



# ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS  
PACKET 8 BY THE EDITORS

## TOSSUPS

1. This ruler ascended to the throne as a result of the “Loyalty Treaty of Naqia-Zakutu,” by which the royal court was commanded to accept him as the favorite grandson of queen Zakuta and never to revolt against his kingship. One relief shows this king forcing a defeated rival of his to live in a dog kennel with a chain stuck through his jaw, and he is alleged to have sowed salt in the land after defeating the Elamites. He was revolted against by Psamtek I, resulting in the loss of Egypt under his rule. Famous for establishing a library of over thirty thousand clay tablets at Nineveh, he was the son and successor of king Esarhaddon, which makes him the grandson of Sennacherib. His death led to the downfall of the Neo-Assyrian empire. For 10 points, name this last great king of Assyria.

ANSWER: ASHURBANIPAL [Assurbanipal]

2. Given a canonical transformation  $\phi$  which takes a vector field to equilibrium and is generated by a function  $f$ , there exists another function that differs from  $f$  only by a function of the time, and which also generates  $\phi$ , and satisfies this equation, according to a theorem bearing this equation’s name. Singularities in the solution to this equation correspond to the points on the Lagrangian manifold where the projection to the coordinate space is not a local diffeomorphism, called caustic points. When this equation describes a system with  $n$  degrees of freedom, a complete integral of this equation will have  $n + 1$  parameters and will provide a solution to the equations of motion for positions and momenta. For 10 points, identify this equation which sets an operator representing total energy, plus the time derivative of the action, equal to zero, a fundamental equation of mechanics.

ANSWER: HAMILTON-JACOBI equation

3. This deity fathered seven demons who periodically emerged from the underworld to retrieve the blood, liver, and other organs of sacrificed animals. This god once summoned a fisherman who had broken the wings of the wind god, and was so impressed by that man’s sincerity that he offered him the food and drink of immortality, which were both refused. This god controlled a set of powerful shooting stars known as kishrus. Atrahasis was home to the throne of this god, which was guarded by Ningishzida. This god’s escape was once cut off when his son bit off his genitals, causing that son to become pregnant with three gods; he then teamed up with one of his grandsons, Teshub, to defeat that son, Kumarbi. Upset by Gilgamesh’s rejection, Ishtar once convinced this god to send a bull to wreak havoc on Earth. Often depicted with a royal tiara, this god split patronage of Uruk with Inanna and ruled the heavens. For 10 points, name this Sumerian god who formed a triad with Ea and Enki.

ANSWER: ANU

4. This character is forced to learn how to whistle to attract bullfinches that live in the bedroom of an eccentric blind woman, who requests that fowls named Phena and Strut are brought to her chambers for daily inspections. In a famous scene this character stumbles on a flock of injured pheasants and breaks all their necks. When her husband returns from Brazil he finds her staying at a fashionable lodging called “The Herons,” and earlier the family horse Prince was impaled by the mail carriage when she fell asleep at the helm. A flag indicating her execution is raised at the end of the novel while her sister Liza-Lu watches, and earlier she recited the wrong passage while baptizing her child Sorrow. This character works as a dairymaid at Talbothays Dairy where she meets the husband who abandons her on their wedding night when she reveals she was raped by Alec. For 10 points, name this title character of a Thomas Hardy novel who loves Angel Clare.

ANSWER: TESS Durbeyfield [accept TESS OF THE D’URBERVILLES; prompt on “Durbeyfield”]

5. Negotiation of this treaty was aided by interpreter Arthur Ferguson, who dealt with several translation issues. A paper in the *Anglo-Saxon Review* on the consequences of this treaty was written by Whitelaw Reid, who was part of the American delegation along with Cushman Davis and George Gray. That five-man commission was led by Judge William R. Day, who had resigned from his post as Secretary of State to attempt to negotiate this peace. Two years after this treaty, it was clarified by the Treaty of Washington, sometimes called the Cession Treaty, which dealt with the islands of Sibutu and Cagayan. The main provision of this treaty stated that the U.S. would pay twenty million dollars within three months of ratification; that payment occurred after Queen Regent Christina cabled her acceptance of this treaty, reportedly causing George Frisbee Hoar to have a heart attack in March of 1899. For 10 points, name this treaty which ceded Guam, Puerto Rico, and the Philippines to the United States, and ended the Spanish-American War.

