1. He wrote a series of paraphrases of operas for solo piano, condensing “Deh! Non volerli” and “Ite sul coile” into the coda of his reinterpretation of Bellini’s *Norma*. He created the term “symphonic poem” to describe his works like *Les Preludes* and (*) *Mazeppa*, and he opened his *Faust Symphony* without a key. He wrote twelve *Transcendental Etudes*, and nineteen works that include an interpretation of the “Rakoczy March” and are mostly based on gypsy songs. For 10 points, name this composer of the *Hungarian Rhapsodies*.

ANSWER: Franz Liszt [or Ferenc Liszt]

2. This author wrote about Keawe, a Hawaiian who buys a magic wish-granting bottle on the stipulation that he must sell it for less than he bought it for, in his story “The Bottle Imp.” He focused on family rivalries, such as between Archie and Lord Hermiston and Henry and James Durie, in novels like *The* (*) *Master of Ballantrae*, and he wrote the poetry collection *A Child's Garden of Verses*. Another of his novels begins at the Admiral Benbow Inn, where Billy Bones is given the Black Spot by Long John Silver. For 10 points, name this author of *Treasure Island*.

ANSWER: Robert Louis Stevenson

3. This process’s effect on band broadening in column chromatography is given by the van Deemter equation. For a suspension liquid, the translational coefficient of this process is inversely proportional to the particle diameter according to the Stokes-Einstein relationship. A collection of (*) random walks spreads out through the normal type of this process, and Fick devised two laws governing this process. For 10 points, name this process in which the random motion of particles results in a flow of matter from regions of high concentration to low concentrations.

ANSWER: diffusion

4. The League of Nations settled its dispute over the town of Leticia in this country’s favor in 1934. This nation evolved out of a confederation known as Granadina, and the assassination of this country’s leftist leader Jorge Eliecer Gaitan in 1948 led to a period of unrest known as La Violencia. (*) Panama seceded from this country in 1903, and it is home to current civil unrest from the ELN and FARC rebel groups. For 10 points name this South American country whose Medellin drug cartel was broken in 1993.

ANSWER: Colombia

5. Ophion and Eurynome lived here before the Titanomachy, and Ares was trapped in a jar during a war over control of this place. Otus and Ephialtes tried to reach it by stacking Ossa on top of Pelion, but were fought off by Apollo. Castor and Pollux each spend half their time in Hades and half (*) here, and Bellerophon was killed by being thrown off Pegasus by a gadfly while trying to reach this place. Hephaestus took an entire day to fall off of, for 10 points, what namesake of twelve principal Greek gods, a mountain where such gods lived?

ANSWER: Mount Olympus
6. This person would have come to power earlier had the Wyatt Rebellion succeeded, and her eventual rule saw the passage of the Thirty-Nine Articles of Religion. Thanks to the spying of her agent Francis Walsingham, the Throckmorton, (*), Ridolfi, and Babington plots all failed in their attempts to replace this ruler with the Catholic Mary, Queen of Scots. She also declared that she had the “heart and stomach of a king” while rallying resistance to the Spanish Armada. For 10 points, name this “virgin queen” of sixteenth-century England.
ANSWER: Elizabeth I [prompt on Elizabeth]

7. One of the works of this painter of the Doni Tondo depicts a woman holding a scroll called the Delphes Sylphide, and that work also depicts the separation of light and darkness. Another of his paintings has a self-portrait in flayed skin and shows the final separation between the righteous and the sinners. This painter of The (*) Last Judgment sculpted a gigantic Virgin Mary holding the body of the dead Christ, and painted a work in which God’s finger touches Adam’s. For 10 points, name this artist of the Pietà and the Sistine Chapel ceiling.
ANSWER: Michelangelo Buonarrotti [accept either]

8. Its power to the square of charge acceleration in relativistic systems is given by its namesake Larmor formula. A blue cone of light appears as a particle goes supra-luminal in the Cherenkov variety of it, while the amount of energy emitted by an object due to it is proportional to the (*) fourth power of absolute temperature via Stefan’s Law. Also coming in an electromagnetic variety, it can propagate through the vacuum of space. For 10 points, identify this type of energy transfer often contrasted with conduction and convection.
ANSWER: radiation [accept Cherenkov radiation before “Cherenkov”]

