

**ACF Nationals 2016**  
**Editors' Packet 5**  
**Tossups**

1. In an essay on this painting, Helene Weinberg argues that its artist used a book of engravings by Charles Le Brun to populate the facial expressions in it. Though it is no longer there, this painting was donated to London's Christ Hospital, where its donor intended it to serve as a "most useful lesson to the Youth." Most scholars believe that two figures in this painting are based on Raphael's *The Miraculous Draught of Fishes*. A pentimento covered with an ugly splotch of gray paint can be seen in the copies of this painting at the Boston Museum of Fine Arts and the Detroit Institute of Arts; those copies may have been made by Henry Pelham, the artist's half-brother. A Borghese gladiator was used as the model for this painting's first title character, who is shown alongside a figure with anatomically inaccurate lips. For 10 points, name this painting depicting a rescue in Havana Harbor, created by John Singleton Copley.

ANSWER: **Watson and the Shark**

2. When deriving the symplectic condition for a canonical transformation, *this operation* applied to a column matrix  $M$ , containing  $n$  generalized coordinates and  $n$  generalized momenta, is set equal to the product of a two  $n$ -by-two  $n$  block matrix times the partial of the Hamiltonian with respect to  $M$ . This operation is applied to the generating function in a canonical transformation. Adding this operation applied to an arbitrary function of the generalized coordinates to a Lagrangian gives another valid Lagrangian that yields the same equations of motion. This operation is applied to the generalized coordinates and momenta on the left side of Hamilton's equations. It is also applied to the derivative of the Lagrangian with respect to the generalized velocity in the Euler-Lagrange equation. Applying this operation to action gives the Lagrangian. For 10 points, name this operation often indicated by putting a single dot over a variable, which can be applied to position to give velocity.

ANSWER: **time derivative** [or partial **derivative** with respect to **time**; or big/little **d** over/by big/little **dt**; prompt on **derivative**]

3. A successful sack of this city by a Byzantine general known only by the name Ibn Qatuna, in Arabic sources, was launched by Theodora, acting as regent for her son Michael III, in 853 CE. Alamanno da Costa was reportedly released from an iron cage so that he could attack this city. St. Francis of Assisi made a visit to this city during that attack, which was written about by Jacques de Vitry. As another force was attempting to retreat at night to its base in this city, it failed to cut the ropes on a canal bridge and was crushed at the Battle of Fariskur. After capturing this city, that army marched to its defeat at the Battle of Al-Mansurah. Its leader then tried to surrender this city in return for Jerusalem, but instead he was captured and ransomed off. The sack of this city initiated the Seventh Crusade, as it was the landing spot for Louis IX. For 10 points, name this Egyptian port city on the Nile River.

ANSWER: **Damietta** [or **Dumyat**; or **Damiata**; or **Domyat**; or **Tamiata**; or **Tam Heet**]

4. A character in this story expresses shock when she sees a “red-head sailor boy” lift a wheelbarrow and hold an object that resembles a “greenish-black stone,” which turns out to be a turtle. One of this story’s main characters refuses to attend singing lessons after she is kissed by her teacher, while playing the part of Zerlina in a rehearsal of *Don Giovanni*. In this story’s twelfth and final section, its title character states “I shall never be poor. I told you I am a great artist” when asked if she will return to her homeland. This story opens with a description of two sisters who are named after Martin Luther and Philip Melanchthon, and describes the aftermath of the spirituality of the Pietist “Dean.” This story, which was published in *Anecdotes of Destiny*, is named for a refugee from France who wins 10,000 francs in a lottery. A sumptuous meal is described in, for 10 points, what short story by Isak Dinesen?

ANSWER: "**Babette’s Feast**" [or "**Babettes gæstebud**"]

5. Hannu Nurmi created a four-level hierarchy which describes the manipulation that can occur in various kinds of these systems. In a seminal analysis of these systems by Robin Farquharson, he analyzes a letter by Pliny the Younger about the consul Afranius Dexter. Peter Ordeshook and William Riker propounded the formula “ $p B \text{ minus } C \text{ plus } D$ ” in their book on the theory of “the calculus of” these systems. Anthony Downs gives his name to a paradox which holds that their costs seem to exceed the expected benefits. Duncan Black discovered the single-peakedness theorem in studying these systems, for which he developed a two-method approach. The Nanson-Baldwin rules can be applied to them, as well as a method named for Jean-Charles de Borda. For 10 points, name this kind of system which can use the Condorcet method or the “first-past-the-post” method in order to identify a winning candidate.