ANSWER: Treaty of PARIS [of 1898]

6. This work borrowed the rigid vertical row of angels in Ferdinand Hodler's *The Chosen* as a model for the perpendicular arrangement of the Choir of Angels in its last section, which illustrates Schiller's line of poetry "This kiss for the entire world." Floating female "genii" figures run along the top of an otherwise empty segment of this work where the wall was left open in the original exhibition to offer a framed view of a monumental polychrome marble sculpture by Max Klinger. The artist's earlier *Pallas Athene* featured an image of Medusa's head on the goddess's breastplate that became the model for the three Gorgons in this work who appear next to a huge, hairy ape-like creature identified as Typhoeus. Its panel "The Hostile Forces" takes its title from Richard Wagner's famous program notes to a certain musical work. Created for the 14th Vienna Secession exhibition, for 10 points, name this painting cycle by Gustav Klimt designed as a pictorial interpretation of the namesake composer's ninth symphony.

ANSWER: The BEETHOVEN FRIEZE [or BEETHOVENFRIES]

7. Wilhelm Roux studied this process by poking a cell with a hot needle, and later Theodor Boveri theorized the existence of a "priority region" by observing a shift in curvature during this process in sea urchins. At the beginning of this process, Cern and lefty work in concert to antagonize the nodal signalling pathway. Snail is upregulated, downregulating E-cadherin, in the epithelial to mesenchymal transition that takes place during this process. In a book about calciferous sponges, Ernst Haeckel coined this term. The grey crescent region in *Xenopus* is crucial for beta-catenin's role in initiating this process, which in *Drosophila* involves the formation of a ventral furrow. Characterized by cell movements causing, in reverse chronological order, epiboly, delamination, ingression, involution, and invagination, this process begins with the creation of a primitive streak and results in a structure with an archenteron, or a primitive gut. For 10 points, name this process that creates three germ layers in an embryo.

ANSWER: GASTRULATION [or word forms; prompt on "epithelial to mesenchymal transition" or "EMT" before it's read]

8. A four-volume work about the sources of this concept was written by British sociologist Michael Mann. A "Radical View" of this concept titles a 1974 book by Steven Lukes, who claimed that it has three dimensions - the first occurring in decision-making scenarios, the second in non-decisionmaking events, and the third being latent or hidden-from-view. Five forms of *this* were described in the best-known theory by John French and Bertram Raven, though Raven later added a sixth form called the informational. In the book *Bound to Lead*, Joseph Nye coined a term for a specific type of *this*, which he defined as ability to use attraction instead of coercion to achieve results. Another book which begins by discussing the "fear of being touched" examines why packs of people are wooed by this idea. For 10 points, name this concept which Elias Canetti paired with crowds, and which has a "bio" form hypothesized by Michel Foucault.

ANSWER: social or political POWER [also accept AUTHORITY or INFLUENCE - but only accept those other answers before "Steven Lukes" - accept SOFT POWER at any time since it refers to Nye's idea and isn't particularly wrong otherwise]

9. Some attractions on this island include the Two Heroines monument, a life-sized statue of the two sisters who saved the island from invasion, and the Indigo Pearl resort area which lies within Sirinat National Park. This island is mostly composed of hills because it's the southern terminus of a namesake mountain range which is a continuation of the Tenasserim Hills. Tourists often sail off of its southeastern coast to visit the Phi Phi Islands. The namesake city on this island is home to the Simon Cabaret show, which features a world-famous group of "ladyboy" dancers. This island is directly south from the Isthmus of Kra, where its eponymous mountain range originates, and its biggest tourist draw is Patong Beach. This island in the Andaman Sea sits at the very upper end of the Malay Peninsula. For 10 points, name this largest island that belongs to Thailand.

ANSWER: PHUKET [or THALANG or JUNG CEYLON or CAPE SALANG before that's mentioned or TONGKA or JUNK]

CEYLON” or JONSALAM]

10. One of this author’s poems beckons the reader to “leave grazing to cattle” and repeats the refrain “to home, to home!” This author posited that between belief and unbelief there lay a “desert plain,” noting that “there is a ‘passion’ in the midst of that expanse.” This poet began another work by noting that “every fantasy devours another fantasy; one thought feeds another.” Quasi-Biblical stories about “Moses and the Shepherd” and “Pharaoh and His Wife’s Advice” join fables, such as the one about the mouse and the frog, in a six-volume collection by this author. This poet befriended a goldsmith to replace his primary muse, an elderly hermit who was his companion before suddenly disappearing. He began one of his books with the instruction “listen to the reed and the tale it tells, how it sings of separation.” Coleman Barks’s liberal, free-verse translations of this poet has led him to be often touted as the “most popular poet in America.” This poet honored his master by writing the *Divan of Shams of Tabriz*, and changed his name upon relocating to Anatolia. For 10 points, name this Persian Sufi poet who wrote the *Spiritual Couplets*.