9. After this event, Louis Lingg killed himself with a small dynamite cap. Events leading up to this occurrence were organized by August Spies and Albert Parsons. Judge Joseph Gary sentenced five to be executed for the murder of Mathias Degan at this event, but others involved were later pardoned by John (*) Altgeld. This event led to national distrust of the Knights of Labor after a strike at the McCormick Harvesting Machine Company. For 10 points, name this 1886 event in which anarchists were convicted of the death of eight policemen in a Chicago Square.
ANSWER: Haymarket Square Riot

10. During performances of this opera at the Met in the 1880s, conductor Artur Bodanzky replaced most of the spoken dialogue with recitatives. This opera opens with a duet between Marcellina and Jacquino, while a jailer named Rocco is among those who participate in the quartet "Mir ist so wunderbar." The title character is actually a (*) woman named Leonora who attempts to rescue her husband Florestan from prison. Composed the same year as the Kreutzer Sonata and Eroica Symphony, for 10 points, name this only opera by Ludwig van Beethoven.
ANSWER: Fidelio

11. This organelle is the site of p53 localization due to proteasome inhibition. Spliceosomal RNA is regulated by the small RNA found here. During mitosis, the components of this structure are synthesized from chromosomal organizer regions, and this structure coalesces from ten smaller structures after cell division. It contains (*) fibrillar centers and the protein fibrillarin, which is involved in ribosomal RNA processing. For 10 points, name this organelle in which components of ribosomes are assembled, found within the nucleus.
ANSWER: nucleolus
12. One character in this novel is fatally bitten by a snake after having a child with the protagonist. That character is the courtesan Kamala, who teaches the protagonist how to love before he meets a merchant and becomes wealthy. However, he isn’t truly happy until he learns the message of the (*) river after living with Vasudeva the Ferryman. For 10 points, name this novel about a friend of Govinda who seeks enlightenment, a work by Herman Hesse in which the protagonist shares his first name with the Buddha.
ANSWER: Siddhartha

13. In graph theory, this man lends his name to a closed path that traverses every edge precisely once. The topological formula named for this man states that faces minus edges plus vertices equals two for any polyhedron, giving the surface a value of two for his namesake characteristic. Another equation named for him relates the complex (*) exponential function to cosine of x plus i times sine of x. For 10 points, identify this namesake of a “phi” function, a prolific Swiss mathematician for whom the number e was supposedly named.
ANSWER: Leonhard Euler

14. One novel set in this place features Earle Shoop and Miguel, who camp out in a garage with a roost of fighting cocks. That novel set in this place sees a child named Adore trampled as Faye Greener tempts Tod Hackett and Homer Simpson. Another novel set here involves an affair with Kathleen Moore and a plane crash that occurs before (*) Monroe Stahr can call off a murder. This locale is the setting of The Day of the Locust and The Last Tycoon. For 10 points, name this place where Holden Caulfield’s brother D.B. goes to be a screenwriter, a movie-making Mecca.
ANSWER: Hollywood [prompt on Los Angeles; prompt on Southern California]

15. The national park named for this feature also contains Rattlesnake Springs, and it was formed from remnants of the Capitan Reef. Explored by Jim White, this place is near Lechugilla Cave as well as the home of The Monarch, Slaughter Canyon Cave. Its own features include the (*) Witch’s Finger, the Rock of Ages, and the Bottomless Pit in places like the Queen’s Chamber and the Big Room. For 10 points, name this cave system famous for its bat flight, located in southeastern New Mexico.
ANSWER: Carlsbad Caverns National Park

16. One character in this work speaks in place of another due to the latter’s slow recovery from a spell of hiccups. Eryximachus claims that the central concept of this work governs gymnastics and astronomy, and another character in this work discusses how Zeus (*) chopped people in half then stitched up skin. In addition to featuring Aristophanes and the traitor Alcibiades, the question “is love somebody or nobody” is posed by Socrates. For 10 points, name this Platonic dialogue about love, titled after Agathon’s drinking party.
ANSWER: the Symposium

