



ACADEMIC COMPETITION FEDERATION

2015 ACF NATIONALS
PACKET 2 BY THE EDITORS

TOSSUPS

1. A thinker with this surname proposed the units of “act,” “scene,” “agent,” “agency,” and “purpose” as five components of his dramatisitic pentad in *A Grammar of Motives*. That philosopher with this surname proposed a construct called the “terministic screen” to describe the vocabulary of an individual as a result of their world-view in his book *Language as Symbolic Action*. Another philosopher with this surname stated that pleasure, pain, and delight are the three types of passions and identified succession and unity as two components of the “artificial infinite.” That philosopher with this surname stated that “greatness of dimension,” or “vastness,” is a cause of the second title concept of a treatise, and that concept arises from terror and not caused by the aesthetically pleasing. For 10 points, give this surname of literary theorist Kenneth and the British philosopher who wrote an inquiry into the origins of our ideas of the sublime and beautiful.

ANSWER: Burke [or Kenneth Burke; or Edmund Burke]

2. Two characters in this novel are taken to a godown behind the Collector’s house on Chamundi hill, only to find that the person they were looking for had left two years ago, abandoning his wife Ammu. People are surprised when the matchmaker Old Granny is able to find a husband for this novel’s main character’s daughter, who later gives birth to an albino baby named Sacrabani. A character in this novel is forced to reveal that he fathered two of Kunthi’s sons out of wedlock, after which his son Raja is killed by watchmen at the new tannery. This novel takes its title from Samuel Taylor Coleridge’s poem “Work Without Hope.” After giving birth to a daughter named Irrawaddy, this novel’s protagonist has her infertility treated by Dr. Kennington, or “Kenny,” allowing her to have five consecutive sons with her husband Nathan. For 10 points, name this novel about the endless struggles of the peasant woman Rukmani, the best known work of Kamala Markandaya.

ANSWER: Nectar in a Sieve

3. Early in this man’s political career, he was forced to flee when his cohort accused him of punishing a governor in Babylonia without authorization, and his supporter Bilitor was put to death after he fled. Several inscriptions attest to this man’s loyalty to his wife, the Sogdian princess Apama, a daughter of Spitamenes. One of his greatest military victories came at the Battle of Corupedium, where his longtime rival was killed. He dispatched the ambassador Megasthenes on expeditions to the east, resulting in the production of the *Indika*. This man’s assassin gained the epithet Keraunos, or “thunderbolt,” after slaying him. After he was turned away from invading the Mauryan empire, he defeated his rival Lysimachus, and then was succeeded by his son Antiochus I. For 10 points, name this member of the Diadochi who took the epithet Nicator and founded a namesake empire east of the Antigonid dynasty.

ANSWER: Seleucus I Nicator [or Seleucus Nicator until “Nicator” is read; prompt on “Seleucus”]

4. This artist’s use of bright dots of color that resemble shiny sequins led Alfred Barr to characterize that technique as the “Rococo” phase of his career; one such work from that time is a still-life of a cup and a bottle that is dominated by a green background. He glued a piece of oilcloth onto a canvas to create another artwork, which is framed by a piece of actual rope. In addition to making *Still Life with Chair Caning*, he used a piece of blue paper, sheet music, and a wood-grain pattern on another patch of paper to imitate the form of a guitar. To explain his art, this painter once wrote “art is a lie that makes us realize truth.” While in Fontainebleau, this artist depicted a harlequin, a Pierrot and a monk in *Three Musicians*. This artist’s invention of the collage style led a fellow artist to produce the first *papiers colles*. Separate analytic and synthetic phases characterizes the cubist work of, for 10 points, what artist who often worked with George Braque?

ANSWER: Pablo Picasso [or Pablo Ruiz y Picasso]

5. Jacob Bjerknes names a process of this type caused by the easterly surface winds in the Walker Circulation and the zonal sea-surface temperature gradient; that Bjerknes-named process of this type affects the ENSO. The non-linearity of the thermohaline circulation is driven by the following two processes of this type: the advection of salinity and the convective mixing of deep water. In many models, this type of physical process would move from a metastable state into activity by the firing of the “clathrate gun.” One classic example of this type of process is the accumulation of water vapor in the atmosphere, since water vapor is a greenhouse gas; another classic example is increasing ice cover, since ice boosts a body’s albedo and may lead to creation of a “Snowball Earth. For 10 points, name this type of process in which an initial change causes an additional change in the same direction, causing small perturbations to be amplified.

