues its daily tasks in 2026 after the human race has become extinct. This story takes its title from a Sara Teasdale poem recited on a tape recorder inside the house.

ANSWER: “THERE WILL COME SOFT RAINS”

9. Unable to find a smithing partner, the swordsmith Munechika appealed to this god, who assumed the form of a boy and

helped him out. For 10 points each:

[10] Name this androgynous god, the dedicatee of almost one-third of all shrines in Japan, who is often depicted carrying grains of rice, usually accompanied by fox messengers known as kitsune.

ANSWER: INARI [accept INARI-OKAMI, but don't read this out loud because of the next part]

[10] Inari is one of these spirits in Shinto. Other examples include the wisdom god Omoikane and the sun goddess Amaterasu.

ANSWER: KAMI

[10] A popular candidate for Inari's female aspect is this member of the Seven Lucky Gods, a Japanese cognate of the Hindu Saraswati who carries a musical instrument, rides an aquatic serpent, and grants wishes of love and beauty.

ANSWER: BENZAITEN [accept BENTEN]

10. Henry Ford collected first editions of these six books and moved the Pennsylvania log home of their author to Greenfield Village. For 10 points:

[10] Name these six "readers" which were created for U.S. primary school students starting in 1836, and were named for two brothers who'd been recommended to write them by Harriet Beecher Stowe. Also known as the "Eclectic Readers," they were full of moralistic didactic writings.

ANSWER: MCGUFFEY Readers

[10] Around the same time, this Massachusetts politician created the first public education system when he headed up the newly created Massachusetts Board of Education, and spearheaded the Common School movement.

ANSWER: Horace MANN

[10] This historian studied the Prussian school system and started Round Hill School in 1823. Though he served as Secretary of Navy for James Polk, and founded the Annapolis Naval Academy, he's best known as the "Father of American History" for his 10-volume opus *History of the United States*.

ANSWER: George BANCROFT

11. This architectural style is characterized by ostentatious brackets, oversized sculptural details, elaborate cornices, and a flat roof. For 10 points each:

[10] Name this architectural style, taught at a namesake Parisian art school that became very influential in America. Its best-known American example is probably Grand Central Station.

ANSWER: BEAUX-ARTS architecture

[10] This 1895 building, designed by Charles McKim as a "palace for the people", is an early American example of Beaux-Arts. Its most famous room is Bates Hall, a reading room modeled on a basilica with a majestic double-coffered canopy bounded by a half-dome on each end.

ANSWER: BOSTON PUBLIC LIBRARY McKim Building

[10] Beaux-Arts education emphasized this term referring to architectural design that communicates its identity or purpose. This two-word term originated with Claude Nicolas Ledoux who provides the example of a brothel shaped like a penis.

ANSWER: ARCHITECTURE PARLANTE [or SPEAKING ARCHITECTURE]

12. The first Westerner to write a first-hand account of this dynasty was the bookkeeper Hendrick Hamel. For 10 points each:

[10] Name this hermit dynasty of Korea which succeeded the Goryeo and ran from approximately 1392 to 1897.

ANSWER: JOSEON or CHOSON Dynasty

[10] During this last major battle of the Japanese invasion of Korea, a combined force under the Korean admiral Yi Sun-sin and the Chinese Chen Lin busted up the fleet of Yoshihiro in 1598, although Admiral Yi died at this battle.

ANSWER: Battle of NORYANG [or NORYANG POINT]

[10] The Korean struggle against Hideyoshi's invasion is often referred to as this war. This word means "water dragon" and describes the year on the Chinese calendar corresponding to 1592. It also aptly names the 1592 battle where Kato Kiyomasa slaughtered the Korean cavalry and forded the namesake river.

ANSWER: IMJIN War [or Imjin River]

13. The speaker of one poem in this collection offers to "pay a debt of birth I owe" by asking his father, a probable victim of suicide, to "rise out of thy hearse, and take a life immortal from my verse." For 10 points each:

[10] Name this collection of nearly twelve-hundred poems, such as "To the reverend shade of his religious Father" and several progressively erotic lyrics about Julia.

