



ACADEMIC
COMPETITION
FEDERATION

ACF NATIONALS 2018

ROUND 19 FINALS 1

packet by
THE EDITORS (11)

Tossups

1. This ability was visualized in mathematical diagrams consisting of two cylinders joined at an obtuse angle by G. G. J. Rademaker and J. W. G. Ter Braak. For a study of this ability published in *Nature* in 1894, Étienne-Jules Marey used a “chronophotographic gun” to show that it was accomplished via a “tuck and turn” method. In Islamic tradition, this ability was bestowed by the touch of Muhammad’s hand after a creature owned by Abu Hurayrah saved Muhammad from a snake. A 1988 paper by Wayne Whitney and Cheryl Mehlhaff found that over 90% of sufferers of “high-rise syndrome” survived, many with jaw injuries, largely because of this reflex. Physiologically, this reflex kicks in based on input from the vestibular system and is facilitated by a free-floating collarbone and a very flexible spine. Because this reflex depends mostly on the movement of the hind legs, and not the tail, it is present in the tailless Manx species. For 10 points, name this reflex that helps falling felines avoid injury.

ANSWER: cats’ **righting** reflex [accept answers mentioning cats always **landing on their feet** or similar; prompt on answers mentioning “cats contorting their bodies in midair” or similar answers]

2. Pfandler’s 2D form of this technique uses two encode pulses followed by a delay and then an observe pulse; that form of this technique can be used to study the kinetics of the ionization of methane. This technique can induce motion by using a single SWIFT pulse or a radio frequency sweeping “chirp” excitation pulse. The primary source of signal decay in that form of this technique is due to ion-neutral collisions. This technique processes data from an image current generated from ions passing near a detector plate to generate a free induction decay. The “orbitrap” is an alternative to this technique that does not require a superconducting magnet. Dividing the magnetic field by the frequency in this specific technique yields the mass-to-charge ratio. For 10 points, name this extremely high-resolution form of mass spectrometry in which a Penning trap causes ions to undergo cyclotron motion.

ANSWER: **FT-ICR MS** [or **Fourier-transform ion cyclotron** mass spectrometry; accept **FTMS**; accept **Fourier-transform mass spectrometry**; prompt on “mass spectrometry”; prompt on “MS”]

3. A woman in this story “shows with expressive face how interested she is, how impressed,” as her dinner companion describes his plans to expand his business. After weeping due to “the terrifying sun” and fleeing to the men’s room, a character in this story returns to watch people making a seemingly “eternal circuit” on a merry-go-round. This story’s protagonist shouts, “What are they doing? Don’t they know what they’re doing?” after two people argue over entering a fortune teller’s booth. In the last sentence of this story, the narrator wakes into “the bleak winter morning of my 21st birthday” and sees “the windowsill shining with its lip of snow, and the morning already begun.” In this story, the protagonist imagines himself in an old movie theater watching the day of his parent’s engagement at the Coney Island boardwalk. For 10 points, name this best-known short story of Delmore Schwartz.

ANSWER: **“In Dreams Begin Responsibilities”**

4. This political faction’s hostility to the state was discussed in the papal encyclical *Cum multa* by Leo XIII. In one dispute, this faction was opposed by the *chapelgorris*; during that conflict, this faction agreed to the Lord Eliot Convention, which regulated treatment of prisoners. At the end of that conflict, this faction sought to protect the traditional *fueros* by agreeing to the Convention of Vergara. Soldiers nicknamed *requetés* were loyal to this faction, which included the general Tomás de Zumalacárregui. After the last major dispute involving this faction, the autonomy of the Basque provinces was revoked as punishment for their support of this faction. This faction rejected the Pragmatic Sanction of 1830 and supported the Salic law, which led them to oppose the rule of Isabella II. For 10 points, identify this conservative political faction whose followers rebelled in three namesake 19th-century wars in Spain.

ANSWER: **Carlism** [or **Carlists**]

5. This phenomenon is argued to succeed evolutionarily because it is “counter-intuitive” in a book by Ilkka Pyysiäinen (EEL-kah POO-see-“eye”-nen) titled for “how” it “works.” Wilfred Cantwell Smith noted that Arabic has no word for this phenomenon and questioned its assumed universality in a book titled for its “meaning and end.” The claims that this phenomenon “is solely the creation of the scholar’s study . . . by his imaginative acts of comparison and generalization” and that it “has no existence apart from the academy” are found in a book on “imagining” it by Jonathan Z. Smith. This phenomenon was the result of the “electricity” or “collective effervescence” produced when people gather, according to Émile Durkheim. Clifford Geertz used the phrase “a system of symbols which acts to establish powerful, pervasive and long-lasting moods and motivations” to describe, for 10 points, what phenomenon that Karl Marx called “the opiate of the people”?