ANSWER: **positive feedback** loops [or equivalents, such as **positive feedback** processes; or **reinforcing feedback**; or **runaway process**; or **positive** feedback after “feedback” is read; prompt on “**feedback**” until it is read]

6. The 1991 case of *Wilson v. Seiter* established that a certain class of people alleging this constitutional violation must show a “culpable state of mind” or “deliberate indifference,” using the standard created in *Estelle v. Gamble*. The state was found not to have violated this constitutional protection in *Penry v. Lynaugh*, though that ruling was overturned by the 2002 case *Atkins v. Virginia*, which was recently qualified in *Hall v. Florida*. This protection was first applied to the states in the 1962 decision *Robinson v. California*, though the seminal 1910 case of *Weems v. United States* established the “proportionality doctrine” in evaluating whether this right had been violated. In *Roper v. Simmons*, Justice Kennedy used the idea of “evolving standards of decency” to hold that Missouri was violating this clause by seeking to execute a person who committed a crime as a minor. For 10 points, name this protection that, along with excessive fines and excessive bail, is extended by the Eighth Amendment.

ANSWER: “**cruel and unusual punishment**” [or any descriptive answer that contains the phrase “**cruel and unusual punishment**”; prompt on “**Eighth Amendment** violation”]

7. A staining mixture of Alcian yellow and toluidine blue is used to test for the presence of this organism. This organism secretes a protein that is phosphorylated by Src kinases at its EPIYA sites. That protein secreted by this organism interacts with Crk adaptors of the host cells, causing the host cells to elongate, a morphological change called the hummingbird phenotype. This organism is present in over 90% of patients with MALT lymphomas. This organism produces vacuolating cytotoxin A, and its pathogenicity is based on the virulence factor CagA. This organism can be detected using a urea breath test and its infections are often treated using a “triple therapy” consisting of one proton pump inhibitor and two antibiotics. This organism’s role as the causative agent of a certain condition was studied by Barry Marshall, who drank a broth containing colonies of this organism. This organism burrows into the epithelium lining the stomach to avoid the low pH environment within. For 10 points, name this bacterium that causes peptic ulcers and gastritis.

ANSWER: **H. pylori** [or **Helicobacter pylori**; or **Campylobacter pylori**]

8. Shostakovich composed one of these dances as an interlude between the scenes in Kovalev’s bedroom and Kazan Cathedral in Act I of his opera *The Nose*. These dances are the final movements of Bizet’s *Petite Suite* and Khachaturian’s *Masquerade* suite. Hans Christian Lumbye depicted the popping of a cork at the beginning of one he composed named for a bottle of champagne. Dmitry Kabalevsky composed a frequently excerpted example of these dances as the second movement of his suite *The Comedians*. Liszt often ended his concerts with a virtuosic “grand chromatique” piece of this type. Music hall chorus lines often perform a certain high-kicking dance to the “infernal” one of these pieces from the final scene of *Orpheus in the Underworld*. Rossini used its driving rhythm for the finale of the *William Tell* Overture. For 10 points, name this ballroom dance from which the can-can was derived, that imitates the fastest gait of a horse.

ANSWER: **galops** [or **galoppades**]

9. An author with this surname was an ardent nationalist who wrote a number of poems about the fictional hill-farmer Iago Prytherch and was praised in John Betjeman’s preface to his first widely-published collection, *Song at the Year’s Turning*. Another author with this surname attracted controversy for lifting passages wholesale from Anatoly Kuznetsov’s novel *Babi Yar* for a novel in which recurring, intense pains in the left breast and ovary prompt the opera singer Lisa Erdman, also known as “Frau Anna G.”, to seek treatment with Sigmund Freud. The author of *The White Hotel* shares this surname with a poet who described how “the sabbath rang slowly / In the pebbles of the holy streams” in a poem from his collection *Deaths and Entrances*. For 10 points, give the surname of the poet who wrote the lines “Time held me green and dying / Though I sang in my chains like the sea” at the end of his poem “Fern Hill”.

ANSWER: **Thomas** [or Ronald Stuart “R.S.” **Thomas**; or Donald Michael “D.M.” **Thomas**; or Dylan (Marlais) **Thomas**]

10. This polity created a government office called the Central Ministry of Culture and Guidance to distribute standard green-and-red textbooks to schools, and monitor newspapers according to the Press Organization Law. In response to formation of this entity, a rival power conducted an emergency drill in which three code words were broadcast over public radio in nine different languages, resulting in a period of panic called the “Night of the Ducks.” In order to combat the growing influence of this polity, Operation Blue Bat was authorized to support the opposing regime of president Camille Chamoun. The founder of this entity immediately forced Michel Aflaq to suspend operation of his party, and entered a confederation with the Mutawakkilite Kingdom, which joined this state under the name of North Yemen. For 10 points, name this failed political state created by Gamal Nasser, which lasted from 1958 to 1961, and attempted to unify Egypt with Syria.

