



ACADEMIC COMPETITION FEDERATION

2014 ACF NATIONALS

PACKET MARYLAND A, NOTRE DAME, AND TRUMAN

TOSSUPS

1. Poseidon performed *this action* on the Sperkheides before he began seducing their sister Diopatre, and undid it after he finished. After another instance of this action, Artemis told Dion about his daughter Karya's affair with Dionysus. Another instance of this action happened after a woman attempted to fetch a toy for her baby Amphissus, and then touched some unnatural blood. After Orpheus addressed a prayer in the Garden of the Hesperides and sobbed, three beings performed this action. A woman who fled her sword-wielding sexual partner Cinyras, whom she had tricked into an incestuous affair, underwent this action and then gave birth to Adonis. As a reward for their hospitality towards Zeus and Hermes, Baucis and Philemon both underwent this action rather than dying. The daughter of the river god Peneus underwent this transformation just as she was about to be overtaken by Apollo. For 10 points, name this common transformation by which Leuke, Myrrha, and Daphne became poplar, myrrh, and laurel.

ANSWER: TURNING INTO A TREE [or synonyms, accept DENDRIFICATION; prompt on "turning into a plant"; prompt on "transforming" or other non-specific answers, accept these specific trees before they're mentioned at the end: POPLAR, WALNUT, ELM, WILLOW, MYRRH, MYRTLE, LINDEN, OAK, and LAUREL]

2. In this theoretical framework, the extinction efficiency factor exhibits a series of sharp peaks as a function of the size parameter, a phenomenon known as morphology-dependent resonance. The fine structure of the spectrum obtained from this theory exhibits a characteristic "ripple" as a function of angle. Numerical calculations within this framework were difficult before the advent of computers because computing the wave functions in this theory requires evaluating a recurrence relation involving Ricatti-Bessel functions. This theory contains four parameters which control the expansion of the scattered and internal fields, and it predicts a forward lobe that is larger than the backward lobe. It is obtained by solving Maxwell's equations in terms of expansions in an infinite series of vector spherical harmonics for a plane wave incident on a dielectric sphere. Unlike a companion theory of the same type of process, this theory is applicable to particles of any size, and thus contains the Rayleigh theory as a special case. For 10 points, name this theory of light scattering, worked out by its namesake in 1908 to explain the reddish color of gold particles in a solution.

ANSWER: Lorentz-MIE scattering theory [do not accept or prompt on "Rayleigh scattering"]

3. A memorial to this battle consisted of eight towers in an octagon, with the graves of twenty unknown soldiers in its plaza, designed by Johann and Walter Kruger. The initial attack in this battle was to be made by Hermann von Francois, but he refused to proceed until his artillery shells arrived. Prior to this battle, small engagements were fought at Stalluponen and then Gumbinnen, after which the ineffective General Prittwitz was replaced as commander of the Eighth Army. The winning encirclement tactic at this battle is credited to Max Hoffman. The losers here were completely driven out of the area one week later at the First Battle of Masurian Lakes. In its aftermath, Paul von Rennenkampf was accused of incompetence and, rather than report his losses here, Alexander Samsonov shot himself. For 10 points, name this World War II battle that made heroes out of Ludendorff and Hindenburg in 1914, and was named in honor of a 1410 battle where the Teutonic Knights were defeated.

ANSWER: Second Battle of TANNENBERG [don't accept "First Battle of Tannenberg" or "Battle of Grunwald"]

4. A story titled after this person concerns an insomniac scholar who wrote a book supporting De Quincey's claim "Not one thing, but everything tradition attributes to [this figure] is false." In *The Critic as Artist*, Oscar Wilde claims "every great man" is surrounded by followers and "it is usually [this man] who writes the biography." Ferdinando Petrucelli della Gattina wrote a book titled "the memoirs" of this character, who in another book is lured by Niza into an ambush organized by an operative called "The Hooded Man." In a short story named for this man, Nils Runeberg theorizes that God chose this man as his total

incarnation. In a chapter of *Master and Margarita* ironically titled “How the Procurator Tried to Save [this character],” Pilate orders the death of this man from Kerioth, who Kaifa hired to spy on Ha-Notsri. Borges wrote a story titled “Three Versions of” this character, who appears in Cocytus being chewed by Satan’s three monstrous heads alongside Cassius and Brutus in the lowest circle of Dante’s *Inferno*. For 10 points, name this Apostle who betrayed Jesus for thirty pieces of silver.

ANSWER: JUDAS Iscariot

5. The finale of this piece consists of three separate dance melodies, the first of which alternates units of two and three eighth notes and is reprised in 2/2 time in the coda. Its second movement begins a theme in the violins after a silence, and ends with an extended pizzicato passage played with fingernails. The first movement of this piece is a fugue starting on A in the violas, which then goes both ways around the circle of fifths until it climaxes on E-flat. Its composer tried evoking the Baroque concerto grosso by devising a seating plan in which part of the orchestra is split into two antiphonal halves and placed on opposite sides of the stage. This piece plays when Danny goes to get his firetruck, only to discover Jack sitting awake on his bed, and when Jack looks down upon the model of the hedge maze, in *The Shining*. The xylophones play a series of high Fs in accordance with the Fibonacci sequence, and the timpani play an unusual glissandi, in this piece’s third movement *Adagio*, which exemplifies the composer’s “night music.” For 10 points, name this Bartok composition for two sections of the orchestra and an instrument similar to the piano.