ANSWER: RUMI [or JALAL AD-DIN Muhammad Balkhi; or Jalal ad-Din Muhammad RUMI; or MOWLANA]

11. During a conflict in this country, one side’s co-commander was burned alive in a helicopter, and 31 members of that side were captured in Operation Sparrowhawk. Bloodshed intensified here when field marshal John Harding created a Special Mobile Reserve unit to control riots, such as the demonstrations on “Oxi Day.” The man who led the conflict in this country had, in *another nearby country*, earlier founded the paramilitary group Organization X. A cease-fire in this country came with passage of the London and Zurich Agreements which included the Treaty of Guarantee. That agreement ended the dream of *enosis*, which was fought for in this country by Colonel George Grivas, who adopted the name Digenis in tribute to a hero of the Middle Ages. He led the EOKA movement, which was also supported by this country’s first leader, Archbishop Makarios III. For 10 points, name this island republic split between the influence of Turkey and Greece.

ANSWER: CYPRUS

12. An apocryphal story about the construction of one of this building’s elements holds the architect was sick in bed when he stumbled on a photograph of the tower at the Salamanca Cathedral. The architect was inspired by French Auvergne mosaics to mix Dedham granite with a Longmeadow sandstone trim for this building’s facade, which prefigured his trademark technique of mixing different stones. This building’s rounded arches, rough-faced stone masonry, and polychrome facades became characteristic of a popular style of Romanesque Revival architecture named after its architect. The artist John La Farge was commissioned to finish this building’s interior murals, and four stained glass pieces including *The Worship of the Shepherds* and *David’s Charge to Solomon* were designed for this place by Edward Burne-Jones, though they were completed by William Morris. Outside its left entrance, there is a Saint-Gaudens statue of Rector Phillips Brooks who commissioned Henry Hobson Richardson to design this building. Standing beside John Hancock Tower in Copley Square, for 10 points, name this Episcopal church in Boston.

ANSWER: TRINITY CHURCH

13. A quantitative version of Bial’s test requires this technique, for which enones demonstrate a marked “substituent effect.” A “solvent correction” is required for, and 5 nanometers per exocyclic double bond are added in, a schema allowing one to predict the resulting data from using this technique. Detectors for this technique are often used in conjunction with high performance liquid chromatography. Quartz and plastic are the most common materials for the cuvettes into which samples undergoing this technique are loaded. The presence of conjugated double and triple bonds boosts the absorption maximum in this technique, which is dependent on excitations from the HOMO to the LUMO, or from the ground to excited state, in opposition to the complementary fluorescence spectroscopy. The Woodward-Fieser rules predict data produced from this technique. For 10 points, name this form of spectroscopy that detects transitions that are just a little more energetic than those found in infrared spectroscopy.

ANSWER: UV-VIS spectroscopy [or ULTRAVIOLET-VISIBLE spectroscopy; or ULTRAVIOLET-VISIBLE spectrophotometry; prompt on SPECTROPHOTOMETRY; prompt on COLORIMETRY]

14. One character in this novel has an epiphany when he finds the “Bibliography of Bibliographies” that shows him all libraries are arranged in an organized taxonomy. One character in this novel refuses to have a child with her husband Walter because she does not want to pass on his mediocrity and becomes obsessed with the “musicality” of a murderer imprisoned for killing a

prostitute. The nymphomaniac Bonadea seduces the protagonist in this novel's first volume, "A Sort of Introduction," which begins when the main character decides to take a "vacation from life." The main character meets his twin sister Agathe in this novel's last volume, titled "Into the Millennium: The Criminals," and watches as his neighbor Clarisse becomes fixated on the imprisoned murderer Moosburger. Count Leinsdorf leads the "Collateral Campaign" in this novel that is planning a massive celebration for the 70th anniversary of the reign of Franz Joseph I. Set in the fictional country of Kakania, for 10 points, name this unfinished novel about the aimless Ulrich in fin-de-siècle Vienna, written by Robert Musil.

ANSWER: The MAN WITHOUT QUALITIES [or Der MANN OHNE EIGENSCHAFTEN]

15. In one story, this figure bids his men to put a glass plate over the nest of the Moor-Hen, to obtain a cutting tool given to the Moor-Hen by the Angel of the Sea. In another tale, he drips honey into a bowl late at night to prove that the two men at his Court are really women. In the Quran, Asaf offers to bring him a throne before he can look up to heaven and look down again - that throne is meant for Bilqis, whose land was foretold to this man by the lapwing. The water flowing at this man's glass palace causes Bilqis to lift up her dress, showing him her hairy legs. This figure evokes 72 demons and puts them in brass pots in the Ars Goetia, part of a 17th century grimoire named for the "Lesser Key" of this man. His son Rehoboam was entrusted to hide his greater Key in his tomb. For 10 points, name this husband of the Pharaoh's daughter, who built the First Temple of Jerusalem and proposed splitting a baby in two to solve a dispute.