17. Two foreign “traitors” during this period were Jacques Margeret and Jakob Pontusson de la Gardie, the latter of which lost the Battle of Kleshino. One leader during this period was assassinated at his wedding to Marina Mniszech, while another put down a rebellion at Vosma. Sigismund III Vasa invaded during this period, which saw three men (*) pretend to be Prince Dmitri as well as the reign of Boris Godunov. For 10 points, name this dark period in Russian history, which ended with the accession of Mikhail Romanov as tsar.
ANSWER: the Time of Troubles [or Smutnoye Vremya]
18. This man’s recent contributions to his academic field include a relationship of “government and binding” that he adapted into his “Minimalist Program.” This man studied under Zelig Harris at the University of Pennsylvania and is the namesake of a hierarchy of formal (*) grammars. He also created a sentence that is grammatically correct yet completely meaningless, “Colorless green ideas sleep furiously,” in a work about transformational grammar, Syntactic Structures. For 10 points, name this MIT professor of linguistics.
ANSWER: Avram Noam Chomsky

19. Books in this language include Jagua Nana and Heavensgate, by Cyprian Ekwensi and Christopher Okigbo, respectively. Amos Tutuola used a pidgin variety of it in The Palm-Wine Drinkard. Another author used this language to write novels about the industrialist Mehring and the family of Maureen Smales, The (*) Conservationist and July’s People. For 10 points, name this language used by Nadine Gordimer, the primary language of South Africa.
ANSWER: English

20. Oliver Goldsmith's poem "The Deserted Village" is the source of one of this team’s monikers, the Plainsmen. Pat Sullivan was this school’s first Heisman Trophy winner, and this school won the 1957 national title under Coach Shug Jordan. Terry Bowden coached an undefeated season here in 1993, and this school had another undefeated season in (*) 2004. They ended a coaching search in December 2008 with the hire of Iowa State’s Gene Chizick. For 10 points, name this school of Charles Barkley and Bo Jackson that plays Alabama in the Iron Bowl.
ANSWER: Auburn University

21. He wrote about his “cradled infant” sleeping while the title object performs “its secret ministry” in one poem. In another of his works, Geraldine discusses her abduction by five knights. Those poems are “Frost at Midnight” and Christabel. One of his poems was interrupted by a (*) “person from Porlock” and discusses the sacred Alph running near a “stately pleasure dome” that was decreed in Xanadu. Another of his poems sees a wedding guest listen to a man who killed an albatross. For 10 points, name this author of “Kubla Khan” and “The Rime of the Ancient Mariner.”
ANSWER: Samuel Taylor Coleridge

22. This man arbitrated a dispute between Philip of Swabia and Otto IV, and he wrote the tract De contemptu mundi. He was trained by his uncle and predecessor Celestine III, and he attempted the fait accompli and blessed the Fourth Crusade. He called the Fourth (*) Lateran Council, and he sent Pandulf to be his legate in England and saw to the election of Stephen Langton as archbishop of Canterbury. For 10 points, name this pope of the Middle Ages who excommunicated King John, the third of his name.
ANSWER: Innocent III [or Lotario di Segni]

23. Slater determinants are used to ensure a system obeys this principle, and Oscar Greenberg proposed the concept of color to account for it. White dwarfs are prevented from collapsing into black holes by electron degeneracy pressure, a consequence of this principle. It only applies to particles with antisymmetric wave functions, and thus, (*) bosons are not governed by this principle, while fermions are. For 10 points, name this principle that results in no two electrons being able to occupy identical quantum states.
ANSWER: Pauli exclusion principle
1. Their only trip to the World Series was in 1982, when they were led by Hall-of-Famers such as Paul Molitor and Robin Yount. For 10 points each:
[10] Name this major league baseball franchise that switched from the American League to the National League in 1998.
ANSWER: Milwaukee Brewers [accept either part]
[10] The Brewers finally made it back to the playoffs last season, thanks in large part to their midseason acquisition of this 2007 AL Cy Young from the Cleveland Indians.
ANSWER: Carsten Charles [C.C.] Sabathia
[10] Sabathia’s Brewers were aided by a competent offensive attack, led by this starting left fielder who is nicknamed “The Hebrew Hammer.”
ANSWER: Ryan Braun

2. The speaker of this poem yearns for "A Jug of Wine, a Loaf of Bread--and Thou / Beside me singing in the Wilderness." For 10 points each:
[10] Name this collection of quatrains translated into English by Edward Fitzgerald.
ANSWER: the Rubaiyat
[10] The Rubaiyat was written by this Persian mathematician and poet.
ANSWER: Omar Khayyam
[10] This other Persian poet recounted the history of Iran in his epic poem Shahnameh.
ANSWER: Ferdowsi