ANSWER: **voting** systems [or **election** systems; or obvious equivalents indicating that a winner is being chosen by **voters**]

6. For any point  $P$  on a vector lattice with the principal projection property, a theorem denoted by this term proved by Hans Freudenthal states that there exists sequences of  $p$ -simple functions that converge to any element of the ideal of  $P$ . In functional analysis, the set denoted by this term is often invoked in ergodic theory and has the property that von-Neumann’s inequality holds for rational functions for some subsets of the set. Another theorem named for this term states that a bounded operator on a Hilbert space always admits invariant subspaces and commutes with its Hermitian adjoint if and only if the operator is a multiplication operator. Cauchy proved a special case of the theorem denoted by this term for self-adjoint matrices, which involves a namesake operation that decomposes a matrix into the matrices “ $U \text{ times } \lambda \text{ times } U \text{ transpose}$ .” For 10 points, give this term for the set of eigenvalues of a finite-dimensional matrix.

ANSWER: **spectrum** [or **spectral**]

7. Claude Levi-Strauss's *The Jealous Potter* describes an Ecuadorian myth in which one of these deities was created when Kumpara spat mud on his son Etsa. The Inca threw weapons and made loud noises to chase a predator away from a deity with this role, who was also believed to have loved a fox that she accidentally squeezed to death. This is the domain of a goddess who once roused the Centzon Huitznauhtin, her four hundred brothers, in an effort to kill their mother. A god who was often depicted with the wings of a butterfly and a white shell on his back was assigned this domain after proving too cowardly to leap into flames and having a rabbit thrown in his face. The Incan goddess Mama Killa and the Aztec deities Coyolxauhqui and Tecciztecatl represented this domain, while a Greek goddess of it fell in love with Endymion. For 10 points, give this domain of Selene in Greek myth.

ANSWER: **moon** deities/god(desse)s [accept word forms like **lunar** gods]

8. A ruler of this dynasty destroyed an idol at the Nagarkot temple and gave its pieces to butchers to be used as weights. According to legend, that member of this family knelt to pray over a piece of grain dropped by a bird, so his prime minister planted it in his garden—years later, the harvest from that grain was used to build this dynasty's "Lentil Mosque." That ruler also composed poetry under the pseudonym Gul Rukh. This family overthrew the short-lived Sayyid Dynasty that had been founded by Kizir Khan. Its first ruler, Bahlul, created a succession crisis when he named his son Babrak as viceroy. This dynasty founded the modern city of Agra as an alternate capital for its second ruler, Sikandar. For 10 points, name this final ruling family of the Delhi Sultanate, which was defeated at the First Battle of Panipat after its leader Ibrahim was betrayed to the Mughals.

ANSWER: **Lodi** Dynasty [or **Lodhi**; prompt on Delhi Sultanate until it is read]

9. In a series of Letters addressed to John Norris, Mary Astell argued against this philosophy stating that there is no such thing as a "sensible congruity." A form of this philosophy advocated by Arnold Geulincx in his text *Metaphysica vera* uses the example of two clocks which stay synchronized due to the regularity of their maker's actions. In England, this idea was promoted by Thomas Taylor in his book *Two Covenants of God with Mankind*. Gottfried Leibniz rejected this stance and instead relied on "pre-established harmony," though Antoine Arnauld argued it is indistinguishable from this view. A book that introduced this idea rejected the Aristotelian notion of change and Rene Descartes's idea that bodies act upon other bodies and discusses the concept of "intelligible extensions." The idea that God "continually intervenes" and is thus the only efficient cause is, for 10 points, what stance presented in *The Search After Truth* and articulated by Nicolas Malebranche?

ANSWER: **occasionalism**

10. A poem attributed to this author states “Pull up thy heart, suppress thy brackish tears” since “The less afraid, the better thou shalt speed” and mockingly tells its subject "It passeth fickle Fortune's power and skill / to force my heart to think thee any ill." This writer translated a fragment of Boethius's *The Consolation of Philosophy* in "All human kind on earth," which asks "What crake you of your stock or forefathers old?" A short poem by this author that states "Much suspected by me, / Nothing proved can be" was etched into a window at Woodstock with a diamond. This person, who may have written “Ah Silly Pug, Wert Thou So Afraid” to a lover, is the model for both Lucifera of the Court of Pride and the virginal Belpheobe. She also inspired the title character of a poem that traces her "elfin lineage"; the court of that character inspired by this person contains Guyon, Redcrosse, and other knights. For 10 points, name this woman who served as the inspiration for Gloriana, the title character of *The Faerie Queene*.