ANSWER: MUSIC FOR STRINGS, PERCUSSION AND CELESTA, Sz. 106, BB 114 [accept Sz. 106; accept BB 114]

6. In February, a member of the militant group ISIS made a recording naming one member of this group as the true leader of the organization. A surreal scene unfolded in 2013 when one member of this group, somehow seated behind Jason Garrett in the Dallas Cowboys draft war room, reportedly began mocking their first-round pick. A member of this group was killed after attacking police in a blood rage over the satanic influence of television, which may have prompted his brother’s murder of another member of this group. Two teenage girls from this group are currently being trained by master archer Kim Soo-nyung to compete in the 2016 Rio Olympics. In December 2013, this family announced that one of its members will face execution for murder, the first such case since the 1977 execution of Misha’al bint Fahd for adultery. The General Intelligence Presidency is headed by one member of this family, a longtime Ambassador to the U.S. upon whom George W. bestowed the affectionate nickname “Bandar Bush.” For 10 points, name this family that includes Crown Prince Salman and King Abdullah, and monopolizes power in Riyadh.

ANSWER: The SAUDI Royal Family [or equivalents]

7. A dicarboxylic compound of this type can be synthesized by combining ammonia, an aldehyde, and a tartaric acid derivative in the Maquenne synthesis. Tosylmethyl isocyanide is added in a “three-component” synthesis of this compound devised by Van Leusen. Electron donor groups on this functionality coordinate to transition metals in a form of immobilized metal-affinity chromatography used to purify compounds with a short affinity tag. The drug with trade name Flagyl, which is commonly used against *C. difficile* infection, contains a nitro-derivative of this functional group. Myoglobin is protected from carbon monoxide poisoning because the heme is close to two of these sterically-hindered groups, whose positively-charged salts are stabilized by resonance. An atom in this functional group abstracts a proton from serine in the catalytic triad. This functionality is a five-membered ring heterocycle with two double bonds and two nitrogen atoms. For 10 points, name this aromatic functional group present in the side chain of histidine.

ANSWER: IMIDAZOLES [accept IMIDAZOLIDES, IMIDAZOLATES, and IMIDAZOLIUMS]

8. The first ruler of this period had a consort named Ahsait, whose tomb has a hymn to the four winds, and built a burial temple called the “Gate of the Horse.” Another of its rulers founded the fort of Semna and employed the general Nysumontu. That ruler erected the “Wall of the Princes,” a series of forts designed to protect the borders from invasion, and moved the capital to Itj-Tawy. Before he was slain by a harem cabal, that ruler during this period wrote a set of Instructions to his son, whose court was also home to “Sinuhe the Sailor,” the “son of the sycamore.” The final rulers of this period were called the Xoïs Dynasty since they moved the capital there. This period’s first ruler, who built his mortuary complex at Deir el-Bahri, used his army to lay siege to Hierakonpolis and took the name Mentuhotep II. Several pharaohs named Senwosret ruled during this period. For 10 points, name this period that started with the Eleventh Dynasty, a time which followed the First Intermediate Period and saw the unification of Egypt.

ANSWER: MIDDLE KINGDOM [accept the ELEVENTH DYNASTY before the word “Nysumontu”]

9. One poem in this collection describes “in heaven / some little blades of grass / stood before God” who asks them “what did you do?” The question “You say you are holy?” recurs throughout this collection, which includes a poem describing a man who climbed into the heavens to reach “a ball of gold in the sky” and found it was made of clay. Another poem in it describes meeting a seer who held the “book of wisdom” in his hands, but when the seer opens the book the speaker comments, “Strange that I should have grown so suddenly blind.” One poem in this collection begins, “Yes, I have a thousand tongues, / And nine and ninety-nine lie.” The speaker of another poem in this collection is disturbed when he “saw a man pursuing the horizon.” Its second poem depicts “three little birds in a row” who mock a man walking nearby because “He thinks he can sing.” This collection’s first poem describes the “clang and clang of spear and shield” made by figures who “came from the sea,” and its third describes “a creature, naked, bestial” squatting “in the desert” and eating his own heart. For 10 points, name this 1895 poetry collection by Stephen Crane.

ANSWER: The BLACK RIDERS and Other Lines

10. A recent experiment by Kidd, Palmeri, and Aslin at the University of Rochester modified an experiment first conducted at this institution by making the environment experienced by the subjects either “reliable” or “unreliable.” It’s not Carnegie Mellon, but this university is currently home to the Parallel Distributed Processing research group of Jay McClelland, who also heads its Center for Mind, Brain, and Computation. Another psychologist from this university developed a theory of triadic reciprocal causation as a framework for concepts like vicarious reinforcement and a phenomenon described in a study on “the exercise of control,” self-efficacy; that psychologist also wrote *Social Foundations of Thought and Action*. Its nursery school provided subjects for an experiment conducted by Walter Mischel in which the capacity to forego consumption of a marshmallow was correlated with adult success, as well as an experiment that studied imitative aggression towards an inflatable doll. For 10 points, name this American university, home to Albert Bandura’s “Bobo doll” experiment, as well as one in which the basement of its psychology building was converted to a prison by Philip Zimbardo.

