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Toss Ups:

1. Pakistan's Atomic Energy Commission produced the NIAB78 mutant of this crop, which is cited as one of the most successful radiation-induced crop mutants. Fungi in the *Ascochyta* genus causes wet weather blight in this crop. The upland type of this crop, with species name *hirsutum*, accounts for 90% of the world's production of this crop and is a (*) "New World" variety of it. The cellulose-based fibers that make up the useful part of this crop are contained in a hard shell called a boll. For 10 points name this crop used to make the most widely used natural fiber, which can have its fibers separated from its seeds with a gin invented by Eli Whitney.
ANSWER: cotton [accept Gossypium] <Taylor/Ed. JS>

2. The term "carnavalesque" and the concept of the grotesque body are discussed in a critical work named for this author written by Mikhail Bakhtin. In a novel by this author, a character's indecision on whether or not to marry leads to a sea journey to find the Oracle of the Bottle. In that five-part novel by this author, one of the title characters constructs a chaotic abbey featuring a swimming pool, whose only rule is (*) "Do What Thou Wilt." This author created the characters Friar John and Panurge, both of whom share many absurd conversations with the two size-morphing giants of his most famous work. For 10 points, name this French renaissance author who wrote the early novel *Gargantua and Pantagruel* (Pan-Tag-Gru-El).
ANSWER: Francois Rabelais [accept Rabelais and his World] <Taylor/Ed. AS>

3. The Kunz Axe is a jade artifact from this culture. A common figure from the small sculptures of this culture is God Four, which depicts an open mouthed, toothless infant with crinkled paper on the side of its face. El Azuzul is an archaeological site of this culture, where two seated sculptures usually called "The Twins" were found. This culture had the monuments of its original capital defaced when that city was sacked and turned into La Venta. The first capital of this civilization, (*) San Lorenzo, featured the earliest pyramids built in Mesoamerica. This civilization was the first to ritualistically drink chocolate, and were the first to make rubber balls later used by their successor, the Mayans. For 10 points, name this early central American culture best known for creating huge stone heads.
ANSWER: Olmec Culture <Taylor/Ed. PT>

4. Description acceptable. In Hopi myth this event begins when the *kachina* removes his mask during a dance in the plaza of Oraibi in front of urinating children. In Hindu myth, rulers are filled with the quality of *tamas* preceding this event, which beckons in the Kali Age. The (*) Fimbulvetr is a series of three consecutive winters that proceeds this event in Norse mythology. Eschatology is the study of this event in various myth systems and religions. John of Patmos received a series of visions concerning this event. For 10 points name this process which includes the Norse Ragnarok and a series of events detailed in the biblical Book of Revelation.
ANSWER: the Apocalypse [accept descriptive answers like the end of the world; accept Armageddon; accept Ragnarok before mentioned] <Taylor/Ed. TH>

5. A landscape of this city shows a group of colorfully dressed nobles assembled on a dock in *The Arrival of the French Ambassador*. Another *vedute* painting by the same artist depicts the title *Stone Mason's Yard* in this city. Francesco Guardi depicted the bell tower and dome of this city's (*) San Giorgio Maggiore in a landscape painting. Canaletto painted many landscapes of this city, which was where oil painting flourished during the high renaissance with resident artists like Mantegna, Veronese, Titian and the Bellini family. This city's landmarks include Saint Mark's Basilica and the Bridge of Sighs. For 10 points, name this Italian city crisscrossed by canals.
ANSWER: Venice, Italy <Taylor/Ed. TH>

6. Supposedly, the first one of these structures was supported by four large tree trunks and featured a tree stump in its center as a speaking platform. The Huasheng one of these in Guangzhou is one of the oldest still extant. Iwans are arched entryways to some of these structures. *Mihrabs* in these buildings are niches that often indicate the (*) *qibla*. One of these buildings in Istanbul is named for its blue tiles and features thirteen domes and six minarets, which are slender towers from which the call to prayer is issued. Services in these building are lead by imams and they contain features indicating the direction of Mecca for *salat*. For 10 points, name these places of worship in Islam.