ANSWER: United Arab Republic [or UAR; or United Arab States; or UAS; or Al-Jumhuriyah al-Arabiyyah al-Muttahidah]

11. Antoninus Liberalis reports that Periphas, and not this man, was the first to have his unusual manner of birth. Polydore Vergil claims that this man raised the child who invented the *quadriga*. He introduced a new method of worshipping the gods in which cakes, rather than bloody animal sacrifices, were used as offerings. Some sources state he founded the towns of Tetrapolis, Epakria and Eleusis, and that he was a son of Pandion. In another story, this man’s daughters Herse, Pandrosus, and Aglaurus opened a box, shrieked, and threw themselves off of a cliff, because they found this man’s successor Erichthonius inside. This king judged a contest in which one of the participants planted an olive tree and the other used a trident to create a salty sea. For 10 points, name this autochthonous, half-serpent mythical founder of Athens.

ANSWER: Cecrops

12. In one play by this author, a Minister on an ocean liner listens to various stories from a Long-Winded Lady, an Old Woman, and Chairman Mao Tse-Tung. In another of his plays, a woman gives a monologue describing the muscle and sinews of a man with whom she was in love. In that play’s first act a 26-year-old lawyer tries to ascertain the correct age of her nonagenarian client. In another play by this author, a man must explain what a “brute beast” is to a character who is told that “flux” is responsible for evolution. That play by this author is punctuated with noises made by an offstage jet and concerns Sarah and Leslie, a couple who do not understand love. This author wrote a play in which “the boy” is an object of contention in the bickering of A, B, and C. In another of his plays, Nancy and Charlie are visited by a pair of lizards. For 10 points, name this author of *Three Tall Women* and *Seascape*, who also wrote *Who’s Afraid of Virginia Woolf?*

ANSWER: Edward Albee [or Edward Franklin Albee III]

13. The semileptonic decay of this particle was studied by the CPLEAR experiment and is currently being studied by the NA62 experiment at CERN. This particle is a member of both an octet of pseudoscalar particles and an octet of vector particles. The branching ratio for the FCNC-mediated decay of this particle was explained by the GIM mechanism, which predicted the existence of the charm quark. This particle can undergo particle-antiparticle oscillations with a frequency proportional to the difference between the masses of its “short” and “long” lifetime variants. This particle was originally thought to be two particles termed the tau and the theta due to this particle’s ability to decay into either two or three pions. That decay was studied experimentally by Cronin and Fitch to confirm the existence of CP violation. This particle consists of a either an up or a down quark or antiquark and a strange quark or antiquark. For 10 points, name this meson which is lighter than the D and B mesons but heavier than the pion.

ANSWER: kaons [or K mesons]

14. An account of this battle claims that the last descendant of Skanderbeg had his Albanian horse thrown into a ravine at this clash, after that man, the Marquis of St. Angelo, breached the walls of the army camp and began plundering tents. As a result of success at this battle, the city of Ortona was gifted to the Princes of Sulmona. The winning army was aided by Max Sittich and Georg Frundsberg, who led companies of landsknecht soldiers, as well as arquebusiers under Fernando d’Avalos, the Marquis of Pescara. The losing commander was doomed by the defection of 8,000 Swiss soldiers and wrote to his mother that “all is lost, except honor” after this battle, which ended the Four Years War. The loser was forced to sign the Treaty of Madrid, though he rebuked it a year later by forming the League of Cognac. For 10 points, name this battle during the Italian Wars which saw Francis I get captured by the army of Charles V in 1525.

ANSWER: Battle of Pavia

15. A problem in this field of study, which is in the PPAD-complete complexity class, may be solved using the Lemke-Howson algorithm. A counterintuitive result in this field of study concerning the distribution of traffic flow is illustrated by Braess's paradox. That paradox in this field of study illustrates the concept of "price of anarchy," a measure of a system's efficiency under the pressure of human behavior. The technique of backwards induction for solving problems was introduced in a pioneering work of this field. Leonid Hurwicz and Roger Myerson won a Nobel Prize for creating a "reverse" form of this discipline, which is called mechanism design. Oskar Morgenstern and John von Neumann wrote an introduction to this field of study, the latter of whom proved the minimax theorem in it. The study of strategic decision making characterizes, for 10 points, what field of study which analyzes Kuhn Poker and the prisoner's dilemma?