ANSWER: **Elizabeth I** [or **Good Queen Bess** or **Elizabeth Tudor**; prompt on **Elizabeth**]

11. This artist proposed that an “acoustic space” could be created if you put “all the politicians from the world ... inside a circle” and activated “23 machine guns at the same time.” A piece of “danger music” by this artist instructs the player to “climb inside the vagina of a live female whale.” The journalist George Plimpton appeared as a host in a work by this artist in which John Cage’s “prepared cactus” was broadcast. Another work by this one-time member of Fluxus features shots from *The Wizard of Oz* and uses neon lights to depict Alaska, Hawaii, and the continental US. This artist of *Good Morning, Mr. Orwell* often collaborated with Charlotte Moorman, for whom he designed a “cello bra” whose “cups” are screens. A 1974 proposal he wrote contained an early use of the phrase "electronic super highway". The idea that televisions would link the world together drove the work of, for 10 points, what South Korean artist?

ANSWER: Nam June **Paik** [or **Baek** Namjun; or **Paek** Namjun]

12. A biography of this family entitled *The Secret Book of Honors* was written by a secretary who kept records for the Council of Thirteen. This family’s influence grew when it acquired the Maestrazgos [MY-strah-goes], the right to control the religious orders of Santiago, Calatrava, and Alcántara. The best-known member of this line employed the architect Thomas Krebs to build a settlement of 106 houses at Hood Point, which each cost one florin per year to live in, sometimes cited as history’s first residential housing project. Pope Leo X issued a bull granting the church of St. Moritz to this family, which was divided into branches “of the lily” and “of the deer” based on its two coats of arms. This rival of the Welser family claimed to have bought the election of Emperor Charles V in 1519, and its founder started as a weaver in Augsburg. For 10 points, name this family of German bankers that included Jakob the Rich.

ANSWER: **Fugger** family

13. Diphenyl-2-butene can be used as an inhibitor of one of these enzymes. The antibiotic linezolid weakly inhibits these enzymes. One of these enzymes contains an “entrance” cavity and a “substrate” cavity separated by an isoleucine “gate” residue that rotates to allow the cavities to fuse. Clorgiline and rasagiline are inhibitors of these flavin-dependent enzymes, which are also non-selectively inhibited by derivatives of hydrazine. A gene that codes for one of these enzymes has been linked to aggressive behaviors, leading to its nickname, the “warrior gene.” Patients taking inhibitors of these enzymes can experience a hypertensive crisis known as the “cheese effect,” since in absence of the inhibitor, these enzymes metabolize tyramine. Inhibitors of the “B” and “A” type of these enzymes are used in treatments of Parkinson’s disease or as antidepressants, respectively. For 10 points, name this family of enzymes that oxidizes compounds like adrenaline, serotonin, and dopamine.

ANSWER: monoamine oxidases [or MAOs, accept MAO-A or B or monoamine oxidase A or B, prompt on oxidases]

14. A synopsis of this piece that ends with a Shankara quote beginning "For the circling world is like a dream" was written by Lawrence Gilman for a 1921 New York Philharmonic performance of it. This piece’s third section requires the second violins to tune down their G strings to G flat during a passage depicting idyllic love. Throughout this piece, two tubas play a recurring motif of parallel fifths. This piece begins with the horns and cellos playing ascending E flat major triads as part of a leitmotif representing the main character. Its second section begins with chattering woodwinds representing the pettiness of carping critics, while its penultimate section, about the title character's “works of peace,” quotes a number of the composer’s earlier works, including the opera *Guntram* and *Death and Transfiguration*. For 10 points, name this tone poem whose title character is often considered to be a self-portrait of the composer, Richard Strauss.

ANSWER: *Ein Heldenleben* [or A Hero’s Life; or A Heroic Life]

15. Near the conclusion of this novel, the narrator has a dream that takes place in a room with a giant silver dollar, where his ex-wife suggests that they cryogenically preserve themselves for the future. This novel’s title character stays with an avid fan of karate movies named Nikki and is diagnosed with Guillain-Barre syndrome. This novel opens in the penthouse of the Hotel Crillon, where the narrator observes Michael Jackson’s entourage staying in the floor below them and is told to read a biography of John Maynard Keynes. Six years after the death of the title character, its narrator nearly dies after being poisoned with ciguatoxin, which inspires its narrator, Chick, to write a memoir about a professor who is based on the real-life author of *The Closing of the American Mind*. Allan Bloom inspired the title academic of, for 10 points, what final novel by Saul Bellow?