ANSWER: mosques [or masjid] <Taylor/Ed. TH>

7. During the prelude to this opera, the lead tenor sings the love serenade *Silinciana* offstage. In this opera, the teamster Alfio sings the jolly aria “Il cavallo scalpita” while cracking his whip. This opera features the aria “Voi lo sapete,” which is sung to Mamma Lucia by Santuzza. In this opera the unfaithful soldier (*) Turiddu dies in a duel against Alfio after he sleeps with Lola. This verismo opera was based on a Gionvanni Vergo story, and it is often performed alongside Leoncavallo's *Pagliacci*. For 10 points, name this opera by Pietro Mascagni, whose ironic English title is usually rendered as *Rustic Chivalry*.

ANSWER: Cavalleria rusticana [accept Rustic Chivalry until mentioned] <Taylor/Ed. TH>

8. The *nobi* Manjok names one of these events that happened in Korea during the Goryeo dynasty. Gaspar Yanga was named a Mexican national hero two centuries after being involved in one of these events in Vera Cruz. Muhammad ibn Ali led one of a series of these event in Basra which involved over half a million of the Zanj people. Samuel Sharpe led a force in the Baptist War, which was a conflict of this type which took place in (*) Jamaica. The Battle of Vertieres was a major battle in a large conflict of this type, which was led by Toussaint L'Ouverture and led to the independence of Haiti. For 10 points, name these uprising against a certain institution, an example of which was led by Nat Turner in the US.

ANSWER: slave revolt [or slave uprisings or slave rebellions; prompt on revolution or uprising by asking for what type of person is revolting] <Taylor/Ed. PT>

9. A 1993 book by Gillian Rose pairs this field of study with feminism. Torsten Hägerstrand applied the concept of time to this field, and he also worked on theories of cultural diffusion within it. A 1973 work which argues that this field cannot be objective in the face of the urban poor was written by David Harvey, the foremost practitioner of the Marxist approach to this field. The general (*) systems approach to this field considers open or closed systems which are linked by input, output, and flow-through mechanisms, while the spatialist approach to this field is concerned with the physical placement of entities with respect to each other. For 10 points, name this field of social science, whose “human” form may study population densities and whose “physical” form might study the locations of mountains and rivers on maps.

ANSWER: geography [accept human, physical, feminist, or Marxist geography; accept *Explanation in Geography*; accept *Feminism and Geography*; accept spatialist or systems geography] <Taylor/Ed. AS>

10. H. Roy Cullen and Clint Murchison are among the “big four” businessmen that dominated one of this US state’s industries in the 1920s and 30s. Exploration of salt domes near the coast of this state led to the opening of facilities at Goose Creek and Sour Lake. In this state, wildcatters like Glenn McCarthy and Columbus Marion Joiner were largely responsible for the expansion of a certain industry here. A 1900 (*) hurricane that struck this state is still the deadliest natural disaster in US history. A discovery by Anthony Lucas at Spindletop near this state’s city of Beaumont led to an oil boom here that led to rapid industrialization. For 10 points, name this state where hundreds of oil refineries and petrochemical companies can be found in and around the city of Houston.

ANSWER: Texas <Taylor/Ed. PT>

11. This composer's chamber work *Psyche* is scored for voice, string trio, harp, and flute. Solo piano pieces by this composer include *Courtship of the Gnomes* and *For the Tomb of Paul Dukas*. This composer's Harpsichord Concerto was premiered by Wanda Landowska, who also played in the Paris premiere of his puppet opera *Master Peter's Puppet Show*. Oft-excerpted pieces from one of his ballets include the *Dance of Terror* and (*) *Ritual Fire Dance*. Another ballet by this man features the *Dance of the Neighbors*, which plays as a magistrate attempts to seduce a miller's wife. For 10 points, name this Spanish composer best known for his ballets *El Amor Brujo* and *The Three Cornered Hat*.

ANSWER: Manuel de Falla y Matheu <Taylor/Ed. TH>

12. The starch-statolith hypothesis claims that statolith activates ion channels in the columella cells of these structures. Adolf Engler first discovered the proteoid or cluster type of these structures that are prevalent in the family *Proteaceae*. The casparian strip interrupts apoplastic transport in these structures. Cation exchange is aided by the large surface area of the (*) hairs that line these structures. These structures can be divided into zones of maturation, elongation, cell division, and their namesake cap. Pneumatophores are types of these structures specialized for gas exchange. Though not stems, gravitropic growth of these structure is guided by auxins. For 10 points, name these plant structures that come in branched or tap varieties, which are responsible for water uptake from soil.