ANSWER: **religion** [accept forms of the word “religion” such as **religious** practice; accept **How Religion Works** or **The Meaning and End of Religion** or **Imagining Religion**]

6. Pieces of this type make up entries C32 through C48 in the Ernest Warburton Catalog of the works of Johann Christian Bach. A piece of this type by another composer only survives in an arrangement found in the estate of the composer's biographer Otto Jahn (YAHN). That arrangement of a piece of this type replaces a flute part with a clarinet, which led Robert Levin to reconstruct the original scoring and to write an investigation of "who wrote" the piece. That spurious work of this type, numbered K297b, was originally written with solo parts for flute, oboe, horn, and bassoon. The most frequently performed piece in this genre is in E-flat major and requires one soloist to tune the strings a half step higher than usual. The Baroque concerto grosso was a predecessor of, for 10 points, what genre popular during the Classical period that is scored for multiple soloists and orchestra and exemplified by the one that Mozart wrote featuring violin and viola?

ANSWER: sinfonia concertante [or sinfonie concertante; or symphonie concertante]

7. An essay argues that literature in this language has been judged "stripped of its style," leaving its writers "like men deprived [of their clothes] by an earthquake or a railway accident." A translator of works in this language nicknamed "Kot" had an unrequited crush on his collaborator Katherine Mansfield and a rivalry with an author whose son David wrote *Lady into Fox* while part of the Bloomsbury Group. A story in this language lays emphasis "upon such unexpected places that at first it seems as if there were no emphasis at all" according to an essay that disfavorably compares *Ulysses* with that story about a dying soldier on a ship. Virginia Woolf's "Modern Fiction" discusses literature of this language, which Woolf knew through a translator often criticized for skipping or smoothing out difficult passages. British modernism was influenced by translations from this language that Constance Garnett released in the 1910s, such as *The Darling and Other Stories*. For 10 points, name this language used by Anton Chekhov.

ANSWER: Russian [The first clue is from Woolf's "The Russian Point of View."]

8. When this property holds, the parallel transport of a vector from one path to another is independent of the path taken. This property holds to the first order in Riemann normal coordinates and the local Lorentz frames defined by those coordinates. Birkhoff's theorem states that the vacuum solution of the Einstein field equations must be static and have this property in the asymptotic limit. This property lends its name to a fine-tuning problem that asks how the initial density of the universe was so close to the critical density. The metric tensor and the inverse metric tensor have the same components when space-time has this property. The pseudo-Riemannian space-time of general relativity reduces to Minkowski space-time when it has this property. For 10 points, give this property of space-times in which the Riemann curvature tensor vanishes.

ANSWER: flatness [accept more specific answers such as asymptotically flat or locally flat or flatness problem]

9. The progenitor of this dynasty displaced the Yaonian clan by being elected ruler. Consorts of this dynasty hailed from the Xiao clan, while rulers of this dynasty were members of the Yelu clan. Like its successor, this dynasty commissioned the creation of both a "large script" and a "small script" to write its native language. From the Shatuo Turks, this empire received the Sixteen Prefectures; that territory included this empire's Southern Capital, which stood on the site of modern Beijing. After the demise of this dynasty, Yelu Dashi fled to Central Asia and established a successor state. This empire's ethnically Chinese neighbor agreed to recognize this empire's ruler as a coequal Son of Heaven and to pay annual tribute in the Treaty of Chanyuan. This dynasty, which was founded by Abaoji, was succeeded by the Jin dynasty after it was conquered by the Jurchens. For 10 points, name this dynasty in northern China that coexisted with the Northern Song dynasty and was ruled by the Khitan people.

ANSWER: Liáo dynasty [prompt on "Khitans" before "Khitan"]

10. The first half of a 2003 book argues that the theory of this concept faces the problems of "reification" and "displacement" and is insufficient to create "parity of participation" in society. An essay titled for this concept examines Jean-Jacques Rousseau and Immanuel Kant as standard-bearers for a "difference-blind" approach to this concept based on "equal dignity" that grew out of the collapse of honor-based social hierarchies. In a published exchange with Axel Honneth, Nancy Fraser held that this concept must be coupled with "redistribution." Cultural identity should be treated with the "politics of" this concept according to an essay in Charles Taylor's book *Multiculturalism*. The master-slave dialectic described by G. W. F. Hegel is a "struggle for" this concept, which Hegel argued a self-consciousness needs to receive to exist. For 10 points, identify this act of acknowledging the existence and validity of another person or identity.