ANSWER: *Ravelstein*

16. The GutenTag algorithm analyzes the products of this process in order to infer protein structure. The “pathways in competition” model classifies mechanisms for this process as either “charge-directed” or “charge-remote.” The presence of compounds like 3-NBA or glycerol reduces the rate at which this process occurs during fast atom bombardment. In proteins, this process can produce A and X type or B and Y type products and is commonly performed using techniques like ECD and CID. This process can occur when a carbonyl abstracts a gamma-hydrogen in the McLafferty rearrangement, as well as via retro-Diels-Alder or sigma cleavage. This process occurs in between the two stages of MS/MS and occurs in “hard” but *not* “soft” ionization methods. For 10 points, name this process in mass spectrometry where the analyte is broken into pieces.

ANSWER: ion **fragmentation** in mass spectrometry [or **dissociation**; prompt on ionization until it is read; prompt on tandem mass spectrometry until “McLafferty” is read]

17. This man bizarrely claimed that his 1993 performance of Mendelssohn’s violin concerto in Winston-Salem was to show that he was “not anti-Semitic.” This man gained his early influence by recording the song “Back to Back, Belly to Belly” while performing as “The Charmer,” as well as authoring and directing popular plays such as *Orgena*, and *The Trial*. In 2010, he called on those following him to undergo an “audit” and subscribe to dianetics, despite not syncretizing his faith with scientology. This man started the newspaper *The Final Call* to spread the word of Wallace Fard. A sermon by this man delivered at the Mosque Maryam in Chicago states that God’s intention is the “total destruction of America,” which will be brought about by the Mother Plane. This leader organized and was the keynote speaker of the 1995 Million Man March. For 10 points, name this current leader of the Nation of Islam.

ANSWER: Louis **Farrakhan** Sr. [or Louis Eugene **Wolcott**; prompt on Louis X; do not accept or prompt on “Louis”]

18. A mayor of this city launched the Potato Patch Plan in response to the Panic of 1893, encouraging local churches to supply farming tools to immigrants to cultivate vacant land. Early mayors of this city included Zina Pitcher and James J. Couzens, in addition to the aforementioned Hazen Pingree. This city’s police force admitted to playing a game of throwing knives at people in a brothel, during a murder investigation called the Algiers Motel Incident. An industrialist based in this city founded the Masco Screw Company, and designed the modern water faucet; that man was Alex Manoogian. The Supreme Court case *Milliken v. Bradley* dealt with public school desegregation in this city. It was the site of the 12th Street Riots, which tarnished the reputation of its mayor Jerome Cavanagh. It was originally founded as a fort by Antoine Cadillac. For 10 points, name this city whose suburb of Royal Oak was home to Father Coughlin, and which is the headquarters of the United Auto Workers.

ANSWER: **Detroit**, Michigan

19. In one of this author's novels a father quotes the proem of *The Iliad* to one of his children before quoting the proem of *The Odyssey* to his other child to juxtapose their character traits. A short novel by this author follows a "cerebral pathologist" who explains to Soares that the soul is like a gigantic seashell from which he hopes to extract a pearl. In a novel structured as the seventh and last volume of Counselor Ayres's memoirs, this author wrote about the two children of Natividade feuding for the affections of Flora. Another of his books describes the construction of an insane asylum called "The Green House" and follows Simon Bacamarte, the title doctor. In another of his novels, Dona Gloria makes a promise to God to have her child become a priest if it survives childbirth. While at a seminary, the title character of that novel by this author befriends Escobar and fathers the child Ezekiel. This author of *Esau and Jacob* and *The Alienist* penned a novel in which Bento suspects that his wife Capitu is having an affair. For 10 points, name this author of *Dom Casmurro*.

ANSWER: Joaquim Maria **Machado** de Assis

20. A ten-foot limestone statue depicting this event, created by Albert Wein, sits in Brookgreen Gardens in South Carolina and was commissioned by Anna Hyatt Huntington. The earliest-known account of this event is the *Ephesia* by Posidippus, though a writing by Hermippus of Smyrna caused it to be expanded upon by Athenaeus in his *Deipno-sophistae*. The subject of this event, according to Athenaeus, had earlier offered to rebuild the walls of Thebes, and was born with the name Mnesarete. In the best-known account of this event, Euthias is opposed by the orator Hyperides, who claims that a certain person is the "prophetess and servant of Aphrodite." In a painting by Jean-Léon Gérôme, the subject of this event appears with her robe already torn from her body, in an attempt to garner sympathy as she stands naked in front of the Areopagus. For 10 points, name this event in which a famous Thespian courtesan was acquitted.