ANSWER: algorithmic game theory [prompt on "algorithmic design" until Braess is read]

16. One member of this family, whose collected writings were published by Charles Wallace, used the motto "strength guided by kindness" for teaching children, and had a practice of pulling her apron over her head for one hour each week to pray. Another member of this family wrote a physics manual *The Desideratum*, subtitled "Electricity Made Plain and Useful" based on his experiments, and founded the Kingswood School. Another man with this surname wrote the original words to "Hark! The Herald Angels Sing" and many other carols. He served as chaplain at St. Simon's Island in Georgia, where he was appointed Secretary of Indian Affairs by James Oglethorpe. The writings of a better-known member of this family, like *A Plain Account of Christian Perfection*, inspired people like Francis Asbury to lead the Holiness Movement. For 10 points, name this family which included Samuel, Susanna, Charles, and John, who was the founder of Methodism.

ANSWER: Wesley family [or Susanna Wesley; or Charles Wesley; or John Wesley]

17. One type of these compounds can be detected via the reduction of copper acetate to copper oxide in Barfoed's test, while two different types of these compounds can be distinguished using a solution of resorcinol and hydrochloric acid in Seliwanoff's test. These compounds isomerize through an enediol intermediate via the Lobry de Bruyn-van Ekenstein reaction. These compounds can be shortened by one carbon by oxidizing them with bromine water, then adding ferric acetate and hydrogen peroxide. Conversely, these compounds can be elongated by one carbon via the formation of a cyanohydrin intermediate which is reduced by a palladium-catalyzed hydrogenation or a sodium amalgam. These compounds, which can be shortened or lengthened by the Ruff degradation and the Kiliani-Fischer synthesis, have an asymmetric carbon in their hemiacetal group called the anomeric carbon. These compounds are typically visualized using Haworth or Fischer projections. For 10 points, name this type of compound exemplified by mannose and glucose.

ANSWER: sugars [or carbohydrates; or mono-, poly-, di-, or oligo-saccharides; or aldoses; or ketoses; or pentoses; or hexoses]

18. In a film by this director, a man states that all beautiful music composed in the preceding centuries is "false," since the title music theorist incorrectly split the "octave of the gods" into twelve parts. At the opening of that film by him, a man in a bar has its patrons mimic the chaotic orbit of the sun and the moon. At the conclusion of another of his films, a doctor boards up his home from the inside after he finds a man wildly ringing some bells. A young girl named Etsi commits suicide by poison in that film by this director, which focuses on Irimias's and Petrina's plot to defraud a village of the money obtained from the closing of a collective farm. A circus with an exhibit featuring a giant whale is at the center of this director's *Werckmeister Harmonies*. For 10 points, name this director, known for his use of long takes and black and white films, who created the seven-hour-long *Satantango* and hails from Hungary.

ANSWER: Béla Tarr

19. One man by this surname married Anne Lloyd, the widow of Thomas Yale, but allowed her to be excommunicated for her views like opposing infant baptism. That man wrote a legal code with John Davenport prohibiting such views. This was also the last name of the youngest Senator in U.S. history, whose secret meeting with the Indian chiefs Greenwood LeFlore and Mushulatubbee led to the Treaty of Dancing Rabbit Creek. This surname is shared by the founder and first governor of the New Haven colony in 1638, who had the first name Theophilus, and the lawyer who wrote the Pendleton Civil Service Act of 1883 as a leader of the Mugwumps, with the first name Dorman. More notably, this surname was taken by the widow of John Timberlake, whose husband was replaced by Lewis Cass as Secretary of War in 1831, thanks to his role in the Petticoat Affair. For 10 points, give the married name of that woman Peggy, whose marriage caused scandal during the Andrew Jackson administration.

ANSWER: Eaton [or Theophilus Eaton; or John Eaton; or Dorman Eaton; or Peggy Eaton]

20. The main character of this story is distressed to learn that another character is related to Hinz and Kunz, the Cupbearer and Chamberlain to the sovereign. Near the end of this story, the protagonist takes a piece of paper out of a locket given to him by a gypsy woman and swallows it. A character in this story shows the protagonist a Bible verse immediately before dying; that character, Lisbeth, was injured while attempting to petition the elector of Saxony. Martin Luther writes a letter condemning the protagonist of this story, who is spurred to action by the vicious beating of the groom Herse and the unlawful detention and mistreatment of two “blacks.” Its protagonist leads a growing army to ransack a castle and then set fire to Wittenberg and Leipzig in his quest for revenge against the Junker Wenzel von Tronka. For 10 points, name this historically-inspired novella about a horse dealer from Brandenburg, written by Heinrich von Kleist.