ANSWER: HESPERIDES, Or, the Works Both Humane and Divine

[10] *Hesperides* is a collection of poems by this English poet, who Algernon Swinburne prematurely crowned “the greatest songwriter ever born to the English race.” He’s famous for his line “Gather ye rosebuds while ye may.”

ANSWER: Robert HERRICK

[10] Herrick summarized the content of *Hesperides* in this introductory poem, which begins: “I sing of brooks, of blossoms, of birds, and bowers, Of April, May, of June, and July flowers.”

ANSWER: “The ARGUMENT OF HIS BOOK”

14. One of the most sacred days during this event is Mauni Amavasya Snan, during which many people take a vow of silence. For 10 points each:

[10] Name this Hindu festival celebrated every three years in a 12-year cycle, during which pilgrims bathe in sacred rivers near one of four sites.

ANSWER: KUMBH MELA [or Kumbha Mela]

[10] The Kumbh Mela occurs at the four sites where Garuda spilled drops of the nectar of immortality, *amrita*, while serving as a mount for this god. One of this god’s ten avatars is the focus of ISKCON.

ANSWER: VISHNU

[10] The *amrita* was produced when the *devas* and *asuras* churned the ocean of milk, using Vasuki as a rope to move Mount Meru. That churning also produced the halahala, a poison so powerful that it caused this lasting effect to Lord Shiva’s appearance when he drank it.

ANSWER: it turned his THROAT BLUE [prompt for more specific if the player does not specify “both the color BLUE and the THROAT or the NECK”]

15. These parameters serve the same function as and are expressible in terms of the Cayley-Klein parameters. For 10 points each:

[10] Identify these parameters of rigid body theory, which can be used to characterize any rotation between two coordinate systems in three dimensions, according to their namesake’s rotation theorem.

ANSWER: EULER ANGLES [prompt on partial answers or on answers like “Euler parameters”]

[10] Characterizing rotations in terms of Euler angles leaves the computation open to this problem, in which the Euler angles lose a degree of freedom. In gyroscopes, this problem manifests when two of its three axes co-align.

ANSWER: GIMBAL LOCKING

[10] Euler’s equations for rigid body rotation can be written in terms of the products of time-derivatives of the Euler angles and moments of inertia on one side, and this quantity on the other side. This quantity is given as the time-derivative of the angular momentum, much like force is the time-derivative of linear momentum.

ANSWER: TORQUE

16. This philosopher outlined eight requirements that a system of rules had to meet in order to be properly termed “law” in his most important work, *The Morality of Law*. For 10 points each:

[10] Identify this natural law legal philosopher and teacher of Ronald Dworkin who mimicked different judicial approaches in deciding whether to hang four hypothetical cavers who ate a companion in “The Case of the Speluncean Explorers.”

ANSWER: Lon Luvois FULLER

[10] In the pages of the Harvard Law Review, Fuller engaged in a notable debate about the connection between law and morality with H.L.A. Hart, an exponent of this view of legal philosophy, according to which the validity of law depends on its sources, and which Hart elucidated in his *The Concept of Law*.

ANSWER: legal POSITIVISM

[10] Hart’s departure point in *The Concept of Law* is the theory of an English philosopher with this surname, who promoted a “command theory” of law. Another English philosopher with this surname is most famous for his theory of speech acts in *How to Do Things with Words*.

ANSWER: AUSTIN [the two thinkers are John Austin and John Langshaw Austin]

17. An artist wrote a letter describing his obsession with this tree’s thin, vertical shape that resembles the proportions of an Egyptian obelisk. For 10 points each:

[10] Name this tree that appears in a painting titled for a “road with [this tree] and star.” Another one is depicted towering above shorter olive trees to the right of a golden field in a painting titled “Wheat Field with [these trees].”