ANSWER: Leland STANFORD Junior University

11. The protagonist of this novel recalls winning a bet to hold onto a snake for ten seconds, counted in German, despite it biting him after four. Multiple characters in this novel repeat the mantra “Arrange your face.” This novel’s protagonist fashions angel wings out of peacock feathers as a costume for his daughter to wear at a Christmas pageant. Because one character in this novel introduces himself by saying “Call me Risley,” everyone else jokingly refers to him by the nickname “Call-Me.” This novel begins with a gruesome scene where the main character lies barely conscious on the ground as his blacksmith father Walter repeatedly kicks his head; as a result, its protagonist boards a ship for continental Europe. Stephen Gardiner antagonizes the protagonist of this novel, who rises from the right-hand man of Cardinal Wolsey to a position in which he negotiates the marriages of Anne Boleyn and Jane Seymour, whose family’s residence titles the novel. The author of this Booker-winning, 2009 novel won a second Booker in 2012 for its sequel *Bringing Up the Bodies*. For 10 points, name this novel about Thomas Cromwell, the first in a series by Hilary Mantel.

ANSWER: WOLF HALL

12. On the left side of this painting a man wearing an upside-down funnel, symbolizing that no wisdom from above can flow into him, skates over ice toward a bridge where three people huddle underneath holding an envelope in its beak inscribed with the word “Bosco” or “fat”. In the central panel of this painting a bearded man in a black top-hat was taken from the artist’s earlier *The Conjuror*. In its left panel, the unconscious main figure is dragged across a bridge by two monks and a figure painted as a self-portrait of the artist. A burning village in the left background of this painting references the title person’s role as a protector against ergotism. A naked woman poses provocatively from a makeshift river-tent made from draping a red cloth over a tree stump as the title figure looks away in this work’s left panel, titled for the “contemplation” of the title saint. It is often referred to as the Lisbon altarpiece. For 10 points, name this 1501 triptych that shows the title saint kneeling in a ruined tomb besieged by demons, painted by Hieronymus Bosch.

ANSWER: The Triptych of the TEMPTATION OF ST. ANTHONY [accept LISBON ALTARPIECE before mentioned]

13. One of these institutions at Oxford was dubbed “the Black” when a supposed curse uttered by Rowland Jencks caused hundreds of onlookers to be stricken with typhus and die in 1577. These entities were commissioned by the provision of Oyer and Terminer, and their namesake acts included *darrein presentment*, *mort d’ancestor*, and *novel disseisin*. They had a better reputation than Quarter Sessions, though both were abolished together in 1971. An edict named for these institutions was proclaimed in 1166 by Henry II from Clarendon. An infamous one was held partly at Taunton Castle, and sealed the fate of

the elderly widow Alice Lisle, as well as Lord Russell and Algernon Sidney, in the wake of the Rye House Plot. That example was presided over by George Jeffreys, the “Hanging Judge.” For 10 points, name these periodic criminal courts in English law, such as the ones held after the Monmouth Rebellion, which were known as the “Bloody” ones.

ANSWER: ASSIZES [or Courts of ASSIZE, prompt on general answers like “English Criminal Trials/Courts,” “courts,” “English courts,” “British courts,” “Turnabout Britain,” etc.]

14. Studies by Parker, Bertazonni, and Spanos show that, apart from the BLM gene, genes expressing these proteins are abnormally expressed in Bloom’s syndrome. The C-terminal region of Artemis interacts with one of these proteins in V(D)J recombination. The amount of these enzymes that catalyzes the exchange of 1 nanomole phosphorus-32 from pyrophosphate to ATP in 20 minutes at standard conditions is quantified in a measure of their activity known as the Weiss unit. Aprataxin interferes with their activity by removing AMP, which these enzymes bind to via a lysine side chain. In prokaryotes, they are NAD⁺ dependent, but they’re ATP-dependent in eukaryotes. The most common enzyme of this kind in laboratory settings is isolated from the T₄ bacteriophage. One of these enzymes forms a complex with PARP, beta-Pol, and XRCC1 in base-excision repair. The yield upon treatment with them is much lower for blunt ends than for sticky ends. The first enzyme of this kind acts upon Okazaki fragments in DNA’s lagging strand by catalyzing the formation of a phosphodiester bond. For 10 points, name these enzymes that join pieces of DNA together.

ANSWER: DNA LIGASES [accept LIG; accept specific numbers and kinds, like the aforementioned T₄ LIGASE, but do not accept “ubiquitin ligase” or “RNA ligase,” which are different things]

15. An article whose title proclaims a new interpretation of this phenomenon considers two parties dubbed “ego” and “alter,” and was expanded into *Social Theory of International Politics*; that essay is a foundational text of constructivism by Alexander Wendt. This concept is advanced by “superstitious faith... in machinery,” and distinguished from “Fenianism,” in a work that berates Nonconformists in the chapter “Our Liberal Practitioners” and contrasts “Hebraism” with “Hellenism.” A utopian “post-scarcity” variant of this phenomenon was envisioned in a book by Murray Bookchin, and its “communistic” version was advocated in the book *The Conquest of Bread* by a man who also wrote the 1910 Encyclopedia Britannica article on this concept, Peter Kropotkin. This is the first title concept in a work which uses the example of people paying to see Wilt Chamberlain play basketball to argue against egalitarian theories, such as those advanced by John Rawls in his *A Theory of Justice*. For 10 points, name this concept contrasted with “Culture” in a work by Matthew Arnold, which appears along with “State” and “Utopia,” in the title of the major work by Robert Nozick.