ANSWER: recognition [accept word forms such as recognize or recognizing; accept "The Politics of Recognition"]

11. The only indication for afamelanotide is for treatment of this condition, which can be diagnosed when urine reacted with a DMAB-containing solution turns red in both the Hoesch and Watson-Schwartz tests. This condition can be characterized by the presence of compounds prefixed proto-, uro-, and copro- in the urine and feces. Gunther disease is a form of this condition caused by mutations in *UROS*, and this condition may also be caused by mutations in *HIMBS* and *PPOX*. A 10% glucose infusion can be used to treat acute varieties of this condition. Ferrochelatase defects cause a form of this condition called EPP. This condition is either “erythropoietic” or “hepatic” depending on where a certain set of compounds builds up. A urine sample from an acute bout of this condition will change to a reddish-purple color after time in the sun. For 10 points, name this set of conditions that occurs due to faulty heme metabolism and that is named for the tetrapyrrole found in heme.

ANSWER: porphyria

12. This man left Rochester University to volunteer in the 105th Ohio, spent part of the Civil War in Libby Prison, and was wounded at First Bull Run. This cofounder of what is now Bennett College may have introduced Ferdinand Lee Barnett to Barnett’s future wife Ida B. Wells. This author of the nationally syndicated column “A Bystander’s Notes” is profiled in a Mark Elliott biography titled for a term this man coined, “color-blind society.” In the year of his most prominent legal case, this Ohio-born lawyer successfully championed the passage of an anti-lynching bill in Ohio. This attorney, who wrote two books that drew on his experiences as a committed reconstructionist living in Greensboro, North Carolina, was hired on his most prominent case by a citizen’s committee headed by Louis A. Martinet to represent a man who was one-eighth black. The carpetbagger novels *Bricks without Straw* and *A Fool’s Errand, by One of the Fools* were written by, for 10 points, what lawyer for Homer Plessy in *Plessy v. Ferguson*?

ANSWER: Albion W. Tougee [or Albion Winegar Tourgée]

13. The bottom middle of this artwork is dominated by a curtain that hangs from a wooden frame between two sets of five allegorical panels displaying the contrasting images of, among other things, a cannon and a cloud emitting four forked bolts and a crown and a bishop’s mitre. This artwork, which exemplifies its artist’s form of perspective based on Girard Desargues’s projective geometry, appeared nine years after a similar piece by Jean Matheus that is divided into panels depicting *Libertas*, *Imperium*, and *Religio*. At the very top of this artwork is a Latin quote from Job 41:33 meaning “there is no power on Earth to be compared to him.” This artwork shows a crowned man who is holding a bishop’s crozier and a sword and whose body and arms are made up of many smaller bodies. Abraham Bosse designed, for 10 points, what engraving that adorned the original title page of Thomas Hobbes’s treatise on the “matter, form, and power of a commonwealth”?

ANSWER: frontispiece to Thomas Hobbes’s *Leviathan* [prompt on less-specific answers mentioning “*Leviathan*” such as “title page of *Leviathan*”; do not accept or prompt on answers mentioning “cover of *Leviathan*”]

14. In the opening passage, everything seems “so small . . . so near, so wet” to this character that he wants to “tuck the earth behind a stove.” This character voices the ideas of the author’s trial lecture *On Cranial Nerves* by describing an “infinite beauty that passes from form to form” in a speech opposing the “idealism” supported by Christoph Kaufmann. This character wears ash on his face and a sackcloth while attempting to revive a dead child in a nearby village. The opening pages of *Capitalism and Schizophrenia* cite a passage in which this character walks in the mountains as an example of a “schizophrenic out for a stroll.” The novella titled for this character begins with him traveling to stay with Pastor Oberlin, whose real-life diary entries about this man’s time with him provide the basis of the work. For 10 points, name this *Stumm und Drang* author whose mental breakdown is the subject of an innovative novella fragment by Georg Buchner.

ANSWER: Jakob Michael Reinhold Lenz [accept Lenz; prompt on “Jakob” or “Michael” or “Reinhold”]

15. According to one text, a mortal version of this god disguised himself as a lyre-playing musician to steal a foodstuff that gave superhuman strength because it contained the venom of three snakes. That human aspect of this god, who was famed for eloquence, helped an inarticulate king named Helgi woo Thora, the daughter of Kuse. This figure cut Mjólnir off at the hilt during a battle with Thor and wrested a magical sword and bracelet from the satyr Miming, according to the third book of the *Gesta Danorum*. In that text, Saxo portrays this god as a hero who slays his rival for the hand of Gewar’s daughter, Nanna. In a poem named for another figure’s dreams, a *völva* foretells that the giantess Rind will bear a son whose only purpose is to slay this god on the day of his birth. This figure was killed by Vali in retribution for his participation in a game where objects were hurled at a supposedly invulnerable god. For 10 points, what blind son of Odin and Frigg was tricked by Loki into using mistletoe to kill his twin brother, Baldr?