ANSWER: **trial of Phryne** [or "**Phryne before the Areopagus**"; or **Mnesarete** in place of "Phryne" until it is read; or obvious equivalents indicating that **Phryne** is being put on **trial**]

Tiebreaker. This man's cabinet included David Houston, who wrote a memoir of his eight years under this president, and postmaster general Albert Burleson, who enacted a policy prohibiting post offices from employing both black and white workers. Vance McCormick served as this man's campaign manager in an election that saw the brief candidacy of Victor Murdock. During his presidency, the cook Albert Gitchell was patient zero of a flu epidemic that broke out at Fort Riley, Kansas. In a well-covered incident, he ordered William Monroe Trotter to leave the White House after a verbal dispute. A group of protesters during his presidency was placed in Occoquan Prison and tortured by W .H. Whitaker during the so-called "Night of Terror;" That group called themselves the Silent Sentinels, and were led by Alice Paul and Lucy Burns. This president signed the Underwood-Simmons Tariff into law. For 10 points, name this president who headed Princeton University and gave the Fourteen Points speech.

ANSWER: [Thomas] Woodrow **Wilson**

**ACF Nationals 2016**  
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**Bonuses**

1. One of this man's poems notes "Rommel is dead. / His army has joined the quicksand legions / of history where the battle is always / a metal echo saluting a rusty shadow. / His tanks are gone. / How's your ass?" For 10 points each:

[10] Name this author of "Rommel Drives on Deep into Egypt". The possibly-post-apocalyptic commune of iDEATH serves as the setting for his novel *In Watermelon Sugar*.

ANSWER: Richard **Brautigan** [or Richard Gary **Brautigan**]

[10] Brautigan wishes for a "cybernetic ecology, / where we are free of our labors and joined back to nature" in a poem whose title suggests that humanity is "all watched over" by these specific things.

ANSWER: **machines of loving grace** [prompt on partial answer; accept "All Watched Over by **Machines of Loving Grace**"]

[10] Brautigan is from this state, and set *A Confederate General from Big Sur* in the Embarcadero of one of its largest cities. Several John Steinbeck novels are set in its Salinas Valley.

ANSWER: **California**

2. Together with his wife Lizzie Vought, this man edited a newsletter called *The Iconoclast* which attacked organized religion. For 10 points each:

[10] Name this first president of the American Sociological Association, who in 1883 introduced the principle of "social telesis" in his 1200-page textbook entitled *Dynamic Sociology*.

ANSWER: Lester [Frank] **Ward**

[10] Lester Ward frequently railed against this four-word phrase that had been coined by Herbert Spencer. It was co-opted by Darwin to describe how natural selection works, at the suggestion of Alfred Wallace.

ANSWER: **survival of the fittest**

[10] This Scotsman and biologist, who wrote the *The Evolution of Sex* with J. Arthur Thomson, accompanied Lester Ward on a lecture tour. As a city planner, he created the design for Tel Aviv in 1925 and coined the term "conurbation."

ANSWER: Sir Patrick **Geddes**

3. Answer the following about the globalization of Japan's textile industry, for 10 points each.

[10] The process began after this commodore was sent by Millard Fillmore to open up Japanese ports in 1853, leading to the Convention of Kanagawa.

ANSWER: Matthew [Calbraith] **Perry**

[10] Paul Brunat, an employee at a French trading firm in Yokohama, built this government-run silk mill in 1872 at a namesake city northwest of Tokyo. Wada Ei wrote a diary about her time at this silk mill, which is now a UNESCO world heritage site.

ANSWER: **Tomioka** silk mill

[10] This period of Japanese history, which started in 1912, was the golden age of Japanese silk-reeling. Its namesake emperor, known personally as Yoshihito, relied largely on carrier pigeons to keep himself aware of happenings in his country.

ANSWER: **Taisho** Period [or **Taisho** Era]



4. The two Hirabayashi vases shown in the painting depicting these people currently flank the painting itself in the Museum of Fine Arts in Boston. For 10 points each:

[10] Name these subjects of a portrait in which two of them stand in a darkened hallway, while the other two sit and stand in the lighter foreground.

ANSWER: the **daughters** of Edward Darley **Boit** [or **Florie, Jane, Isa and Julia** Boit; or Edward Darley **Boit's female children**; prompt on family of Edward Darley **Boit** or partial answers]

[10] *The Daughters of Edward Darley Boit* was painted by this American artist of a portrait of Theodore Roosevelt and *Madame X*.

ANSWER: John Singer **Sargent**

[10] Another Sargent portrait depicts this socialite, the ex-wife of Robert Gould Shaw II. In the portrait, this woman is half-turned, wears a white dress, and stands with her hands behind her back holding onto a cream-colored waist sash.