ANSWER: ANARCHY [accept any word forms]

16. This poet repeated the line “I want to sleep the sleep of the apples” at the beginning of one poem’s first and final stanzas. He addressed the theme of sleep in a poem outlining the “creatures of the moon” such as “the unbelievable alligator” and iguanas who “come and bite the men who do not dream”. This poet described a girl with “green flesh, her eyes green / with eyes of cold silver” waiting on a balcony in a poem with the refrain “Green, how I want you green.” One of his poems begins “In the sky there is nobody asleep,” and in another, the speaker repeats, “I will not see it,” beseeching the moon to block his view of the title object in a section called “The Spilled Blood”. This poet of “Gacela of the Dark Death” alternated between descriptive lines such as “the room was iridescent with agony” and “a boy brought the white sheet” with the obsessive refrain “at five in the afternoon” in an elegy for Ignacio Sánchez Mejías. For 10 points, name this Spanish poet who wrote *Lament for the Death of a Bullfighter* and *Gypsy Ballads*.

ANSWER: Federico GARCIA LORCA

17. In the wake of this court decision, a bill drawn up in Pennsylvania was notoriously vetoed by Governor Samuel Pennypacker. Harry Laughlin and Arthur Estabrook were called as experts in this case, which began as a test case brought by Albert Sidney Priddy, though he died before it concluded. The reach of this decision was limited 15 years later by *Skinner v. Oklahoma*, on equal protection grounds. The only Justice to dissent in this case was Pierce Butler, who did not author an opinion. It stemmed from the rape of a 17-year old girl by Clarence Garland, resulting in the birth of Vivian Dobbs; possibly to hide that rape, both Vivian and her mother were sent to the Virginia Colony for Epileptics. This case upheld the Racial Integrity Act of 1924, and the majority opinion by Oliver Wendell Holmes ends by declaring that “three generations of imbeciles are enough.” For 10 points, name this 1927 case which strengthened the eugenics movement by allowing compulsory sterilization.

ANSWER: BUCK V. BELL [or BELL V. BUCK - must provide both names, prompt on just one name]

18. An inscription outside of a religious structure in this city strangely claims that al-Ma'mun commissioned it, one hundred years before al-Ma'mun was alive. A Mandaean text, the *Ginza Rabba*, claims that this city was founded from the incestuous union of seven planets with their mother Ruha. A pilgrimage originating in this city is the focus of the Nabi Musa festival. To protect a church in this city, Umar knelt in a courtyard and prayed with its patriarch Sophronius, who opposed the Monothelites. A cave in this city was created when the ground tried to follow a man who left behind a single footprint. This city's Haram al-Sharif is home to the "farthest mosque," a reference to the surra *al-Isra'* in which the steed Buraq bears Mohammed here before the ascent to heaven in the Night Journey. For 10 points, the Al-Aqsa Mosque and the Dome of the Rock are found in, what third-holiest city in Islam, also home to the Temple Mount?

ANSWER: JERUSALEM [or AL-QUDS]

19. This mathematician's namesake criterion specifies the conditions under which a Markov chain is time-reversible. Independently of a British counterpart, this mathematician demonstrated that the n -step transition probabilities for a Markov process can be calculated from the 1-step transition probabilities. This mathematician is the alphabetically-first namesake of a method refined by the Anderson-Darling and Cramer-Von Mises methods, which uses the discrepancy between cumulative frequencies, called the "D-statistic," to determine whether two distributions are the same. Together with Yakov Sinai, this mathematician developed the concept of metric entropy, and he names the aforementioned formula for transition probabilities with Sidney Chapman. The axioms of unitarity and sigma-additivity are two of a set of probability axioms named for this man, who developed the idea of complexity as minimal description length and proposed a theorem that shows which quasiperiodic orbits survive under a small perturbation of a dynamical system. For 10 points, identify this Russian mathematician, the namesake of a statistical test with Smirnov and a theorem of dynamics with Arnold and Moser.

ANSWER: Andrei Nikolayevich KOLMOGOROV

20. This man praised a contemporary for adhering to the model of a "producer-autocrat" in his article "More About *Julius Caesar*." This man went through the painstaking process of choosing twenty sonatas out of Domenico Scarlatti's 555 to score an adaptation of Carlo Goldoni's *The Good-Humored Ladies*, the first of what Constant Lambert termed his "time-travelling" works. He expressed many of his ideas in the periodical he co-founded, *World of Art*. This man's differences with Prince Volkonsky led to the cancellation of their planned collaborative staging of *Sylvia*. This man's collaborator on the choreography of *Les Noces* was the younger sister of his lover, who broke up with him in an acrimonious dispute and was diagnosed with schizophrenia. His friends Alexandre Benois and Leon Bakst designed his costumes and sets, and he launched another collaborator's career by hiring him to compose music for *The Firebird*. For 10 points, name this collaborator with Igor Stravinsky, the founder of Ballet Russes.