3. Works by this anthropologist include The Mind of Primitive Man and Race, Language, and Culture. For 10 points each:
[10] Name this German-born anthropologist and professor of anthropology at Columbia University, where he taught numerous other anthropologists.
ANSWER: Franz Boas
[10] This student of Boas wrote Patterns of Culture, Zuni Mythology, and a work in which she examined Japanese culture through interviews at internment camps, The Chrysanthemum and the Sword.
ANSWER: Ruth Fulton Benedict
[10] Another student of Boas, he studied Native Americans like Ishi, the last Yahi Indian, and wrote Anthropology.
ANSWER: Alfred Kroeber
4. Name these eccentric Roman emperors, for 10 points each.

[10] He probably didn’t try to name his horse Inctatus consul, but this emperor known as “little boots” did ride across the Bay of Baiae while wearing the breastplate of Alexander the Great.

ANSWER: Caligula [or Gaius Julius Caesar Augustus Germanicus]

[10] The claim that this successor to Claudius fiddled during the fire of Rome is false, but he did insist on performing in public as a singer and had his mother Agrippina the Younger killed.

ANSWER: Nero Claudius Caesar Augustus Germanicus [or Nero Claudius Caesar Drusus Germanicus; prompt on Lucius Domitius Ahenobarbus]

[10] This emperor of the Severan dynasty was famed for sexual liaisons with both women and men, and he changed his name to that of the Syrian sun god that he worshiped.

ANSWER: Elegabalus [or Heliogabalus; or Marcus Aurelius Antoninus; or Varius Avitus Bassianus]

5. They are located outside the city of Ica and can be found on the Pampa Colorada. For 10 points each:

[10] Name this collection of geometric shapes and images such as a killer whale, condor, and hummingbird that were etched into the earth by a South American pre-Columbian culture.

ANSWER: Nazca Lines

[10] The Nazca Lines are located south of Lima in this present-day South American country.

ANSWER: Peru

[10] Located on the Altiplano of the Andes on the border between Peru and Bolivia is this lake, which contains Isla del Sol and the Cordillera Real on its northeastern shore.

ANSWER: Lake Titicaca

6. One of the title characters of this work has a heart-to-heart with her mother Bessie while reading a letter from Buddy in the bathtub. For 10 points each:

[10] Name this work titled after two members of the Glass family.

ANSWER: Franny and Zooey

[10] This novel sees the disillusioned Holden Caulfield rail against phonies and look after his sister Phoebe.

ANSWER: The Catcher in the Rye


ANSWER: Jerome David [J.D.] Salinger

7. Name some constructs used in computer science, for 10 points each.

[10] These data structures come in AVL and red-black types. The base node is the “root,” while nodes with no children are “leaves.”

ANSWER: trees

[10] Often used to implement priority queues, these structures are trees in which the root node always has either the minimum or maximum for some key. They are central to a type of sort.

ANSWER: heaps

[10] These constructs are used to traverse the elements of a collection in some arbitrary order. In Java, they are implemented using an interface with “next” and “has next” methods.

ANSWER: iterators
8. Name these autosomal recessive diseases, for 10 points each.
[10] In this disorder, abnormal hemoglobin causes deformation of red blood cells, which become lodged in blood vessels. Being a heterozygote for this disease confers resistance to malaria.
ANSWER: sickle-cell anemia [or sickle-cell disease]
[10] In this disorder, a mutation in a transmembrane conductance regulator gene leads to defective chloride channels in epithelial cells. The result is excessive mucus in the lungs.
ANSWER: cystic fibrosis [or CF]
[10] The autosomal recessive Usher syndrome is characterized by this disability, also occurring when meningitis attacks the cochlea.
ANSWER: deafness [accept clear knowledge equivalents like hearing loss]

9. This opera features the tenor aria “Di rigori armato il seno.” For 10 points each:
[10] Name this opera in which Octavian cross-dresses to fool Baron Ochs and marry Sophie Faninal.
ANSWER: Der Rosenkavalier [accept The Cavalier of the Rose]
[10] Der Rosenkavalier was written by this composer of the operas Elektra and Salome as well as the tone poem Also Sprach Zarathustra.
ANSWER: Richard Strauss [prompt on Strauss]
[10] This Austrian dramatist provided the libretto for Der Rosenkavalier as well as many other Strauss operas, including Elektra and Ariadne auf Naxos.
ANSWER: Hugo von Hofmannsthal