ANSWER: Nancy **Astor** [or Nancy Witcher Langhorne **Astor**; or Viscountess **Astor**]

5. For a generalized interaction  $a$  plus  $b$  yields  $c$  plus  $d$ , via a virtual particle  $X$ , a sum over two time-ordered Feynman diagrams is used to compute this quantity as the product of two coupling constants for  $a$  and  $b$  times the propagator for  $X$ . For 10 points each:

[10] Name this quantity, typically symbolized with a script  $M$ , which encodes all of the fundamental physics of a particle interaction in a Lorentz-invariant fashion.

ANSWER: **matrix elements**

[10] Dividing the Lorentz-invariant matrix element by the normalization factor for Lorentz-invariant phase space gives the transition matrix element used in this statement, which states the transition rate of a particle interaction equals two pi times the square of the matrix element times the density of states.

ANSWER: **Fermi's golden rule** [prompt on partial answers]

[10] Fermi's golden rule is derived using the time-dependent version of this formalism, in which solutions to an unknown problem are approximated by considering the Hamiltonian for a similar solved problem and adding an extra term which represents a disturbance.

ANSWER: **perturbation** theory

6. Before his August 2015 death, this man claimed that his wife Merrill had an affair with JFK. For 10 points each:

[10] Name this philosopher who developed game semantics, or a semantics of perception in such works as *Knowledge and Belief*. This Finnish philosopher used modal logic to model objects in *The Intensions of Intensionalities*.

ANSWER: Jaakko **Hintikka** [or Kaarlo Jaakko Juhani **Hintikka**]

[10] Hintikka's work on semantics is the first type of semantics that describes these things.

Modal realism is the belief that all of these things are actually real.

ANSWER: **possible worlds** [prompt on worlds]

[10] Hintikka's claims about transworld identification across all worlds led to heated debates with this philosopher, who claimed that rigid designators referred to the same object across all worlds in *Naming and Necessity*.

ANSWER: Saul [Allen] **Kripke**

7. A title character of this novel summons a ghostly fleet to terrorize France during the Napoleonic Wars. For 10 points each:

[10] Name this novel set in Historic Britain whose title characters trace their magical powers back to the mythic John Uskglass, the Raven King. Its sequel will focus on the minor characters Vinculus and Childermass.

ANSWER: *Jonathan Strange and Mr. Norrell*

[10] In the novel, Jonathan Strange complains that this real-life author was always in the presence of “another poet called Shelley, Mrs. Shelley” and a third girl. This poet wrote “She Walks in Beauty.”

ANSWER: Lord Byron [or George Gordon Byron; or George Noel]

[10] This author’s novel *The Prestige*, also about magicians in England, won the James Tait Black Memorial Prize. His other books include *Inverted World*, in which residents of a massive city on a train must continuously lay new railroad tracks to move it from a gravitational anomaly that continuously pursues it.

ANSWER: Christopher Priest

8. This man was sentenced to death by hanging at Mokotow Prison, along with Franz Konrad. For 10 points each:

[10] Name this SS general who suppressed the Warsaw Ghetto Uprising, and wrote a namesake book-length report about that operation with the long title “The Jewish Quarter of Warsaw is No More!,” complete with photographs.

ANSWER: Jurgen Stroop [or Josef Stroop]

[10] Stroop also served as the police head in this country, where Metaxas was installed in 1936 as leader of the 4th of August regime. Later, this country was run by the military government of Georgios Papadopoulos.

ANSWER: Greece [or the Hellenic Republic; or Hellas]

[10] Stroop was sent on a mission to threaten this Bishop of Munster with confiscation of his property if he didn’t subscribe to Alfred Rosenberg’s ideology. This author of “The Plague of Laicism and Its Manifestations” preached against the T4 euthanasia program and the lawless Gestapo.

ANSWER: Clemens August Graf von Galen [either underlined answer is acceptable]

9. Supposedly, the Paris Gun, used by the French against the Germans during World War I, had to be calibrated to accommodate for this effect since it drastically affected the projectile’s trajectory. For 10 points each:

[10] Name this fictitious force, which affects objects in a rotating reference frame.

ANSWER: Coriolis Effect

[10] In some fluid dynamics formalisms, this approximation is used to treat the Coriolis parameter as constant, instead of having it be dependent on latitude. It’s used to analyze cyclones.

ANSWER: f-plane approximation

[10] The f-plane approximation is useful because it allows for formalisms to neglect the formation of these structures. Henry Stommel explained why currents are stronger on the western side of these structures in a process called “western intensification.”