ANSWER: Sergei Pavlovich DIAGHILEV

TIEBREAKER

21. This work's opening chapter argues that "it is madness to make the fate of thousands depend on the caprice of a weak fellow creature whose very station sinks him necessarily below the meanest of his subjects." This work's ninth chapter opens with the assertion that "from the respect paid to property flow... most of the evils," and draws a parallel between its subjects and "modern soldier[s]." In its eighth chapter, the author argues that excessive "respect for the opinion of the world," actually undermines morality, which should instead be determined by examining one's conduct only when God's presence is felt. The fifth chapter criticizes James Fordyce, the author of a popular series of sermons, and Jean-Jacques Rousseau for the views expressed in *Emile*. This work's title reprises an earlier letter to Edmund Burke in response to Burke's *Reflections on the Revolution in France*. This work argues, among other things, that if its title subjects were granted more political rights, they would be better citizens, wives, and daughters. For 10 points, identify this work of political philosophy which advocates gender equality, written by Mary Wollstonecraft.

ANSWER: A VINDICATION OF THE RIGHTS OF WOMAN: With Strictures on Political and Moral Subjects

BONUSES

1. This theory was mathematically formalized by Kiyotaki and Moore in their paper “Credit Cycles,” and it posits that “distress selling” drives a fall in prices which results in a loss of confidence leading to hoarding in a vicious feedback loop. For 10 points each:

[10] Identify this theory first formulated by Irving Fisher to explain the 1929 Crash. Long ignored in favor of classical theories, it’s been revived by economists like Steve Keen to explain the Great Recession.

ANSWER: DEBT DEFLATION [do not accept or prompt on “deflation,” which is completely different]

[10] Fisher’s debt deflation competed with this economist’s theory that the Great Depression was a problem of flatlining consumption, as articulated in his *General Theory of Employment, Interest, and Money*.

ANSWER: John Maynard KEYNES

[10] Debt deflation’s revival owes much to this American economist, who described the destructive influence of hedge, speculative, and Ponzi borrowers in his Financial Instability Hypothesis. His namesake “moment” denotes a sudden drop in asset prices.

ANSWER: Hyman MINSKY

2. The crime that this man was put on trial for may have been committed by the black factory worker Jim Conley. For 10 points each:

[10] Name this New York-born Jew, who was convicted of killing 13-year old Mary Phagan, an employee of the National Pencil Company in Atlanta, and was then lynched by a mob in 1915 after his sentence was commuted by governor John Slaton.

ANSWER: Leo Max FRANK

[10] This editor of *The Jeffersonian* covered the bejesus out of Frank’s trial, because he wanted to use it to revive the Ku Klux Klan. This Georgia politician was the Populist Party nominee for President in both 1904 and 1908, after which the party disbanded.

ANSWER: Thomas Edward “Tom” WATSON

[10] A cooler thing to know about Tom Watson was that he required this federal agency to provide RFD, or “Rural Free Delivery.” A predecessor to this current federal agency was the Pony Express.

ANSWER: POST OFFICE [or U.S. MAIL; or United States POSTAL SERVICE; or USPS]

3. This poet wrote “Out of my great woe / I make little songs,” and began another poem: “I cannot explain the sadness / That’s fallen on my breast. / An old, old, fable haunts me.” For 10 points each:

[10] Name this poet whose drama *Almansor* provides the famous quote “Where they burn books they will also burn people.”

ANSWER: (Christian Johann) Heinrich HEINE

[10] In his lyric poem “Die Lorelei,” Heine fixates on this recurring color shared by the siren’s jewelry, hair, and comb. A poem by a different author claims that “nothing” this color “can stay”.

ANSWER: GOLD [or GOLDEN; or GOLDENES]

[10] Heine ended his *Book of Songs* with this group of poems consisting of two “cycles” that mocks the antiquated Greek gods in “The Song of the Oceanides” and ends with the poem “In Port”.

ANSWER: The NORTH SEA [or Die NORDSEE]

4. The SHALSTAB and SMORPH models are two computational methods for calculating the dynamics of this process, one of whose forms, slump, occurs when an entire block of material slides along a concave fracture. For 10 points each:

[10] Identify this general term for the movement of soil under the influence of gravity, which is divided into flow, slide, and fall variants.

ANSWER: MASS WASTING [accept MASS MOVEMENT]

[10] This type of mass wasting occurs frequently in permafrost soils because permafrost is impermeable to water; thus, soil becomes waterlogged and loosened, and flows down slopes.

ANSWER: SOLIFLUCTION

[10] Flow mass wasting is frequently generated by these events, such as a 1985 one involving Nevado del Ruiz and a 1980 one involving Mount St. Helens.

ANSWER: VOLCANIC ERUPTIONS [accept anything indicating volcanoes erupting, prompt on partial answers]

5. Answer the following about syncretic misadventures in Asia, for 10 points each.

[10] This term refers to a controversy in the 17th and 18th centuries, mostly between Jesuits and Dominicans, over whether ancestor worship should be allowed in a certain country's practice of Christianity. A bull issued by Pope Clement XI in 1715 answered "no."