ANSWER: Hodr [or Hoder; or Höðr; or Hod; accept Hother or Hotherus]

16. The risk of hydrocarbon backstreaming in these devices has led to a shift away from the use of oil in them, both as a lubricant and as a method to transfer kinetic energy. One type of these devices uses a high voltage to trap particles as a film on a titanium “getter” plate, while the “Roots” type uses two rotors that counter-rotate cyclically without touching. The first type of these devices to have no moving parts was independently developed by Gaede and Langmuir and sprayed jets of mercury vapor from a nozzle. The weaker “roughing” type is commonly used prior to a more advanced type, such as an “ion” or “cryo” one, the latter of which traps incoming molecules by freezing them. After using the earliest type of these devices on a pair of bowls, Otto von Guericke demonstrated that teams of horses were unable to pull the bowls apart. For 10 points, name these devices that reduce the pressure inside closed chambers by removing the air.

ANSWER: **vacuum pumps** [prompt on “air pumps” or “gas pumps” or “suction pumps” or “pumps”]

17. The city of Philadelphia is the focal point of a book arguing that a group “earned” this status, using the example of the “transubstantiation” of the “revolutionary” John Binns. The argument that acquiring this status required the scapegoating of women, thus producing unease about the strict role of mothers and daughters seen as “princesses,” is central to Karen Brodtkin’s book about how another group acquired this status. In a two-volume work on the “invention” of this status, Ted Allen argued that it was created after the lack of a “sufficient intermediate stratum” became apparent in the aftermath of Bacon’s Rebellion. David Roediger wrote that holders of this status saw themselves in contrast to “anti-citizens,” and coined the term “herrenvolk republicanism” in a book titled for a phrase coined by W. E. B. Du Bois describing the “wages” of this status. Noel Ignatiev wrote a book about how the Irish attained, for 10 points, what dominant racial status in the U.S.?

ANSWER: **whiteness** [accept any answer mentioning **white** such as **white** supremacy or **white** race; accept *How the Irish Became White* or *How Jews Became White Folks and What That Says about Race in America* or *The Invention of the White Race* or *The Wages of Whiteness*]

18. John Ciardi’s poem about this event states that its subject “did it so well / we thrill to the performance” and that it is “old school custom to pretend to be sad” when we think about it. That poem about this event uses a 36-line form called *trenta-sci* that was invented by Ciardi. A poem about this event tells its addressee that “the violet; the violet; the violet was your favorite flower.” That John Logan poem about this event quotes an epitaph reading, “Here lies one whose name was writ on water.” Before this event, its subject noted how it might deprive him of “huge cloudy symbols of a high romance” and “the faery power of unreflecting love” in a sonnet that ends, “On the shore / of the wide world I stand alone, and think / till love and fame to nothingness do sink.” This event, the subject of the sonnet “When I have fears that I may cease to be,” inspired an elegy that notes how a man’s soul “beacons from the abode where the Eternal are.” For 10 points, name this event that inspired Percy Shelley’s elegy *Adonais*.

ANSWER: the **death** of John **Keats** [accept answers that refer to John **Keats** **dying** or succumbing to **tuberculosis**]

19. A film set in this country briefly switches to black and white to show mice on the moon after a group of boys tie one of the animals by its tail to a red balloon and send it up into the sky. In that film set in this country, James explores a half-built house before climbing through a window and running in a golden field beyond. A film set in this country opens with abstract circular shapes that eventually reveal a human eye as a female voice speaks random syllables that gradually form words. That film set in this country shows men removing their clothes as they approach the protagonist in a pitch-black space, only to sink into a dark pool and become husklike shells. This is the setting of Lynne Ramsay’s *Ratcatcher* and a film in which an alien disguised as a woman preys on men, Jonathan Glazer’s *Under the Skin*. A monologue in a film set in this country begins, “Choose life; choose a job; choose a career.” For 10 points, what country is the setting of Danny Boyle’s *Trainspotting*, which follows heroin addicts in Edinburgh?

ANSWER: **Scotland** [prompt on United Kingdom]

20. This group, to which the “Nihil novi” law granted the power of “common consent” sometimes translated as “nothing about us without us,” could be expanded through the procedure of *Skartabellat*. This group unsuccessfully protested against violation of the *Incompatibilia* in a rebellion derogatorily called the “Hen’s War.” At funerals for these people in the 17th and 18th centuries, hexagonal or octagonal “coffin portraits” were commonly attached to the end of the casket. This class wore a red mantle called the *kontush* and attached feathers to the front of a fur hat called a *kalpak*, fashioning itself after supposed ancient Iranian invaders of eastern Europe. This group held kings accountable for respecting the Henrician articles. These believers in “Sarmatist” ideology could invoke the *liberum veto*, part of their “Golden Liberty,” to block actions by the Sejm. For 10 points, name this legally privileged upper class in a central European “commonwealth.”