ANSWER: Michael Kohlhaas

TIEBREAKER

21. This work opens with an “Author’s Notice” that falsely attributes the quote “ideas cannot be killed” to Hippolyte Fortoul. It features a narrator who, at one point, recounts General Mansilla threatening the ostensible protagonist of this work with a candlestick, and in another section it posits a set of 15 questions about the decline of La Rioja. This work was conceived as the second installment in a trilogy, the subsequent volume of which concerned a leader in San Juan province and was called *El Chacho*. This work, which contains chapters named for the city of La Tablada and “The Revolution of 1810,” features a title character known as the “Tiger of the Plains,” and bears the subtitle “Civilization and Barbarism.” For 10 points, identify this book written as a critique of Juan Manuel de Rosas and named for a *caudillo* with the last name Quiroga, a work by Domingo Sarmiento.

ANSWER: Facundo: Civilization and Barbarism

BONUSES

1. Critics of this pianist dismissively nicknamed him “Old Arpeggio.” For 10 points each:

[10] Name this mid-19th century virtuoso pianist, who was renowned for using his thumbs to play the melody while his other fingers played elaborate ornamentations, a technique that made it seem like he was playing with three hands.

ANSWER: Sigismond Thalberg

[10] While touring America, Thalberg performed several concerts alongside this composer, who drew on syncopated Creole melodies from his native New Orleans to write piano pieces like “The Banjo” and “Bamboula.”

ANSWER: Louis Moreau Gottschalk

[10] During his career, Thalberg may have been most famous for his paraphrase on this composer’s opera *Moise*. This Italian’s other operas include *Tancredi* and *The Barber of Seville*.

ANSWER: Gioachino Rossini

2. One poem with this title claims that its addressee “in every spot beneath the smiling sun / sees where the springs of living waters lie” and calls that man a “true bard and holy!” For 10 points each:

[10] Give the title of that poem, also shared by a sonnet that opens with the line “Poet of Nature, thou hast wept to know / That things depart which never may return” and describes its author’s grieving at the addressee’s death.

ANSWER: “To Wordsworth”

[10] The first of those “To Wordsworths” was written by this author of “The Homes of England”, a woman who is likely most famous for a poem opening “The boy stood on the burning deck” called “Casabianca”.

ANSWER: Felicia Hemans [or Felicia Dorothea Hemans]

[10] The other “To Wordsworth” was written by this Romantic poet, who asked “If Winter comes, can Spring be far behind?” at the end of his “Ode to the West Wind”.

ANSWER: Percy Bysshe Shelley

3. After campaigning in the Yangtze River region, Kublai Khan had to call a second one of these meetings to depose his brother Ariq Boke. For 10 points each:

[10] Name these meetings at which Great Khans of the Mongol empire were elected in the presence of senior members of each tribe.

ANSWER: kurultai [or kurultay; or khuruldai; or quriltai]

[10] At a secret extension of the kurultai, Genghis Khan put out the Yassa, which was one of these documents possibly influenced by a much older example, the Code of Hammurabi.

ANSWER: law code [or legal code; or book of laws]

[10] The Yassa provided the rules for this military exercise, in which wild animals were rounded up in a particular region over a period of one to three months. Mongol commanders could be put to death if any animals escaped the circle that they supervised during this great hunt.

ANSWER: the battue

4. The characteristic polynomial of this object is given by the Euler-Lotka equation. For 10 points each:

[10] Name this matrix used in mathematical ecology, which multiplies the population vector at time t to give the population vector at time $t + 1$. It is contrasted with the stage-structured Lefkovich matrix.

ANSWER: Leslie matrix [or Leslie model]

[10] While the Lefkovich matrix is stage-structured, the Leslie matrix is structured based on this quantity. The top row of the Leslie matrix contains the fecundities specific to this variable, which is found on the leftmost column of a life table.

ANSWER: age

[10] High fecundity is a characteristic trait of this mode of selection, where an organism exhibits a large growth rate. It is named for the letter which symbolizes growth rate.

ANSWER: r-selection

5. Founded and named by Warren Moorehead, this culture arose during the Middle Woodland period and post-dated the Adena culture. For 10 points each:

[10] Name this prehistoric Native American culture represented by the Mound City Group on the Scioto River. This culture's name derives from a farm in Ross County, Ohio where a group of burial mounds with banked earth enclosures was found.