ANSWER: King SOLOMON [or Jedidiah, or Sulayman]

16. This king's imperial policy was influenced by his Jesuit confessor, William Lamormaini. He employed one of his best-known generals after a secret meeting at Gollersdorf. He ascended the throne by negotiating a secret agreement called the Oñate treaty, by which he surrendered Alsace and many Italian territories including Piombino to Philip III of Spain. That treaty allowed the Styrian line of Habsburgs, led by this ruler, to take the throne after the death of Emperor Matthias. One of his most famous acts was issuing the Edict of Restitution, which temporarily restored Catholic lands to the terms of the Peace of Augsburg. Immediately upon ascending the throne, he was opposed by rival king Frederick V who was elected as the "Winter King" by the princes of Bohemia, until this ruler's general Count Tilly smashed Frederick at White Mountain in 1620. For 10 points, name this Holy Roman Emperor, a leader of Catholic League forces during the Thirty Years War.

ANSWER: FERDINAND II [prompt on "Ferdinand"]

17. In the third movement of one of this composer's symphonies, a funeral march consisting of violins playing jagged dotted-rhythms struggles against another funeral march played by winds. In another of his symphonic third movements, a gavotte transitions into a trio, which transitions back to the gavotte in the flutes while strings play pizzicato accompaniment. He quadrupled the length of the first-movement development section in a revision of his fourth symphony, whose third movement depicts a seductive dance performed by the Beautiful Maiden. The glockenspiels and xylophones imitate ticking clocks in his last symphony, to which he added an energetic coda in the vain hope of winning a prize; that piece was originally composed for a children's radio program. This composer's fourth symphony drew heavily from his ballet *The Prodigal Son*. His chosen title for his first symphony indicates that he attempted to reconcile 20th century music with the music of Haydn. He was posthumously awarded the Lenin Prize in 1957 for his last symphony. For 10 points, name this Soviet-era composer of seven symphonies, such as the *Classical*.

ANSWER: Sergei Sergeyevich PROKOFIEV

18. In 1983, the IRAS satellite provided evidence for the existence of these objects when it showed that about one-fifth of main sequence A stars near the Sun exhibited excess emission in the infrared. The evolutionary dynamics of these objects were worked out by Safronov, who proposed that structures developed within these objects by agglomerating "significantly smaller bodies that were not fragmented during... collisions," a theory worked out in further detail by Lissauer. The Perri-Cameron model is a theory of structure formation in these objects that builds on an earlier theory of Cameron which proposes that structure formation proceeds via breakup of these objects into axisymmetric rings due to gravitational instability, contrary to the aforementioned core accretion hypothesis. These objects have a lifespan of about 10 million years, after which their mass has either coalesced into structures or been destroyed by photoevaporation driven by the stars they surround. For 10 points, identify these objects, a cloud of dust gravitationally bound to a star which serves as the location for the formation of objects like Earth and Jupiter.

ANSWER: PROTOPLANETARY DISK [accept CIRCUMSOLAR DISK before "star"; do not accept or prompt on "protoplanetary nebula" or "planetary nebula"]

19. A historically distinctive feature of this work's philosophy is its claim that while we do not have innate conceptions of things such as musical tones, we do possess innate conceptions of goodness. In a section "on sophistical arguments," this work suggests that an inference from premises should be admitted only if the premises at the end of the argument are the same as those that were initially granted. This work provides a tripartite definition of being good, which includes mastery of desires and aversions, movement toward and away from things, and freedom from deception and rashness. This work, whose third book contains an argument between an Epicurean and the man whose thought is contained in it, consists chiefly of prescriptions for the good life, and begins with a description "Of the things which are in our power, and not in our power." The central points of this philosophical work would be summarized after the death of the man whose thought it contains by his student Arian into a short work known as the *Manual*, or the *Enchiridion*. For 10 points, identify this four-volume philosophical work containing the teachings of the Stoic Epictetus.

ANSWER: the DISCOURSES or the DIATRIBAI [prompt on "Diatribes" on the off-chance anyone says that]

20. This author wrote a short, oft-quoted article that offers the literary prescriptions "Do not retell in mediocre verse what has already been done in good prose" and "Go in fear of abstractions" in "a list of don'ts for those beginning to write verses." This poet claimed, "any general statement is like a cheque drawn on a bank. Its value depends on what is there to meet it" in the second chapter of a book that defined great literature as "language charged with meaning to the utmost possible degree" and notably defined literature as "news that STAYS news." This author of the *ABC of Reading* borrowed the Beardsley quote "Beauty is difficult" as a refrain in a work that begins one section with the assertion, "Hang it all, Robert Browning, there can be but the one Sordello". This poet's best-known collection includes the notable line "what thou lovest well remains / the rest is dross" and repeats his famous Modernist dictum "Make it new." This author wrote a terrible poem with the lines "petals on a wet, black bough" and "the apparition of these faces in the crowd." For 10 points, name this Modernist poet who wrote *The Cantos* and "In a Station of the Metro."