ANSWER: **szlachta** (SHLAH-tuh) [accept **Polish nobility** or **Polish-Lithuanian nobility** or similar answers indicating the **nobles of Poland**-Lithuania or **nobles of Lithuania**]

Bonuses

1. This compound can be formed when barrelene undergoes a di-pi-methane rearrangement. For 10 points each:
[10] Name this isomer of cyclo-octa-tetra-ene named for its similar structure to a fluxional molecule.

ANSWER: **semibullvalene**

[10] The mechanism of the photoconversion of barrelene to semibullvalene can be analyzed using a “scrambling” technique named for these entities, which also name a “kinetic” effect in which reaction rates change with the substitution of one of these things. Ones for hydrogen include deuterium and tritium.

ANSWER: **isotopes** [accept kinetic **isotope** effect or **isotope** scrambling]

[10] Semibullvalene is named for bullvalene, a molecule that constantly undergoes a degenerate example of this [3,3] sigmatropic rearrangement of a 1,5-diene.

ANSWER: **Cope** rearrangement

2. In this piece, the tenor prays to God to give ear to his prayer and is later accompanied by shrieking wordless women’s voices as he lists the crimes of the wicked. For 10 points each:

[10] Name this piece for tenor solo, chorus, and orchestra, written to celebrate the 50th anniversary of the union of Buda, Pest, and Óbuda.

ANSWER: ***Psalmus Hungaricus***

[10] This composer of *Psalmus Hungaricus* used a musical “sneeze” to open his *Háry János* (YAH-nosh) *Suite*. He lends his name to a method for musical education that emphasizes folk music in the mother tongue and combines solfege with hand motions to teach pitch.

ANSWER: Zoltán **Kodály** (KOH-dai)

[10] The fourth movement of the *Háry János Suite* depicts the defeat of Napoleon by turning a rousing march into a slow solo for this instrument. Maurice Ravel used this instrument to depict a troubadour singing at a castle.

ANSWER: alto **saxophone** [that Ravel piece is his orchestration of *Pictures at an Exhibition*]

3. This book notes that “John Updike worries no more about . . . his readers than does Rabbit about his women.” For 10 points each:

[10] Name this 1978 John Gardner book that set off a firestorm by attacking the shallowness of established writers such as Updike and Robert Coover and arguing that “great art [offers] a vision unmistakably and unsentimentally rooted in love.”

ANSWER: **On Moral Fiction**

[10] *On Moral Fiction* is harsh on this “innovative fictionist,” calling his novels *The Sot-Weed Factor* and *Giles Goat-Boy* “faker” than his early work and “all but unreadable.”

ANSWER: John **Barth** [or John Simmons **Barth**]

[10] In an earlier statement on the relation of fiction and morality, this author and Cleanth Brooks claimed that a story must have a “meaning in moral terms” in their textbook *Understanding Fiction*. This author defended racial segregation in “The Briar Patch,” his contribution to *I’ll Take My Stand*, but later became an integrationist.

ANSWER: Robert Penn **Warren**

4. This suburban community, originally known as “Squattersville,” inspired Curtis White’s novel *The Idea of Home*. For 10 points each:

[10] Name this Bay Area “village,” one of the first preplanned communities in the U.S., whose houses for returning World War II servicemen were mass-produced by the David D. Bohannon Company using the “California method.”

ANSWER: **San Lorenzo** Village

[10] The techniques used to construct San Lorenzo were later used by this American homebuilder, whose namesake “towns” in Pennsylvania and New York are synonymous with mass-produced postwar housing.

ANSWER: William **Levitt** [or William Jaird **Levitt**; accept **Levittowns** or **Levitt & Sons**]

[10] The construction of postwar suburbs was aided by the 1926 Supreme Court case of *Village of Euclid v. Ambler Realty Co.*, which arose from this state and held that municipal zoning was not a “taking” under the Fifth Amendment.

ANSWER: **Ohio**

5. A book by this thinker used a theological form of phenomenology developed in his country to argue that the individual and community come together via the process of “participation.” For 10 points each:

[10] Name this author of a 1969 book variously translated into English as *Person and Act* or *The Acting Person*.

ANSWER: Saint **John Paul II** [or Karol Józef **Wojtyła**; accept **John Paul the Great**; prompt on “John Paul”]

[10] John Paul II’s *The Acting Person* drew from a Polish scholarly tradition of blending phenomenology with the metaphysics of this Italian Church Doctor, a student of Albertus Magnus who distinguished essence and existence in his extensive commentaries on Aristotle.

ANSWER: Thomas **Aquinas**

[10] John Paul II commented on this aspect of the Creation, which, according to Aquinas, is present in humanity’s capacity to know and love the divine. Aquinas also wrote that this concept mentioned in Genesis was partly lost in the fall of man.