ANSWER: Hopewell culture [or Hopewell tradition]

[10] The Havana Hopewell culture is ancestral to the Cahokia sites on this river, which begins at Lake Itasca in Minnesota and was discovered by Hernando de Soto.

ANSWER: Mississippi River

[10] This seat of Ross County is the center of Hopewell culture, and was the original capital of the state of Ohio in 1803. Shawnee tribes under Chief Blackfish were crushed in this city in 1779 and at Piqua the following year, making the reputation of George Rogers Clark.

ANSWER: Chillicothe

6. One of this author's collections ends with the play *Madam No Go Quench Again*, a treatment of the Phoenix myth about two women who follow their husbands to the grave. For 10 points each:

[10] Name this author who included *The Transistor Radio* in his *Four Farcical Plays*, and wrote stories like "Night Ride" and "The Stars Below" in his collection *Forest of Flowers*.

ANSWER: Ken Saro-Wiwa [or Kenule Beeson Saro Wiwa]

[10] Saro-Wiwa is better known for this "Novel in Rotten English" about Mene, who grows up in a Nigerian village in the 1960s, and is constantly tormented by a tall man he meets at Upwine Bar.

ANSWER: Sozaboy

[10] This Nigerian author, like Saro-Wiwa, was persecuted by the dictator Sani Abacha. He collected his prison notes into the book *The Man Died*, and wrote *Kongi's Harvest* and *The Lion and the Jewel*.

ANSWER: Wole Soyinka [or Akinwande Oluwole Babatunde Soyinka]

7. Given that x and r are coprime, then x raised to this function of r is congruent to one modulo r . For 10 points each:

[10] Name this function, which for an input n , outputs the number of integers less than n that are co-prime to n .

ANSWER: Euler totient function [or phi function; prompt on "Euler function"]

[10] The Euler totient function is often defined in terms of this other function, which returns 1 or negative 1 if an integer is square free. The totient function of a number m equals the sum of the divisors of m , where each divisor is multiplied by this function of m over the divisor.

ANSWER: Mobius function

[10] This mathematician conjectured that if Euler's totient function outputs a value y for some input, then there always exists some distinct input that would also output y . For an input n , his namesake function returns the smallest x such that " x to the x is congruent to one mod n " is satisfied.

ANSWER: Robert Daniel Carmichael

8. This artist supposedly made a painting featuring maple leaves by dipping a chicken's feet in paint and chasing it across the canvas. For 10 points each:

[10] Name this artist who is better known for his series *Thirty-Six Views of Mt. Fuji*.

ANSWER: Katsushika Hokusai

[10] Hokusai's *Eagle in a Snowstorm* is a painting made on one of these objects. In the medieval art form of *Emakimono* these things are illustrated with narratives; one such example is the *Genji Monogatari Emaki*.

ANSWER: scrolls

[10] This style of painting is contrasted with the Chinese style *tara-e*, meaning "Tang painting." It now refers to a style of Japanese paintings featuring exaggerated facial expressions and *fukinuki yatai*, or houses with their roofs removed so that their interiors can be seen.

ANSWER: yamato-e

9. This character correctly deduces that the “wolf will swallow the Father of Men, and Vidar will avenge him” when asked what will happen at Ragnarok. For 10 points each:

[10] Name this knowledgeable giant who recounts the history of the Norse gods in a contest with Odin. Unfortunately, he loses his after being unable to answer a certain question at the end of the lay named for him.

ANSWER: Vafthrudnir

[10] Vafthrudnir is foiled when Odin asks what he whispered into the ear of this dead god of light. This son of Odin’s son was accidentally killed by his blind brother Hodr..

ANSWER: Baldr [or Balder; or Baldur]

[10] Vafthrudnir claims that Lif and Lifthrasir will survive Fimbulvetr by hiding out in this location, which is a wooded area that is named for the “wise one.”

ANSWER: Hoddmimir’s holt [or Hoddmímis holt; or Mimir’s forest]

10. Alfonso III was the first ruler to adopt the title of “King of Portugal” and this region, which is home to the Ria Formosa lagoon and Cape St. Vincent. For 10 points each:

[10] Name this southernmost region of Portugal, which has its capital at the port city of Faro.

ANSWER: the Algarve [or the Al-Gharb]

[10] By the 1267 Treaty of Badajoz, the Algarve became the property of this oldest son of Alfonso III, who ruled as king of Portugal from 1279 to 1325. Known as the Farmer King, he founded the University of Lisbon.