ANSWER: the CHINESE RITES controversy [don't accept other answers, this is a fairly discrete term]

[10] The intermixing of Catholicism and other Western ideas in this nation is called Seohak; opposition to that mixing led to the Donghak peasant rebellion here, which promoted "Eastern Learning." John Paul II canonized 100 of its martyrs en masse in 1984, including Andrew Kim Taegon.

ANSWER: South KOREA

[10] A heavily syncretic, animistic form of Christianity was championed by the Htoo twins, who led the God's Army of this ethnic group during the 1990s. This ethnic group has been persecuted heavily since the 8888 Uprising.

ANSWER: KAREN [or KARAING; or YANG; or KAYIN]

6. This filmmaker always cast Torben Meyer as a character named Schultz as part of his "stock company" of recurring character actors that included William Demarest and Franklin Pangborn. For 10 points each:

[10] Name this American director behind *The Palm Beach Story* and *The Lady Eve*, who famously sold his script for *The Great McGinty* for \$1 in return for the right to direct it.

ANSWER: Preston STURGES

[10] Sturges excelled in this genre of film, popularized during the Great Depression, which usually features battles of the sexes and aggressive female characters. The definitive example of this genre is probably *It Happened One Night*.

ANSWER: SCREWBALL comedy [prompt on "comedy"]

[10] Sturges also created this 1941 film, about the title director, who decides to tour the country as a hobo to find inspiration for a socially conscious film titled *O Brother, Where Art Thou?*

ANSWER: SULLIVAN'S TRAVELS

7. A recent book on this time period and its consequences, by Robert Bellah and Hans Joas, argues that it led to a new self-reflective attitude across Eurasia. For 10 points each:

[10] Give this term which was coined by a different man to describe the time period from 800 BC to 200 BCE, in which modes of revolutionary thinking simultaneously arose in Ancient Greece, China, India, and the Middle East, as exemplified by the writings of Plato and Confucius.

ANSWER: AXIAL Age [or the AXIS Age]

[10] The term Axial Age was coined by this German thinker whose works include a textbook on General Psychopathology and *The Origin and Goal of History*.

ANSWER: Karl Theodor JASPERS

[10] Pierre Teilhard de Chardin argued that, since the Axial Age, we have all been progressing to a point named for this Greek letter of the alphabet. This is the supreme point of complexity, and the end of evolution, where there remains no separation between God and man.

ANSWER: OMEGA point

8. An unnamed character in this play keeps buying pigs, but they all die when he brings them home. For 10 points each:

[10] Name this 1953 play by Arthur Miller, in which Abigail Williams, an allegorical equivalent to Joseph McCarthy, seizes power by accusing the residents of Salem of witchcraft.

ANSWER: The CRUCIBLE

[10] In a memorable scene from the play, the farmer John Proctor is visited by an inquisition led by Reverend Hale, and is told to recite the Ten Commandments. He does so, but appropriately forgets this one.

ANSWER: thou shalt not commit ADULTERY [or the ADULTERY commandment; accept commandment 6 or commandment 7]

[10] At the end of Act IV, Proctor signs a confession admitting that he is a witch, but in response to an additional condition imposed by Judge Danforth, he passionately pleads "I have given you my soul; leave me" this thing.

ANSWER: my NAME!

9. Titus Aebutius Elva was "Master of the Horse" during this battle, which saw the dictator Postumius defeat a force partly

commanded by Octavius Mamilus, the dictator of Tusculum, who was slain here. For 10 points each:

[10] Name this early victory for the Roman Republic over the Latin League, which was fought around 496 BC at a volcanic body of water between Rome and Tusculum.

ANSWER: Battle of LAKE REGILLUS

[10] The other opposing commander at Lake Regillus was the legendary 7th and final king of Rome, the “proud” king by this name, who had succeeded Servius Tullius.

ANSWER: TARQUIN [or TARQUINIUS; or Lucius TARQUINIUS Superbus]

[10] It’s possible that Horatius Cocles may not have been at Lake Regillus because he took a spear to the butt in a previous battle. Cocles was remembered for defending this bridge against the king of Clusium, Lars Porsena.

ANSWER: Pons SUBLICIUS [or the SUBLICIAN Bridge or SUBLICIA]

10. Bell’s theorem implies that hidden variable theories would have to violate this principle to reproduce all the observations and predictions of quantum mechanics. For 10 points each:

[10] Identify this property for a system which amounts to that fact that there can be no correlations between two spacetime events in a spacelike interval. It is weaker than causality.

ANSWER: LOCALITY

[10] This theorem, a corollary to Bell’s theorem, states that there’s no function that assigns 1, 0, and -1 to any triplet of three mutually orthogonal vectors on the surface of a sphere.

ANSWER: KOCHEN-SPECKER theorem or paradox

[10] A pillar of quantum mechanics that hidden variable theories should reproduce is this rule, which states that the probability a measurement on a state will result in a given eigenstate is the square of the inner product of the state and the eigenstate.