ANSWER: CYPRESS

[10] Van Gogh's best-known cypress occurs in this painting, which shows the view out of a French sanitarium window. A tall cypress appears on the far left below the title expanse of swirling blue and yellow.

ANSWER: The STARRY NIGHT [or De STERRENNACHT]

[10] Van Gogh first became interested in cypresses while staying at the Saint-Paul Asylum in Saint-Remy where trips to the garden inspired this floral painting, modeled on Japanese woodblock prints. Van Gogh called this work "the lightning conductor for my illness".

ANSWER: IRISES [or LES IRIS]

18. The protagonist of this story remains emotionless as her brother Fred Henry calls her the "sulkiest bitch that ever trod," and later meticulously scrubs the headstone of her late mother's grave. For 10 points each:

[10] Name this bittersweet story in which Mabel Pervin repeats "you love me" after regaining consciousness at the clinic of Dr. Ferguson, who had stopped her from drowning herself in a pond.

ANSWER: "The HORSE-DEALER'S DAUGHTER"

[10] In this story by the same author, a broken vase of the title flowers signifies that the protagonist Elizabeth Bates has never developed a meaningful relationship with her husband Walter, who died in a coal mining accident.

ANSWER: "ODOUR OF CHRYSANTHEMUMS"

[10] "The Horse-Dealer's Daughter" and "Odour of Chrysanthemums" are major stories by this writer of "The Rocking Horse-Winner," who is best known for his novel *Lady Chatterley's Lover*.

ANSWER: David Herbert LAWRENCE

19. An uprising broke out in this city after the Hungarian reformed minister Laszlo Tokes was evicted from his apartment, despite the fact that his wife was ill and pregnant, and Mayor Petre Mot was not able to meet the demands of the crowd. For 10 points each:

[10] Name this city where water cannons and tear gas were turned on protesters in the street in 1989, sparking a revolution.

ANSWER: TIMISOARA [or Timisvar or Temesvar]

[10] This Romanian leader was ousted during that ensuing revolution. After fleeing with his wife in a helicopter, he was quickly convicted of mass murder and executed on Christmas Day.

ANSWER: Nicolae CEAUSESCU

[10] Shortly after the overthrow of the Ceausescu government, this secret police force that had been founded by Gheorghe Pintilie in 1948 was abolished.

ANSWER: SECURITATE

20. An important parameter in this theoretical framework is theta, a scaled product of the mutation rate and population size. For 10 points each:

[10] Name this genealogical method, developed primarily by John Kingman, which traces alleles of a gene back to a most recent common ancestor.

ANSWER: COALESCENT theory [or COALESCENCE]

[10] Coalescents are generated in part by backwards modelling of this process, the change in frequency of an allele or gene due to random sampling.

ANSWER: genetic DRIFT

[10] In coalescent theory, the mean value of this quantity is theta divided by one plus theta. It is diminished by subpopulation structuring in the Wahlund effect, and it is represented by the $2pq$ term in the Hardy-Weinberg model.

ANSWER: HETEROZYGOSITY [accept answers referring to the proportion of HETEROZYGOUS individuals in a population; accept any answer including the word HETEROZYGOUS or its word forms]

EXTRA BONUS

21. Its captain was the son of the man who served as captain of the *Mora*, the ship William the Conqueror used in his invasion of England. For 10 points each:

[10] Name this vessel that met its demise on a return trip from Normandy to England in November of 1120 CE. It's believed that the captain tried to race the English king's ship back to England when he struck a rock.

ANSWER: the WHITE SHIP

[10] Among those who drowned in the wreck was this man, the son of King Henry I. He was killed after his small boat was sunk by people trying to be rescued.

ANSWER: WILLIAM ADELIN (accept WILLIAM ÆTHELING or "William the Aetheling")

[10] The death of William Adelin led to a succession crisis, culminating in this period of war in England and Normandy. It ended with Stephen of Blois being placed on the throne.

ANSWER: The ANARCHY