10. He gave the “Swing around the Circle” speeches against radical Republicans. For 10 points each:
[10] Name this vice president under Lincoln and seventeenth president, who was impeached in 1868.
ANSWER: Andrew Johnson
[10] Johnson was impeached after removing Edwin Stanton in violation of this act, by which the Senate had to approve the removal of people appointed by the president.
ANSWER: Tenure of Office Act
[10] This final rogue Republican voted to acquit Johnson. His courage was profiled by John F Kennedy.
ANSWER: Edmund Gibson Ross

11. Voltage lags ninety degrees behind current in these devices. For 10 points each:
[10] Name these circuit components that contain a dielectric material between two parallel conductors and are used to store charge.
ANSWER: capacitors
[10] When a capacitor is put into series with an inductor, forming a tank circuit, current alternates between the two in the electric form of this phenomenon often seen in standing waves.
ANSWER: resonance
[10] Capacitors are used to smooth the output of these circuits that use diodes to convert AC to DC.
ANSWER: rectifiers
12. This man painted a black Star of David in the middle of a work that also includes crosses and a small person standing in the bottom, *Temple Gardens*. For 10 points each:

[10] Name this Swiss painter of a series of birds on top of a handcrank entitled *Twittering Machine*.
ANSWER: Paul Klee
[10] This other surrealist painted melting clocks in his *The Persistence of Memory*.
ANSWER: Salvador Felipe Jacinto Dali y Domenech
[10] This other Spanish surrealist painted a red stripe and a series of black dots as part of his *Blue* series. He also painted *Dog Barking at the Moon*.
ANSWER: Joan Miro

13. This book was compiled in 1086 and recorded data from most English towns. For 10 points each:

[10] Name this census of England that attempted to assess economic resources for accurate taxation.
ANSWER: *Domesday Book* [or *Doomsday Book*; accept both with “books” instead of “book”]
[10] The Domesday Book was ordered by this English king, the illegitimate son of Robert I and the victor at Hastings.
ANSWER: William I [or *William the Conqueror*; or *William the Bastard*]
[10] William the Conqueror’s victory at Hastings was aided by the fact that Harold I had fought this battle against Harold Hardrade just a few weeks before.
ANSWER: Battle of *Stamford Bridge*

14. Just before this event, Loki breaks free from his prison and leads a ship out of hell. For 10 points each:

[10] Name this “doom of the gods” in Norse mythology, which is preceded by three winters.
ANSWER: *Ragnarok*
[10] This figure, the ruler of Muspellheim, leads the army that breaks Bifrost during Ragnarok and duels with Freyr during the battle.
ANSWER: Surt
[10] Surt leads this type of giant, the inhabitants of Muspellheim. At the court of Utgard-Loki, Loki has an eating contest against this entity.
ANSWER: fire giants

15. This man allied with 1953’s Operation Ajax, which restored his power and curtailed the abilities of the Majlis to nationalize the oil industry. For 10 points each:

[10] Name this ruler of Iran who was overthrown by the 1979 revolution.
ANSWER: Mohammad Reza Shah Pahlavi [prompt on partial answer; prompt on *Shah* or *Pahlavi*]
[10] This nationalist prime minister was deposed in Operation Ajax by a US-British initiative led by Kermit Roosevelt.
ANSWER: Mohammed Mossadeq
[10] The 1979 revolution was quickly given an Islamic character by this figure, who served as “Supreme Leader” of Iran until his 1989 death.
ANSWER: Ayatollah Sayyid Ruhollah Musavi Khomeini
16. This play ends with the title character ascending to heaven along with Good Deeds. For 10 points each:

[10] Identify this medieval play about the title character’s allegorical journey and reckoning before God.
ANSWER: Everyman

[10] Everyman and The Castle of Perseverance are both examples of this genre of plays, which used allegories to teach Christian principles.
ANSWER: morality plays

[10] This other genre of medieval plays narrated the life of Christian saints, such as St. Nicholas and the Virgin Mary.
ANSWER: miracle plays