ANSWER: **image of God** [or **imago Dei**; or **tzelem Elohim**; accept any answer indicating humankind was created in **God’s image**; prompt on “image” or “imago”]

6. Cells are grown on media containing this substance to see if they have been successfully transformed. For 10 points each:

[10] Name this sugar analogue whose indole substituent, when cleaved, dimerizes to form an intense blue product visualized in the blue-white screen.

ANSWER: **X-gal** [or **BCIG**]

[10] X-gal can be used to see if a cell expresses the beta-galactosidase enzyme produced by this inducible operon.

ANSWER: **lac** operon

[10] The *E. coli* enzyme beta-glucuronidase and X-gluc are employed in this reporter gene system used to analyze promoter activity.

ANSWER: **GUS** reporter system [accept **GUS** staining]

7. One of these authors relinquished the editorship of his newspaper *The New Witness* to the other’s brother Cecil. For 10 points each:

[10] Name these two Catholic British authors whose close association and shared views, such as their anti-Semitism and advocacy of distributism, led to them often being referred to by a portmanteau of their two names. One of them dedicated his novel *The Napoleon of Notting Hill* to the other, the author of *The Servile State*.

ANSWER: G. K. **Chesterton** [or Gilbert Keith **Chesterton**] and Hilaire **Belloc** [or Joseph Hilaire Pierre René **Belloc**] [accept **Chesterbelloc**]

[10] The term “Chesterbelloc” was coined by this author, who faced off with Chesterton in a debate chaired by Belloc. This member of the Fabian Society wrote the play *Mrs. Warren’s Profession*.

ANSWER: George Bernard **Shaw**

[10] A public debate between Belloc and H. G. Wells inspired this 1925 Chesterton book, which converted C. S. Lewis to Christianity. This book’s portrayal of its title figure, Jesus, is a rebuttal to Wells’s *The Outline of History*.

ANSWER: *The **Everlasting Man***

8. Two players of this instrument collaborated on the album *The Great Kai & J.J.* For 10 points each:

[10] Name this brass instrument. The appropriately named “Slide” Hampton also plays this instrument.

ANSWER: **trombone**

[10] The previously mentioned Kai Winding spent his early career in this bandleader’s ensemble. This man liked to call his music “progressive jazz,” and most high school jazz programs today are still modeled after his Band Clinics.

ANSWER: Stan **Kenton**

[10] Kenton’s band scored a hit with a cover of a Cuban song about a “Vendor” of these things. They also appear in the name of a Dizzy Gillespie song with a recurring octave jump.

ANSWER: **peanuts**

9. This historian appears to have popularized the idea that servants at the Banquet of Chestnuts kept score of participants' orgasms. For 10 points each:

[10] Name this American biographer whose 1992 history of medieval Europe, *A World Lit Only by Fire*, spread what one reviewer referred to as "some of the most gratuitous errors of fact" he had ever seen.

ANSWER: William **Manchester** [or William Raymond **Manchester**]

[10] Manchester fancifully claimed that this notorious pope, whose son, Cesare, ran the banquet, handed out prizes for the most sexually virile participants after the feast was over.

ANSWER: **Alexander VI** [or **Rodrigo Borgia**; or **Rodrigo de Borja**; prompt on "Alexander"]

[10] Manchester also, without any evidence, claimed that a psychopathic pedophile kidnapped and killed 130 children from this German town in 1484. A book about that incident in this town by Wolfgang Mieder stated that its missing children might instead have helped settle Transylvania.

ANSWER: **Hamelin** [or **Hammel**]

10. A paper titled for the "strength" of these concepts is, at over 47,000 citations, among the most cited in the social sciences. For 10 points each:

[10] Name these concepts that, according to the sociologist Mark Granovetter, are chiefly responsible for the "embeddedness" of an individual within a social network.

ANSWER: **weak ties** [or **weak social ties**; accept "The **Strength of Weak Ties**"; prompt on "social ties"]

[10] A classic 1974 Granovetter book studies the process by which 282 Americans use their social ties to engage in networking and achieve this goal, a process social scientists now study using data from Monster and LinkedIn.

ANSWER: getting a **job** [accept any answer indicating **job** or **career** seeking or getting **hired**; accept **Getting a Job**]

[10] The "weak ties hypothesis," under which individuals A and B will likely have a weak tie to one another if they both have strong ties to individual C, was proposed by this social scientist and game theorist who published the 1963 paper "Mathematical Models of Social Interaction" while teaching at the University of Michigan.

ANSWER: Anatol **Rapoport** [or Anatoly Borisovich **Rapoport**]

11. Unlike coma and the other Seidel aberrations, this effect occurs even for objects on the optical axis. For 10 points each:

[10] Name this optical aberration in which lenses fail to focus all incoming rays to a single point due to the lenses' curvature.