ANSWER: Denis [or Dinis; or Diniz]

[10] Just north of Cape St. Vincent in the Algarve is Sagres Point, where this Portuguese prince and member of the Aviz Dynasty set up a school of exploration.

ANSWER: Prince Henry the Navigator [or Henrique o Navegador; prompt on “Prince Henry”]

11. This thinker proposed evidence and reasons as justifications for acceptance of facts as true in his essay “Conclusive Reasons.” For 10 points each:

[10] Name this philosopher who analyzed the work of Claude Shannon in *Knowledge and the Flow of Information*. In that same book, he argued that the only way to accept a proposition as true is to have knowledge of the proposition’s negation, an argument called relevant alternatives theory.

ANSWER: Fred Dretske

[10] In a book named for this propositional attitude, *Form, and Content*, Fred Dretske proposed a “crude causal theory” of intentionality. An essay about a boy named Pierre is used to present a paradox about it in a Saul Kripke paper.

ANSWER: beliefs

[10] Fred Dretske’s proposal that epistemology be treated as an information science was inspired by this author of *Word and Object*, who argued that scientific inquiry should be used to study the title subject in “Epistemology Naturalized.”

ANSWER: W.V.O. Quine [or Willard Van Orman Quine]

12. This man hijacked movie theaters in 80 cities to show his delightful eight-hour long film *The Photo-Drama of Creation*. For 10 points each:

[10] Name this man who split with his former partner Nelson Barbour after publishing Barbour’s book *Three Worlds*, which spread this man’s theory that a 40-year harvest of souls had begun with Christ’s “invisible return” in 1874, and would culminate in a golden age beginning in 1914.

ANSWER: Charles Taze Russell

[10] Russell started the Bible journal now known by this name. This official journal of Jehovah’s Witnesses is distributed door-to-door with its companion magazine *Awake!*

ANSWER: The Watchtower

[10] In the early Watchtower publications, Russell published advertisements for this miracle product, which was said to grow five times the normal size, and could be yours for the low price of one dollar per pound. The Brooklyn Daily Eagle exposed the scandal, and Russell naturally sued it for doing so.

ANSWER: wheat

13. In this man's "Speech Heard Round the World," he declared that the "gory science of mass murder" has transformed warfare into an "all-consuming juggernaut." For 10 points:

[10] Name this Republican Senator from Michigan who issued a namesake Resolution in the Senate in 1948, advising the President to pursue collective defense strategies. Though he was an isolationist during the Great Depression, he later became a chief backer of the United Nations.

ANSWER: Arthur Hendrick Vandenberg

[10] With the support of John Nance Garner, Vandenberg proposed to amend this 1933 piece of legislation to create a temporary deposit insurance fund. This bank reform act thus led to creation of the FDIC.

ANSWER: Glass-Steagall Act

[10] Vandenberg also co-chaired the Nye Committee which investigated the munitions industry, partly spurred on by this speech given by Marine Corps veteran Smedley Butler. Butler turned it into a book of the same name in 1935, and published a condensed version in Reader's Digest with an introduction by Lowell Thomas.

ANSWER: "War is a Racket"

14. This composer spent the second half of his life teaching at the Paris Conservatoire, where he composed sacred music such as a *Requiem in C Minor*. For 10 points each:

[10] Name this composer of the operas *Lodoiska* and *Médée*, who achieved his greatest contemporary success with a rescue opera about the Savoyard water carrier Mikeli in *Les Deux Journées*.

ANSWER: Luigi Cherubini

[10] The rescue opera *Les Deux Journées* is an example of this genre of French opera, characterized by spoken dialogue. Donald Grout lists "idealized peasantry," "a naïve heroine," and a "manly young hero" as this genre's characteristic elements.

ANSWER: opera comique [prompt on "comic opera"]

[10] This composer held Luigi Cherubini to be his greatest contemporary and modelled his rescue opera *Fidelio* on Cherubini's *Les Deux Journées*.

ANSWER: Ludwig van Beethoven

15. This novel's protagonist is driven to fear creativity by his strictly religious Aunt May, leading him to join a scheme set up by the collector Reckittall Brown that is validated by the critic Basil Valentine. For 10 points each:

[10] Identify this novel about Wyatt Gwyon, who becomes extremely skilled at forging paintings in the style of various fifteenth-century artists.

ANSWER: The Recognitions

[10] *The Recognitions* was the debut novel by this pioneer of American postmodern literature, who gained more fame with his later National Book Award-winning novel *J R*.