ANSWER: Ezra POUND

#### TIEBREAKER

21. This religious faith is promoted by the historical writings of Le Roy Froom and the *magazine El Centinela*, which was first published by Brenton Connerly. One of its official leaders, John Byington, converted his property at Buck's Bridge to be a church for this faith. Another leading figure of this faith lived at a home called Elmshaven in California and one called Sunnyside in Australia, where she bought land to set up the Avondale School to promote this belief. That woman was Ellen Gould Harmon, who put out the semi-monthly newspaper The Present Truth along with her husband James White. This belief preaches the idea of "investigative judgment" which has been happening since the fateful date of October 22, 1844, the date of the Great Disappointment. For 10 points, name this religious movement founded by Baptist preacher William Miller and centered on observing the Sabbath.

ANSWER: SEVENTH DAY ADVENTISTS [accept MILLERITES before Miller is mentioned]

## BONUSES

1. Jacob Mincer showed that restricting investment in this quantity to years of schooling fails to explain earnings of individuals with more than a decade of continuous work experience. For 10 points each:

[10] Mincer created an earnings function for the “human” form of this quantity, which has been written about by Gary Becker, and is defined as the pool of knowledge and skills used to perform labor. Friedrich von Hayek wrote a 1941 book on the “pure theory” of this.

ANSWER: human CAPITAL

[10] This economist’s work suggests that observable values such as years of education is more a signal for ability of a worker rather than the utility of the education in the production process. That work in labor market signaling won him the Nobel Prize with Akerlof and Stiglitz in 2001.

ANSWER: Andrew Michael SPENCE

[10] This UC Berkeley economist identified “thick” labor markets, an ecosystem of intermediate service providers, and human capital spillovers as the three main reasons for the emergence of “innovation clusters” in his book *The New Geography of Jobs*.

ANSWER: Enrico MORETTI

2. Though this god was ritually dismembered in the underworld, he nonetheless inaugurated spring by riding back to earth on a white horse. For 10 points each:

[10] Identify this Slavic fertility god who, in an uncannily similar story to the myth of Persephone, is stolen from his father by Veles, then taken to the underworld.

ANSWER: JARILO [or JURAJ; or DURILO; or JAROVIT; or GEROVIT; be lenient with pronunciations]

[10] Jarilo’s father was this chief Slavic god, who caused thunder and lightning, and tossed his hammer at wrongdoers.

ANSWER: PERUN [or PERKUNAS; or PERKONS]

[10] After the Slavs were Christianized, Jarilo was identified with this patron saint of England, who killed a dragon.

ANSWER: Saint GEORGE

3. The basic idea behind this technique is to pick a scale cutoff and derive a relationship between the coupling constants and the cutoff so that the coupling constants in front of problematic terms goes to zero as the cutoff increases. For 10 points each:

[10] Identify this technique, formalized by Kenneth Wilson, which is used to eliminate infinities in physical theories.

ANSWER: RENORMALIZATION group

[10] The most famous use of renormalization is probably Feynman, Tomonaga, and Schwinger’s work on the quantum theory of this fundamental field, whose force is mediated by the photon.

ANSWER: ELECTROMAGNETIC field [do not prompt on or accept “electric” or “magnetic” alone]

[10] Renormalization theory can be used to show that this quantity becomes infinite at the critical point; this quantity can be viewed as the scale on which order exists in a physical system.

ANSWER: CORRELATION length [accept COHERENCE length]

4. Answer the following about Neolithic Europe and the Proto Indo-Europeans, for 10 points each.

[10] Probably built by Grooved Ware peoples, this Neolithic village by the sea was unearthed by William Watt on the Orkney Islands of Scotland. This settlement is near the Ring of Brodgar, Maeshowe, and the Standing Stones of Stenness.

ANSWER: SKARA BRAE [or Skerrabra]

[10] This hypothesis formulated by Marija Gimbutas posits that a namesake broadly-defined culture consisting of Yamna or Pit Grave peoples in the Pontic steppe, and their predecessors, were the Proto Indo-European speaking culture. This Turkish term also refers to those grave mounds often encountered in Central Asia.

ANSWER: KURGAN hypothesis

[10] This site excavated by Arthur Evans is best known as the center of the Minoan culture, but its deeper Neolithic strata studied by J.D. Evans has yielded an alternative isolation model for Indo-European economies.

ANSWER: KNOSSOS

5. Finish these quotes from *Lady Windermere’s Fan*, for 10 points each.

[10] Lord Darlington quips that “it’s absurd to divide people into good and bad” and suggests instead dividing people between

these two traits.

ANSWER: CHARMING and TEDIOUS

[10] In the third act, Cecil Graham claims “I only talk gossip” and never talks about this word, which he defines as “gossip made tedious by morality”.