ANSWER: **spherical** aberration

[10] Like astigmatism, spherical aberration is classified as an aberration of this order because this is the lowest order at which the effect appears in the Taylor series expansion of Snell's law.

ANSWER: **third** order [or order **3**]

[10] To minimize spherical aberration, or astigmatism, the image screen can be moved to this position, at which point the diameter of the blurred image is at a minimum.

ANSWER: **circle of least confusion** [or **dioptic midpoint**]

12. During the Georgian period, these items were sometimes advertised as "walnut cottages." For 10 points each:

[10] Name these items that, in the Victorian era, came to symbolize domestic respectability, such that many women became proficient in their use. Arthur Loesser wrote a "social history" titled for "men, women," and these items.

ANSWER: **pianos** [or **pianoforte**]

[10] Johannes Zumpe introduced the piano to this city, where a "pianoforte school" grew up to write music primarily for amateur female players. Piano makers clustered in Camden Town north of Charing Cross in this city.

ANSWER: **London**

[10] The piano's explosion in popularity in England was partly due to this manufacturer, a former apprentice to Swiss harpsichord maker Burkard Shudi. This man's namesake company invented the square piano in the late 1700s and gifted a model to Ludwig van Beethoven.

ANSWER: John **Broadwood** [accept John **Broadwood** & Sons]

13. This company's founder was killed in a 1967 plane crash while en route to marrying for what would have been the 23rd time. For 10 points each:

[10] Name this company that grew exponentially after its founder was rewarded with an exclusive government contract for offering financial support during a successful 1964 coup attempt.

ANSWER: Saudi **Binladin** Group

[10] The Binladin Group made good on its exclusive government contract in the 1960s construction of Highway 15, which connected Yemen to this city. Osama Bin Laden was incensed by rumors that the Saudis allowed French special forces to enter this city's Grand Mosque to expel radical occupiers in 1979.

ANSWER: **Mecca** [or **Makkah**]

[10] Until the late 1960s, the Binladin Group had the exclusive contract to renovate this holy site, a mosque that shares its name with a militant wing of the Fatah Party.

ANSWER: Al-**Aqsa** Mosque [or Al-Masjid al-**Aqsa**; accept Al-**Aqsa** Martyrs' Brigade or Kata'ib Shuhada al-**Aqsa** or Masjid **Bayt al-Maqdis**; prompt on "Farthest Mosque" or "Mosque of the Holy City"]

14. In a poem titled for a journey of this kind, the speaker sees his "own image on the gallows tree" and implores Venus to "give me strength to contemplate / my own heart, my own body without hate." For 10 points each:

[10] Name this type of journey that a poet claimed leads to knowledge that makes the world "an oasis of horror in a desert of boredom." A third poem about one of these journeys describes a place that is "abundant, calm, voluptuous."

ANSWER: **voyage**; [accept "**Invitation to the Voyage**" or "The **Voyage**" or "**Voyage to Cythera**"]

[10] The poems "Voyage to Cythera," "The Voyage," and "Invitation to the Voyage" all appeared in the 1861 edition of this book of poetry by Charles Baudelaire.

ANSWER: *Les **Fleurs du mal*** [accept *The **Flowers of Evil***]

[10] Baudelaire's "The Swan" opens by telling this mythical woman, "I think of you!" The speaker informs her that the "false Simois swollen by your tears" made him see that "Old Paris is no more" as he crossed the new Carrousel.

ANSWER: **Andromache**

15. To illustrate these constructs, the author applies them to Baron Liebig's investigations of death by metal poisoning. For 10 points each:

[10] What five tools for identifying causal relationships consist of ones of "agreement," "difference," "concomitant variations," and "residues" and a "joint" one that combines "agreement and difference"?

ANSWER: John Stuart **Mill's methods** [or John Stuart **Mill's canons**; accept answers mentioning **methods** or **canons** and John Stuart **Mill** or *A **System of Logic***; prompt on "**methods**" or "**canons**"]

[10] The "method of agreement" introduced in Mill's *A System of Logic* is aimed at showing that a condition has this property, while the "method of difference" is aimed at establishing a "sufficient" condition. A condition that is both this and sufficient creates an if and only if relationship.

ANSWER: **necessary** [accept **necessity**]

[10] *A System of Logic* lays out Mill's "direct reference" theory of these terms, which holds that the meaning of one of them is only its referent. Saul Kripke disputed the "descriptivist" theory of these terms, which associates their meaning with a collection of descriptions.

ANSWER: **names**

16. This theorem is proven by taking two arbitrary states, applying the same unitary operation to both, and showing that the two states originally must have been either orthogonal or identical to each other. For 10 points each:

[10] Identify this theorem that states that duplicating arbitrary quantum information is impossible.

ANSWER: **no-cloning** theorem [or **no-clone** theorem; prompt on "**no-go** theorem"]

[10] The no-cloning theorem is typically applied to these units of quantum information. These quantum analogs of bits are often visualized with the Bloch sphere.