17. In this novel, Canivet has to amputate Hippolyte’s club foot. For 10 points each:

[10] Name this novel in which the title character cheats on her country doctor husband with Leon and Rudolphe.
ANSWER: Madame Bovary

[10] This author of Bouvard et Pécuchet and The Temptation of St. Anthony wrote Madame Bovary.
ANSWER: Gustave Flaubert

[10] Flaubert also wrote Salammbô, a novel about this ancient city-state. Saint Augustine’s Confessions contains the passage, “To [this place] I came.”
ANSWER: Carthage

18. Mariotte is sometimes credited as a secondary namesake of this law, whose primary namesake authored The Sceptical Chymist. For 10 points each:

[10] Name this law, which states that in a closed system with constant temperature, pressure and volume are inversely proportional.
ANSWER: Boyle’s law

[10] Avogadro formed the basis for his own law from one law of this Frenchman, who stated that ratios between combining volumes and their products are small whole numbers.
ANSWER: Joseph Louis Gay-Lussac

[10] This other gas law relates the square root of the ratio of molar masses of two gases to how quickly one can effuse through a small pore compared to the other.
ANSWER: Graham’s law of effusion

19. He is known as the Master of the Good Name, and his legends were passed down orally through Chassids. For 10 points each:

[10] Name this Tzadikim and Jewish Rabbi, the founder of Hasidism.
ANSWER: Baal Shem Tov [or Yisroel ben Eliezer; or Besht]

[10] Baal Shem Tov was responsible for reforming this esoteric Jewish mysticism that was derived from Merkava mysticism and is recounted in the Books of Brightness and Creation.
ANSWER: Kabala [or Cabbalah]

[10] According to Baal Shem Tov, every person was a complete spiritual one of these in his own right. It represents God's revealed law given in the first five books of the Old Testament.
ANSWER: Torah [or Pentateuch; or Five Books of Moses]
20. He wrote the essay collection *Silence*, in which he discusses his experience in a hyperbaric chamber still being able to hear a tiny bit of sound. For 10 points each:

[10] Name this composer of aleatoric music who is probably most recognizable for writing “Four Minutes and Thirty-Three Seconds,” a piece made up of total silence.
ANSWER: John Cage

[10] John Cage is notable for writing music for the “prepared” kind of this instrument, in which found objects are placed inside of it. It has 88 keys, some white, some black.
ANSWER: piano

[10] Cage wrote five pieces with this name, one of them for tape, the second for turntables, and the fourth for twelve radios with performers changing the volume and wavelength.
ANSWER: Imaginary Landscapes

21. A pair of angles that add up to this are known as supplementary. For 10 points each:

[10] Identify this angle which is also the sum of the three interior angles of any triangle.
ANSWER: 180 degrees [or pi radians; prompt on “180”]

[10] As angles always sum to 180 degrees, two triangles have this property if and only if at least two of their angles are the same. It is similar to congruence, but it allows for scaling.
ANSWER: similarity [accept similar triangles]

[10] This is the intersection of a triangle’s three median lines. In a uniform-density physical object, it corresponds to the center of mass.
ANSWER: centroid [accept barycenter]

22. This group’s goal was to establish a “Räterepublik.” For 10 points each:

[10] Name this association of German Communists, which launched a namesake 1919 revolt in Berlin under such leaders as Clara Zetkin, Karl Liebknecht, and Rosa Luxemburg.
ANSWER: Spartacists [or Spartacus League; or Spartakusbund]

[10] In 1923, another abortive German revolt occurred. This Nazi action started in the namesake establishment and was led by Erich Ludendorff and Adolf Hitler.
ANSWER: Beer Hall Putsch [or Bierkeller Putsch; or Munich Putsch]

[10] The Beer Hall Putsch occurred in this Bavarian city, the home of the Wittelsbach kings.
ANSWER: Munich

23. The title character kills Lensky in a duel over Tatiana. For 10 points each:

[10] Name this long Russian poem.
ANSWER: Eugene Onegin

[10] This author of *The Stone Guest* and *The Queen of Spades* wrote Eugene Onegin.
ANSWER: Alexander Sergeyevich Pushkin

[10] In this Pushkin work, a statue of Peter the Great by Falconet starts chasing the protagonist after the Neva floods.
ANSWER: The Bronze Horseman