ANSWER: BORN rule

11. This church contains a renowned panel depicting an emperor holding a gold communion plate flanked by the Scholae Palatinae and Bishop Maximian. For 10 points each:

[10] Name this Byzantine church with an octagonal floor plan, famous for panels on the left and right walls of its apse depicting Empress Theodora and Justinian I.

ANSWER: Basilica of SAN VITALE

[10] San Vitale’s portraits of Justinian and Theodora are works in this art-form, popular in Byzantine art, which uses small component pieces called “tesserae.”

ANSWER: MOSAIC

[10] The Basilica of San Vitale is in this Northern Italian city, famous for its Byzantine mosaics including the Lunette of the Good Shepherd at the Mausoleum of Galla Placidia. This city also contains Dante’s tomb and was once the site of the lost palace of Theodoric the Great.

ANSWER: RAVENNA

12. Name these terms from Aristotle’s *Poetics*, for 10 points each.

[10] Aristotle does not actually define this term in the *Poetics* but uses it to describe tragedy’s effect on the audience of purging certain emotions especially fear and terror.

ANSWER: CATHARSIS

[10] Aristotle listed this term as the first of tragedy’s six necessary elements. It’s often translated as “plot,” but this term technically refers to the total structure of incidents in a work, and not to the incidents themselves.

ANSWER: MYTHOS [or MUTHOS]

[10] Aristotle defined this term as the “change from ignorance to knowledge.” It refers to the moment of discovery when a character has a revelation about their true nature.

ANSWER: ANAGNORISIS

13. Answer the following about Francois Mitterrand, for 10 points each.

[10] Mitterrand became President of France by succeeding this man, who had balanced France’s budget as finance minister under De Gaulle, and whose seven-year presidential term was marked by an effort to strengthen the European Economic Community.

ANSWER: Valéry (Marie René Georges) GISCARD D’ESTAING [prompt on partial last name]

[10] Mitterrand was in office when this first ship of the Greenpeace navy was sunk by French agents in New Zealand, resulting in the death of Dutch photographer Fernando Pereira.

ANSWER: RAINBOW WARRIOR I

[10] In speeches before the UN, Mitterrand strongly supported intervening to confront this dictator of Somalia who had been ruling since 1969 as the leader of the Supreme Revolutionary Council, but fled Mogadishu in 1991.

ANSWER: Mohamed Siad BARRE [or Maxamed SIYAAD Barre; or Comrade SIAD]

14. The signal to noise ratio is improved in the total internal reflection type of this device, which is commonly used on samples stained with Hoescht and DAPI. For 10 points each:

[10] Name this device which, in conjunction with CCD cameras, is used to capture all those really pretty images of cells and nuclei that adorn countless issues of *Nature* and *Cell*. It magnifies images and illuminates dyes with light of a specific wavelength, causing them to emit light of longer wavelengths.

ANSWER: epiFLUORESCENT MICROSCOPE [prompt on partial answer, accept epiFLUORESCENT MICROSCOPY or epiFLUORESCENCE MICROSCOPE; reverse prompt on “FLIP” or “Fluorescence loss in photobleaching”]

[10] A huge problem in fluorescent microscopy is the presence of autofluorescent molecules that emit their own light, such as this abundant structural protein composed of a triple helix packed with glycine, proline, and hydroxyproline.

ANSWER: COLLAGEN

[10] A common choice of label in fluorescent techniques in general are these small molecules, portions of antigens that can only elicit immune responses when they are bound to larger carrier molecules. Oxidized urushiol, the toxin found in poison ivy, is a great example of these antigenic components.

ANSWER: HAPTEN

15. A single whisker protruded from this being’s body, forcing his killer to hand over Andvarinaut to hide it. For 10 points each:

[10] Name this son of King Hreidmar, a dwarf who could shapeshift into a similarly-named animal. As punishment for killing him, Loki had to satisfy the terms of a bizarre weregild by filling this dwarf’s body with red and yellow gold.

ANSWER: OTR

[10] Andvarinaut was a cursed, gold-producing object of this kind that passed from Loki to Hreidmar to Fafnir to Sigurd.

ANSWER: a RING

[10] The last owner of the ring was this daughter of Grimhild, who harbored unrequited love for Sigurd until he ingested a magic potion that made him forget all about Brynhild. She married Atli after Sigurd’s death.

ANSWER: GUDRUN

16. This work distinguishes between local and global counterexamples, and argues that we should accept Delta’s strategy of “monsterbarring.” For 10 points each:

[10] Identify this posthumous philosophical work that attacks formalism in mathematics, framed as a dialogue between students, denoted by Greek letters, and a teacher, who are trying to derive Euler’s characteristic formula for polyhedra.

ANSWER: PROOFS AND REFUTATIONS: The Logic of Mathematical Discovery

[10] This mathematician and philosopher wrote *Proofs and Refutations*, and suggested a “research programme” that combined Popper’s falsificationism and Kuhn’s normal science. His papers are collected in two volumes, *The Methodology of Scientific Research Programmes* and *Mathematics, Science, and Epistemology*.

ANSWER: Imre LAKATOS

[10] Spiro Latsis, a colleague of Lakatos, attacked this man’s ideas in the 1972 paper “Situational Determinism in Economics.” He argued that the realism of assumptions is irrelevant to the truth of economic theory in “The Methodology of Positive Economics,” but you might know him better for writing *Capitalism and Freedom* and *A Monetary History of the United States*.