ANSWER: SCANDAL

[10] Wilde defines this type of person as “a man who knows the price of everything and the value of nothing” as opposed to the sentimentalist who “who sees an absurd value in everything, and doesn’t know the market price of any single thing”.

ANSWER: a CYNIC

6. This composer ended one of his songs by saying “Fathers, let this be a warning to you: Lock up your sugarcandies! Lock up your young girls!” For 10 points each:

[10] Name this Classical composer, whose composed 30 or so secular songs in Italian and German, such as “Evening Reflections” and “To Chloe,” as well as sacred choral music like his requiem, which was finished by Sussmayr.

ANSWER: Wolfgang Amadeus MOZART

[10] In this song, based on a Goethe poem, Mozart used a chromatically falling line to represent a maiden trampling a young man’s token of love, followed by a modulation to G minor and a coda calling it the sweetest little flower.

ANSWER: “The VIOLET” [or “Das VEILCHEN”]

[10] Mozart’s song “Un moto di gioja” was intended to replace the aria “Deh vieni, non tardar,” which is tauntingly sung by this character from *The Marriage of Figaro*, inducing jealousy in her groom Figaro.

ANSWER: SUSANNA

7. The metacentric and submetacentric types of these entities are only present in grasshoppers living in warm, dry environments. For 10 points each:

[10] Name these typically non-coding, naturally occurring entities that sometimes exist alongside the normal karyotype.

ANSWER: B CHROMOSOMES [or SUPERNUMERARY CHROMOSOMES; or ACCESSORY CHROMOSOMES; prompt on partial answers; prompt on answers like “extra chromosomes”]

[10] B chromosomes might have appeared due to these general kinds of gene transfer events between members of the same generation, not from parent to child. Transformation, transduction, and conjugation are types of this process.

ANSWER: HORIZONTAL gene transfer [or LATERAL gene transfer]

[10] A 2000 study showed that the presence of supernumerary chromosomes didn’t affect this measure, which describes the ability of an individual with a genotype or phenotype to survive and reproduce.

ANSWER: FITNESS

8. This character’s left arm is lopped off by a magic sword, and he receives his nickname by donning the disguise of a Buddhist monk after he leaves a bloody note acknowledging his slaughter of Inspector Zhang. For 10 points each:

[10] Name this powerful man who kills his brother’s murderer Pan Jianlin in the novel *The Golden Lotus*. In another novel, he becomes excessively drunk and punches a tiger to death.

ANSWER: WU SONG [or PILGRIM; prompt on partial name]

[10] Wu Song is one of the 108 bandits from this classic Chinese novel.

ANSWER: WATER MARGIN [or SHUI HU Zhuan; or ALL MEN ARE BROTHERS; or OUTLAWS OF THE MARSH; or close approximates and synonyms of those answers]

[10] This mountain, which also appears in the Yuan Dynasty play *Black Hurricane Presents Twin Victories*, is home to the stronghold of the 108 bandits in *Water Margin*.

ANSWER: Mount LIANG [or LIANGSHAN]

9. After he married the British ambulance driver Ruth Williams, this man was sent into six years of exile, and allowed to return only if he renounced his claim to be chief of Bechuanaland. For 10 points each:

[10] Name this man who did return and promptly became the founder and first president of Botswana in 1966.

ANSWER: Sir Seretse KHAMA

[10] Khama often had banquets with Princess Tabitha and her husband, Constantine Bereng, who ruled in Lesotho as the second king of this name. The first chieftain of Lesotho also held this name, and Bereng adopted it when he became the first ruler of independent Lesotho.

ANSWER: MOSHOESHOE

[10] Another good dinner buddy of Khama was King Sobhuza II, who ruled this country for a ridiculous 82 years. Unlike Lesotho, this tiny-ass country is not completely surrounded by South Africa, because it does have part of its border on Mozambique.

ANSWER: Kingdom of SWAZILAND

10. Name these features on the ceiling of the Sistine Chapel, for 10 points each.

[10] The final chronological fresco on the ceiling shows the “drunkenness” of this biblical figure, who is the subject of three frescoes, including *The Deluge*.

ANSWER: NOAH

[10] Four violent biblical scenes, including *The Brazen Serpent* and *Judith and Holofernes*, were painted in these architectural sections of the chapel. This architectural feature is the triangular segment of vaulting that provides transition between a dome and a square base.

ANSWER: PENDENTIVES

[10] Michelangelo framed the five smaller narrative paintings on the ceiling of the Sistine Chapel with four of these mysterious naked male figures. These figures sit on painted architectural plinths.

ANSWER: IGNUDI

11. Sir Humphrey Davy proved that muriatic acid was not one of these compounds. For 10 points each:

[10] Name these low-pH compounds, like perchloric acid, that all contain hydrogen and a certain other element.