ANSWER: gyres

10. Answer the following about oracles in Greek in mythology, for 10 points each.

[10] After Poseidon sent a sea monster to terrorize his land, this Ethiopian king consulted the oracle at Ammon, who determined that sacrificing his daughter would be the best way to appease it.

ANSWER: **Cepheus**

[10] The very first Greek oracle to Zeus was established at this site, a city of Epirus. Oracular sacred wood from this site was later used to build the Argo.

ANSWER: **Dodona**

[10] The most important oracle in ancient Greek life, the *Pythia*, was located at the temple of Apollo in this place. The presence of an *omphalos* stone here led it to be considered the “navel of the world.”

ANSWER: **Delphi** [or the **Delphic** Oracle]

11. Answer the following about what happened after the Battle of the Alamo, for 10 points each.

[10] This two-word term is used to describe the two months in early 1836 after the fall of the Alamo, when native Texans fled from their homes, hastily abandoning settlements like Washington-on-the-Brazos in fear of Santa Anna’s army.

ANSWER: the **Runaway Scrape**

[10] The Runaway Scrape lasted until this April 1836 battle, where Sam Houston destroyed Santa Anna in a matter of minutes.

ANSWER: Battle of **San Jacinto**

[10] After San Jacinto, the Texas Republic forced the captive Santa Anna to sign two treaties named for this city, which had become the temporary capital of the Republic under David Burnet. These treaties set the southern border of Texas with Mexico.

ANSWER: **Velasco** [or Treaties of **Velasco**]

12. Stokowski’s version of this accomplishment features an organ in the final movement, and was completed in 1939. For 10 points each:

[10] Name this task that was completed in 1922 by another composer, who used solemn brass chords to represent catacombs and a solo tuba to depict a slowly moving oxcart.

ANSWER: **orchestrating Pictures at an Exhibition** [or **orchestrating Pictures from an Exhibition**; or word forms of “orchestrating”, such as **orchestration**]

[10] This French composer orchestrated *Pictures at an Exhibition* and composed *Pavane For a Dead Princess* and *Bolero*.

ANSWER: Maurice **Ravel**

[10] Ravel used one of these instruments to depict the poor Jew Schmuyle in the movement “Samuel Goldenberg and Schmuyle.” In his orchestration, one of them plays the melody of the opening “Promenade.”

ANSWER: muted **trumpet**

13. Lieutenant James McAuley and Harold Stuart imitated Max Harris and other “modernists” by adopting this persona and sending 16 poems to the editor of the magazine *Angry Penguins*. For 10 points each:

[10] Name this fictional poet created in 1943 to illustrate the flaws in “surrealist” methods in creating poetry.

ANSWER: Ern **Malley** [or Ernest Lalor **Malley**]

[10] The Ern Malley affair was satirized in this 2003 novel narrated by Sarah Wode-Douglass, in which Christopher Chubb creates the persona of "Bob McCorkle", who may or may not have become a real person.

ANSWER: **My Life as a Fake**

[10] *My Life as a Fake* was written by this Australian author of *Oscar and Lucinda* and *Illywhacker*.

ANSWER: Peter **Carey** [or Peter Philip **Carey**]

14. Answer the following about species that are morphologically similar, for 10 points each:

[10] In this process, one species adopts the morphological characteristics of another species, which can cause predators to confuse the two species. Examples include the aposematic coloring seen in some frogs and butterflies.

ANSWER: **mimicry** [or Batesian **mimicry**; or Mullerian **mimicry**]

[10] This term refers to a group of species that appear morphologically identical, despite being genetically distinct species. DNA barcoding is often used to distinguish these species.

ANSWER: **cryptic** species [do NOT accept “cryptids”]

[10] The genetic distance between two morphologically similar species can be determined using this scientist’s two-parameter model, where the two parameters are the rate of transversion and transition mutations.

ANSWER: Motoo **Kimura** [or **Kimura** Motoo]

15. At the opening of this opera, its title character travels incognito to a forest in Fontainebleau, where he meets his future wife Elisabetta and determines that they both love each other. For 10 points each:

[10] Name this opera in which the title character, a son of Philip II, is seized by the inquisition while Charles V, from heaven, states that suffering is unavoidable and ceases only once one is dead.

ANSWER: **Don Carlos** [or **Don Carlo**]

[10] *Don Carlo* is a grand opera composed by this Italian. His other works include *Nabucco* and *La Traviata*.