ANSWER: Milton FRIEDMAN

17. Name these factors that explain the differences in acidity between similar compounds, for 10 points each.

[10] In dilute aqueous solutions, nitric and sulfuric acids are equally strong, because they both produce H_3O^+ , according to this effect, in which the acidity and basicity of compounds in a solvent is limited by the solvent’s conjugate.

ANSWER: LEVELING effect [I can dig word forms like LEVEL]

[10] In binary acids, acidity increases going down a group, opposing this other property, a trend that makes H_2S a better acid

than H₂O. This property is a measure of the ability of an atom in a molecule to pull electrons toward itself.

ANSWER: ELECTRONEGATIVITY [word forms like ELECTRONEGATIVE are fine]

[10] Confusingly, though, higher electronegativity boosts acidity through one of these effects, exemplified by the fluorines in PF₃ drawing electron density away from the phosphorus atom, making it a weaker base than PH₃.

ANSWER: INDUCTIVE effects [take INDUCTION and word forms]

18. The speaker of this poem charges the addressee with feeding “thy light’s flame with self-substantial fuel, making a famine where abundance lies.” For 10 points each:

[10] Name, or give the first line of, this poem which ends with the couplet “Pity the world, or else this glutton be, To eat the world’s due, by the grave and thee.” Like the sixteen poems after it, this poem is all about procreation.

ANSWER: “FROM FAIREST CREATURES WE DESIRE INCREASE” [or Shakespeare’s SONNET 1]

[10] Give the first line of the first sonnet after the procreation sonnets; sonnet 18 if you’re keeping track. This first line is immediately followed by the compliment “thou art more lovely and more temperate.”

ANSWER: “SHALL I COMPARE THEE TO A SUMMER’S DAY”

[10] The speaker of sonnet 57 assumes this status, and speaks of “the hours and times of your desire.” He later says that like a sad person of this kind, he “stay[s] and think[s] of nought” during the “world-without-end hour.”

ANSWER: a SLAVE [or a SERVANT, I guess, since those are the two things that he refers to himself by; accept “Being your SLAVE, what should I do but tend”; do not accept any synonyms]

19. The first kingdom in this nation had a ruler called the “Cucumber King,” because he killed the previous king for stealing from his garden. For 10 points each:

[10] Name this nation which was home to the Kingdom of Pagan. Its more modern politicians include Aung San Suu Kyi.

ANSWER: BURMA or Republic of the Union of MYANMAR

[10] The second, or “restored” dynasty of this name, was the first to re-unify Burma after the fall of the Pagan kingdom and had its capital at Ava around 1606. The first dynasty by this name arose in Burma under Mingyinyo near the end of the Ava kingdom and conquered the Mohnyin Shan peoples.

ANSWER: TAUNGGOO Dynasty [or TOUNGGOO Dynasty]

[10] The great Pagan king Anawrahta conquered the Thaton state and absorbed this kingdom of lower Burma, which later had a base at the city of Pegu. This culture was led by king Razadarit, who fought forty years of wars on its behalf with the Ava kingdom to the north.

ANSWER: MON kingdom [or MAN]

20. One piece in this collection was arranged for violin and piano and used as an encore piece by Jascha Heifetz under the title “Sweet Remembrance.” For 10 points each:

[10] Name this collection for solo piano containing three “Venetian Boat Songs” amidst its eight books of six lieder each.

ANSWER: SONGS WITHOUT WORDS [or LIEDER OHNE WORTE]

[10] This German composer of the *Songs Without Words* conducted a famous performance of the *St. Matthew Passion* in Berlin, and created incidental music for *A Midsummer Night’s Dream*.

ANSWER: Felix MENDELSSOHN [or Jakob Ludwig Felix MENDELSSOHN Bartholdy from showoffs]

[10] During his productive teenage years, Mendelssohn composed this misleadingly-numbered A minor chamber work, which begins with a three-note rising motif based on the words “Ist es wahr?”

ANSWER: STRING QUARTET NO. 2 in A minor [or STRING QUARTET, OP. 13; accept things like his SECOND STRING QUARTET; prompt on “string quartet”]

EXTRA BONUS

21. This city was constructed by two architects, Liu Bingzhong and the fantastically-named Yeheidie'ering, after Kublai Khan fell in love with the gardens at Jade Flower Island in Taiye Lake. For 10 points each:

[10] Name this city located in the center of modern Beijing, which Kublai named as the capital of the Yuan dynasty in 1271.

ANSWER: DADU [or KHANBALIQ; or TA-TU; or KANBALU; or CAMBALU; or DAIDU; or YUAN DADU; or CAMBALUC]

[10] In the process, Kublai captured this capital of the Southern Song Dynasty, where the incompetent Song rulers had fled after leaving Kaifeng. This city was declared the “sixth ancient capital” in the 1930s.

ANSWER: HANGZHOU [or HANGCHOW; or LIN'AN]

[10] Hangzhou was the southern terminus of this waterway, which was extended north by Kublai. Its construction started way back in the Sui Dynasty, under its great engineer Yuwen Kai.

ANSWER: the GRAND CANAL [or Beijing-Hangzhou GRAND CANAL]