ANSWER: OXOACIDS [or OXYACIDS]

[10] The acidity of oxoacids usually increases with an increase in this number for the non-oxygen, non-hydrogen element. That explains why perchloric acid, where chlorine’s value for this is +7, is the strongest chlorine oxoacid.

ANSWER: OXIDATION number [or OXIDATION state; accept other answers mentioning OXIDATION]

[10] The one exception to the aforementioned trend is this element, for which oxoacids are stronger with a lower oxidation state.

ANSWER: PHOSPHORUS [or P]

12. Aunt Georgiana breaks down in tears after attending a concert with her nephew Clark in this author’s story “A Wagner Matinee.” For 10 points each:

[10] Name this author of “The Willing Muse” who wrote a story about the corpse of famous sculptor Harvey Merrick returning to Harvey’s small hometown to be buried.

ANSWER: Willa CATHER

[10] The title character of this Willa Cather story steals \$1,000 from Denny & Carson’s to go on a spree in New York after his father forbids him from keeping his job at Pittsburgh’s Carnegie Hall.

ANSWER: “PAUL’S CASE”

[10] In her story “Neighbour Rosicky,” Cather describes how the elderly immigrant Anton Rosicky came from Europe to the prairie land of this state, where Cather also set *O Pioneers!* and *My Antonia*.

ANSWER: NEBRASKA

13. The usage of this four-word phrase dates back to a 1990 paper authored in part by Christof Koch, who later defined these concepts as “the minimal set of neuronal events and mechanisms jointly sufficient” for a mental state. For 10 points each:

[10] Identify this concept denoting a correspondence between biological and mental states. Koch’s paper suggested that these concepts can be located by generating coherent 40 Hertz oscillations in the brain.

ANSWER: NEURAL CORRELATES of consciousness

[10] This man co-authored that 1990 paper, titled “Towards a neurobiological theory of consciousness,” with Koch. You might know him better for his extraphilosophical work on the structure of DNA with James Watson.

ANSWER: Francis CRICK

[10] This philosopher argued for “access” and “phenomenal” correlates to match the corresponding types of consciousness. His paper “Psychologism and Behaviorism” argues that a machine programmed to pass the Turing test by giving every possible response would still not be intelligent.

ANSWER: Ned BLOCK



14. Name these proposed constitutional amendments which tried to avoid war, for 10 points each.

[10] This compromise issued by a Kentucky senator was a last-ditch effort to avoid the Civil War, and would have included six amendments which guaranteed the continuance of slavery south of the 36-30 parallel.

ANSWER: CRITTENDEN Compromise

[10] Named for an Ohio Republican, this failed amendment in 1861 was numbered as the 13<sup>th</sup> Amendment, but was introduced after seven states had already seceded, and was ignored. It would have forbid Congress from making any amendment to the Constitution to interfere with the “domestic institutions” of any State, including any laws about “persons held to labor” in those states.

ANSWER: CORWIN Amendment

[10] Named for an isolationist Democrat from Indiana, this Amendment introduced in 1935 would have required a national referendum on any declaration of war by Congress, except where U.S. territory had been invaded or U.S. citizens attacked first.

ANSWER: LUDLOW Amendment

15. This poem describes a “restless voice” harrying the title figure as she follows “the just man . . . over a black mountain” before “a sudden dart of pain / stitch her eyes before she made a sound.” For 10 points each:

[10] Name this poem whose speaker asks, “Who will grieve for this woman?” before concluding, “Yet in my heart I never will deny her, / who suffered death because she chose to turn.”

ANSWER: “LOT’S WIFE”

[10] The author of “Lot’s Wife”, Anna Akhmatova, also wrote this series of ten poems, which has sections titled “The Sentence” and “Crucifixion”. It begins with a prose piece called “Instead of a Preface” about waiting seventeen months with grieving mothers in the prison lines outside Leningrad for her son’s release.

ANSWER: “REQUIEM” [or “REKVIEM”]

[10] Akhmatova wrote an elegy “in memory” of this Russian novelist who fought Soviet censorship before the posthumous publication of his novel *The Master and Margarita* that introduced the phrase “manuscripts don’t burn.”

ANSWER: Mikhail BULGAKOV

16. This formalism divides the earth into radially symmetric shells separated by discontinuities at 400, 670, 2890, and 5150 kilometers. For 10 points each:

[10] Identify this model based on the Adams-Williamson equation which gives the velocity of seismic waves as a function of depth. It was created by Dziewonski and Anderson.

ANSWER: Preliminary Reference Earth Model

[10] This region above the core-mantle boundary at 2890 kilometers is home to reduced and sometimes negative velocity gradients.