ANSWER: **qubits**

[10] To recover information in qubits distorted by quantum noise, this mathematician devised one of the first quantum error-correcting codes. His namesake algorithm can factor large integers and thus break RSA cryptography in polynomial time.

ANSWER: Peter **Shor** [accept **Shor's** algorithm or **Shor's** codes]

17. This lecture examines how “language is actually employed to keep thought at bay” in the use of phrases like the “American people.” For 10 points each:

[10] Identify this speech published as *Art, Truth, and Politics* that was videotaped for a 2005 ceremony that its speaker was not able to attend. This lecture’s excoriation of American foreign policy is emblematic of its British author’s late political activism.

ANSWER: Harold **Pinter**’s **Nobel** Lecture

[10] Pinter’s lecture repeats the phrase “we were assured that was true; it was not true” in discussing the justifications for British involvement in this conflict. David Hare, who introduced Pinter’s lecture on British TV, wrote a play about this 2003 conflict titled *Stuff Happens*.

ANSWER: **Iraq** War [or War in **Iraq**; or Occupation of **Iraq**; or Operation **Iraqi Freedom**; accept answers such as **Second Gulf War** or **Gulf War II**; do not accept or prompt on “**Gulf War**”]

[10] Thomas Ostermeier used Fallujah, Iraq, as the setting for his 2005 staging of this 1995 Sarah Kane play set in a hotel room in a war zone. This play’s infamous scenes include one in which an unnamed soldier sucks Ian’s eyeballs out and eats them.

ANSWER: ***Blasted***

18. In 2012, this man was hired to study and manage the virtual economies of Valve’s video games. For 10 points each:

[10] Name this author of *The Global Minotaur*, whose 2017 book *Adults in the Room* discussed his difficulties in coming to agreements with fellow finance ministers in the European Union.

ANSWER: Yanis **Varoufakis** [or Ioannis Georgiu **Varoufakis**]

[10] Varoufakis served as Greece’s finance minister for about seven months under this political party, formed from a left-wing coalition and led by Alexis Tsipras, which failed to accomplish its election goals of ending EU-imposed austerity.

ANSWER: **Syriza** [or **Coalition of the Radical Left**; or **Synaspismós Rizospastikís Aristerás**]

[10] This country is the title “global minotaur” of Varoufakis’s 2011 book. Varoufakis traces the precarity of the world economy to this country assuming a dominant role in the Bretton Woods arrangement, which was thrown into chaos when this country abandoned the gold standard in 1971.

ANSWER: **United States** of **America** [accept either underlined portion; accept **U.S.A.** or **U.S.**]

19. The American-born salon painter Elizabeth Jane Gardner married this painter and adopted his typical subjects, stating that she’d “rather be known as the best imitator of [this man] than be nobody.” For 10 points each:

[10] Name this French painter, a contemporary of Alexandre Cabanel, whose 1896 work *The Wave* is exemplary of one of his favored genres, namely, nude women on the seashore.

ANSWER: William-Adolphe **Bouguereau**

[10] Bouguereau and Cabanel were prominent members of this largely French artistic movement, named for the formal schools where most of its members studied and taught..

ANSWER: **academic** art [or **academism**; or **academicism**; accept word forms of **academic** or **academism** or **academicism** such as **academists**]

[10] Critics savaged academism by labeling it as this kind of “art.” The use of this French term derived from the fact that certain public safety officials in France wore headgear similar to the Attic helmets shown in academic art.

ANSWER: L’art **pompier** [prompt on “**fireman** art”]

20. A folk figure associated with this holiday wanders the mountains blessing the shepherds’ flocks and once blinded a servant for a year for spying on his master’s family by hiding in a stove. For 10 points each:

[10] Name this holiday on which Frau Perchta visits homes in the Alpine countryside with her retinue of unbaptized children, punishing the wicked by cutting open their bellies. In other traditions, bad children are punished on this holiday by Black Peter and the Krampus.

ANSWER: **Christmas** [accept Twelve Days of **Christmas** or **Advent** or **Christmas Day** or **Christmas Eve**]

[10] Perchta, like her northern counterpart Holda, was a patron of this craft and was often encountered with a golden tool used for it. The Norse goddess Frigg was famed for her skill in this craft, through which she made the clouds.

ANSWER: **spinning** or **weaving** [accept any answer indicating **textile creation** such as **knitting**]

[10] This mountain spirit from Silesian folklore is said to live in the Riesengebirge. He got his name after abducting a local princess and giving her a magic wand that let her turn turnips into companions.

ANSWER: **Rübezahl** [accept **Liczyrepa** or **Duch Gór** or **Rzepiór** or **Rzepolicz** or **Karknosz** or **Krakonos**]