ANSWER: Giuseppe **Verdi**

[10] In Act II, this princess declares her love for Don Carlo. Most performances of *Don Carlo* feature this woman wearing an eyepatch, like the real-life woman she was based on.

ANSWER: Princess **Eboli**

16. This festival may be named for a brother of Cian, a god who lost the Glas Ghaibhleann to Balor of the Evil Eye. For 10 points each:

[10] Name this Celtic holiday, which celebrates the beginning of Winter. Traditionally held on November 1st, it often involves lighting bonfires on top of hills.

ANSWER: **Samhain** (SAH-win)

[10] The Manx version of Samhain called *Hop-tu-Naa* features women making one of these objects called *soddag valloo* and eating it without talking. On some occasions, Vestal Virgins made one of these things called *mola salsa*.

ANSWER: **cake** [prompt on pastry]

[10] Samhain took place exactly two months after this other major festival, named for a Celtic god who supposedly started it to honor his mother's death. Farmers pray to the gods for a good harvest during this festival.

ANSWER: **Lughnasa** (LEW-nah-sah)

17. The writer Joceline Clemencia led the successful campaign to make this creole an official language. For 10 points each:

[10] Name this creole language spoken in the ABC Islands of Aruba, Bonaire, and Curacao, which contains elements of several European languages mixed with Arawak and African dialects.

ANSWER: **Papiamentu** [or **Papiamentu**]

[10] Papiamentu developed when this Director of the ABC Islands imported a number of Native American captives, including the Esopus tribes. He's better known as the one-legged Dutch governor of the New Netherlands starting in 1647.

ANSWER: Peter **Stuyvesant**

[10] An official language in this country, the Waorani language, was "unlocked" when a woman named Dayuma converted to Christianity. After meeting her in 1956, five American missionaries in this country, including Jim Elliot, were killed during Operation Auca.

ANSWER: **Ecuador** [or Republic of **Ecuador**]

18. In 1826, this man published the first major historical novel in French, *Cinq-Mars*, about a conspiracy against Cardinal Richelieu. For 10 points each:

[10] Name this Romantic French playwright, who translated the works of William Shakespeare and wrote a poem about Eloa, an angel who falls in love with Lucifer.

ANSWER: Alfred de **Vigny** [or Alfred **Victor**, Comte de Vigny]

[10] Alfred de Vigny's most-performed play is this drama, which is named for a forger who adopted the persona of Thomas Rowley and wrote medieval poetry.

ANSWER: **Chatterton** [or Thomas **Chatterton**]

[10] This other French playwright outlined a manifesto of Romantic drama in the preface to his play *Cromwell*. His other characters include Claude Frollo and Esmeralda.

ANSWER: Victor [Marie] **Hugo**

19. Vercingetorix was crowned king at this site, which was the capital of the Aedui tribe and served as a trading post. For 10 points each:

[10] Name this oppidum, a fortified settlement that was the namesake of a 58 BC battle where Julius Caesar defeated the Helvetii tribe, six years before Alesia. It was dismantled by Augustus to form Augustodunum, which is now Autun.

ANSWER: **Bibracte** [accept Mont **Beuvray**]

[10] Bibracte is described in Julius Caesar's Commentaries on this conflict, to which an eighth book was added by Aulus Hirtius.

ANSWER: **Galic** Wars [or Bello **Gallico**; or Bellum **Gallicum**]

[10] The Aedui sent a druid messenger to invite Caesar to protect them after they were attacked by Ariovistus, the leader of these people, who were often dubbed the Alemanni by foreigners. In his *Germania*, Tacitus attests that their males wore their hair in a namesake "knot."

ANSWER: **Suebi** [or **Suavi** or **Suevi** or **Suevians**; accept **Swabians** or **Suebians**]

20. These compounds can be produced stereospecifically using a chiral tartrate ligand bound to a titanium catalyst, in a reaction named for K. Barry Sharpless. For 10 points each:

[10] Name this functional group that contains two adjacent carbons bonded to the same oxygen atom.

ANSWER: **epoxides**

[10] Tartrate ligands and cinchona alkaloids are part of a class of "privileged" ligands useful in asymmetric organic synthesis. The privileged diphosphine ligand DIPAMP was used by William Knowles in his asymmetric hydrogenation used to synthesize this drug.

ANSWER: L-**DOPA** [or **levodopa**]

[10] Another reaction that forms epoxides using a privileged ligand is the Jacobsen reaction, which uses a privileged salen ligand bound to this element. This metal and potassium are found in a strong oxidizing agent used to convert alkenes to diols.

ANSWER: **manganese** [or **Mn**]