ANSWER: D-DOUBLE-PRIME layer [do not prompt on “D”]

[10] The discovery of another region of low velocity directly beneath the lithosphere strengthened the evidence for the existence of this “weak” partially fluid region.

ANSWER: ASTHENOSPHERE

17. This singer appeared in the premiere of the operetta *Dede*, but didn’t achieve widespread success until the 1930 release of *The Big Pond*, in which he sang “Livin’ in the Sunlight, Lovin’ in the Moonlight.” For 10 points each:

[10] Name this boater hat and tuxedo-wearing Frenchman, best known for starring in films like *The Love Parade*, and for singing songs like “You Brought a New Kind of Love to Me” and “Thank Heaven for Little Girls.”

ANSWER: Maurice Auguste CHEVALIER

[10] Chevalier had a long and stormy relationship with this French flower seller-turned-singer, who scored a hit with “Mon Homme” in 1916. At the time, she was the highest-paid female entertainer in the world.

ANSWER: MISTINGUETT [or Jeanne Florentine BOURGEOIS]

[10] Chevalier played a tailor opposite Jeanette MacDonald in *Love Me Tonight*, which featured music by this composer and lyrics by Lorenz Hart. He worked with another lyricist on *Carousel* and *South Pacific*.

ANSWER: Richard RODGERS

18. Answer the following about the most compelling of subjects, ancient Roman coinage, for 10 points each.

[10] Originally this was a small silver coin introduced in 211 BC valued at one quarter of a denarius, and was only minted for special occasions during the Roman republic. Later on, Augustus made it the standard large bronze coin, equal to four bronze asses.

ANSWER: SESTERTIUS or SESTERCE

[10] In response to continuing debasement of currency, this emperor issued the Edict on Maximum Prices, though he may be better remembered for setting up the Tetrarchy by appointing Galerius and Constantius as co-emperors.

ANSWER: DIOCLETIAN [or Gaius Aurelius Valerius Diocletianus Augustus]

[10] During the Republic, the two curule types of these officials had power to issue edicts to regulate coinage at public markets. The other two of these officials in charge of public order were required to be plebeians, and maintained public buildings.

ANSWER: AEDILES

19. This book was reportedly discovered by the Barbadian minister Charles Goodridge in Panama. For 10 points each:

[10] Name this “Blackman’s Bible,” which was written by the Anguilla-born Robert Athlyi Rogers, and has become the foundational text for Rastafarians.

ANSWER: the HOLY PIBY

[10] The prophecies of the Holy Piby were allegedly confirmed when this man was crowned emperor of Ethiopia in 1930, taking a name meaning “Might of the Trinity.”

ANSWER: HAILE SELASSIE I [Ras Tafari MAKONNEN or Tafari Makonnen Woldemikael]

[10] This man, called the First Rasta and The Gong, was a Jamaican-born preacher who founded the Pinnacle commune to spread his Rasta teaching. While he was jailed for doing that, he used his pen name G.G. Maragh to write *The Promise Key*, which has become a great holy book in the Rasta movement.

ANSWER: Leonard Percival HOWELL

20. This man allegedly escaped the Puente Grande prison in 2001, and the information provided by Mario Hidalgo Arguello was key to flushing this man out of his safehouses in Culiacan. For 10 points each:

[10] Identify this man who was recently captured in Mazatlan; his second-in-command, Ismael “El Mayo” Zambada remains at large.

ANSWER: Joaquin GUZMAN Loera [or El CHAPO]

[10] Zambada is expected to take over operation of this drug cartel, previously headed by El Chapo, and named for the state in which it is based. It was previously the target of an investigation known as Operation Dark Water.

ANSWER: SINALOA Cartel

[10] The Sinaloa Cartel is believed to be supplying the majority of the drugs moving into this American city on the shores of Lake Michigan, which made news last year for the high level of violence on its South Side.

ANSWER: CHICAGO

#### EXTRA BONUS

21. One character in this novel abuses his Jewish wife by ordering his cook to serve bacon and sausages, and later locks her in her room when she refuses to give him her diamonds. For 10 points each:

[10] Name this novel in which the stories of Sir Kit Stopgap, who fights three duels in one day, and Sir Murtagh, who puts up his own land as collateral for a lawsuit concerning his property, are told by the steward Thady Quirk.

ANSWER: CASTLE RACKRENT

[10] Maria Edgeworth’s *Castle Rackrent* pioneered the modern version of this type of character, first described in 1961 by Wayne Booth, who has compromised credibility. Humbert Humbert from *Lolita* is often cited as an example.

ANSWER: UNRELIABLE NARRATOR

[10] Another notable instance of unreliable narrators occurs in this 1868 novel which uses four secondary characters as narrators, including Gabriel Betteredge, Miss Clack, Mr. Bruff, and Ezra Jennings.

ANSWER: The MOONSTONE