ANSWER: William Gaddis [or William Thomas Gaddis, Jr.]

[10] An invaluable set of annotations to *The Recognitions* was written and compiled by this author, a leading Gaddis authority also noted for his two-volume *The Novel: An Alternative History*.

ANSWER: Steven Moore

16. This type of reaction can be catalyzed by a catalyst consisting of palladium and calcium carbonate poisoned with lead. For 10 points each:

[10] Name this type of reaction catalyzed by Lindlar's catalyst. It can be used to convert unsaturated fats to saturated fats.

ANSWER: hydrogenation

[10] This Japanese chemist shared half of the 2001 Nobel Prize in Chemistry with William Knowles for the development of an asymmetric hydrogenation which uses ruthenium complexes containing the ligand BINAP.

ANSWER: Ryoji Noyori

[10] Ryoji Noyori has also done research on this type of hydrogenation, which is exemplified by the Meerwein-Ponndorf-Verley reduction. This type of hydrogenation involves a hydrogen source other than H₂, such as formic acid or isopropanol.

ANSWER: transfer hydrogenation

17. Answer the following about the notion of Moscow as the “Third Rome,” for 10 points each.

[10] The monk from Pskov is credited with recording the “Legend of the White Cow!” around 1510, and wrote the letter to Grand Duke Vasili III in which he popularized the idea of Moscow, or Muscovy, as the “third Rome.”

ANSWER: Filofei [or Filofey; or Philotheus of Pskov; or Filotheos]

[10] That notion continued in the writings of people who belonged to this group that rejected the liturgical reforms of Patriarch Nikon. This faction supported the traditional custom of making the cross sign with two fingers.

ANSWER: Old Believers [or Starover; or Old Rituatlists]

[10] Vasili III’s successor as Grand Prince of Moscow, Ivan the Terrible, created these secret police named for a word meaning “men apart” in order to govern his notion of third Rome. They included the German-born Heinrich von Staden.

ANSWER: oprichniki [or oprichniks; do not accept “oprichnina”]

18. The creation and annihilation operators are used to add or remove particles from a many-body system in this formalism. For 10 points each:

[10] Name this formalism, which represents particles using quantized field operators. Dirac developed the principles of this method by quantizing the electromagnetic field in 1927.

ANSWER: second quantization [or canonical quantization]

[10] For bosons, the basis states developed in second quantization must have this property. According to the spin-statistics theorem, the wavefunction of two bosons must have this property under the exchange operator.

ANSWER: symmetric [or word forms]

[10] Aspiring physics students might be more familiar with the usage of the creation and annihilation operators in the study of this system, which has equally spaced energy levels with the spacing equal to \hbar times omega. Like a related classical system, it is defined by a potential which varies with the square of the displacement.

ANSWER: quantum harmonic oscillator [or QHO, or simple harmonic oscillator]

19. In this man’s namesake optical illusion, two vertical lines appear to be bent toward each other due to the projective lines in the background. For 10 points each:

[10] Name this German psychologist who founded the first experimental lab for psychology in Leipzig and authored *Principles of Physiological Psychology*.

ANSWER: Wilhelm Wundt

[10] Wilhelm Wundt’s technique of analyzing an object with respect to one’s own personal experiences, tastes and mental states is part of this method he used in his lab.

ANSWER: introspection [or introspective method]

[10] In addition to experimental techniques, Wundt came up with this psychological paradigm that studies certain phenomena, such as language, using a historical method instead of experiments. Between 1900-1920, Wundt wrote ten volumes, such as *Art and Religion and Myth*, that are part of a series named for this technique.

ANSWER: Völkerpsychologie [prompt on “Folk Psychology” since this is a technical term that doesn’t translate well]

20. This character rushes off to reveal the object of her love to the king after the arrival of a man carrying a bloody sword, only to learn that that man had actually lost the duel in which he was involved. For 10 points each:

[10] Name this daughter of the Comte de Gormas, who is reconciled with her love, the son of Don Diègue, at the end of a seventeenth-century play.

ANSWER: Chimène

[10] Chimène is the love interest of the title character of this most famous play by Pierre Corneille, which sparked a “quarrel” in French theatrical circles in part because it failed to respect the classical unities.

ANSWER: Le Cid[or The Cid; do not accept “El Cid”]

[10] Later in his career, Corneille and his rival Jean Racine simultaneously wrote and produced plays about the emperor Titus’s love for this woman. Racine’s was much more successful.

ANSWER: Berenice of Cilicia [or Bérénice]