ANSWER: plant roots <Taylor/Ed. JS>

13. A Robert Browning poem in which the speaker crosses "a mile of warm sea-scented beach" then "three fields" to reach his lover is partially titled for this period of time. A poem in which the speaker "proclaimed the time was neither wrong nor right" is also partially titled for this period of time, at which time the speaker (*) "outwalked the furthest city light." Men whose "words have forked no lightning" are told to "Rage, rage against the dying of the light" in another poem titled for this period of time. For 10 points, name this time period which a Robert Frost speaker is "Acquainted with" and Dylan Thomas asks not to go gentle into.

ANSWER: night [accept full titles: "Meeting at Night," "Acquainted with the Night," or "Do Not Go Gentle Into That Good Night"] <Taylor/Ed. AS>

14. The self repairing characteristics of the synthetic polymer Smart Rubber arise from the presence of this interaction in the material. The strength of nylon fibers is largely a result of this interaction between amines and carbonyls on adjacent chains. Though ethanol and methoxy-methane have the same molecular formula, ethanol has a much higher (*) boiling point because ethanol's hydroxyl group can participate in this interaction, and the presence of this interaction is responsible for the the high boiling point of liquid water. For 10 points, name this electrostatic attraction that forms between highly electronegative elements such as nitrogen, oxygen, and fluorine and the lightest element.

ANSWER: hydrogen bonding [or hydrogen bonds; prompt on bonding; prompt on intermolecular forces] <Taylor/Ed. JS>

15. A member of this family occupied the Belarusian castle of Mirs after marching east from his kingdom of Westphalia towards Minsk. Supporters of a different member of this family were called *afrancesados* while he was called Joe Bottle for his alcoholism by his detractors. While hunting on his estate of Bordentown, one member of this family claimed to see the cryptid the Jersey Devil. That member of this family was made (*) King of Spain by his brother, where he ruled as Jose I. The most famous member of this family first rose to military prominence after causing the evacuation of the British at the Siege of Toulon. For 10 points, name this Corsican-French family whose members included Jerome, Joseph, and Napoleon.

ANSWER: The House of Bonaparte <Taylor/Ed. PT>

16. Robert plans to go to sea with his uncle Dick leaving his brother at home to run a farm in this author's play *Beyond the Horizon*, which won the second-ever Pulitzer Prize for Drama. The Provincetown Players premiered many of the early plays by this man. African American actor Paul Robeson appeared in the premieres of three early plays by this man, including one depicting an interracial marriage in which the abusive wife Ella ruins her husband Jim's law career. This author of (*) *All God's Chillun Got Wings* also wrote about the alcoholic, cynical actor Jamie and the morphine addicted matriarch Mary in his long play about the Tyrone family. For 10 points name this early twentieth century playwright who wrote *Long Day's Journey Into Night*.

ANSWER: Eugene O'Neill <Taylor/Ed. AS>

17. This man wrote a 2016 song from the perspective of Donald Trump's pilot that suggests the pilot plans on flying his plane into the ground intentionally. This man provides the voice and likeness for Tom in the animated series *Tom Goes to the Mayor*. This man wrote, directed and starred in the 2012 film *The Comedy* and co-directed a "Billion Dollar" movie that same year. This man plays the creepy "Angel Boy" in a series of (*) "bedtime stories" he co-directed with a taller co-star. This man jumps out from behind objects and screams "Spagett" in a series of skits from his most famous show. For 10 points, name this comedian who named a former Adult Swim "Awesome Show" with Eric Wareheim.

ANSWER: Tim Heidecker [accept either underlined part] <Taylor/Ed. TH>

18. This letter symbolizes the attenuation length for a particle moving in a material in radiation shielding. When incorporating holonomic constraints into Lagrange's equation, Lagrange multipliers denoted by this letter are used. This letter represents a value calculated by dividing the natural log of 2 by a half-life; that value is the decay constant. In linear algebra, (*) eigenvalues are symbolized by this letter. A quantity represented by this letter is equal to the Planck constant over momentum of a photon. That value represented by this letter can be calculated by measuring the distance from crest to crest or trough to trough of a wave. For 10 points, identify this greek letter that represents wavelength.

ANSWER: lowercase lambda <Taylor/Ed. JS>

19. In a long poem, this man meets Jesus, the Buddha, Don Quixote, and Faust before sailing from a Eskimo village to his death in Antarctica. That "modern sequel" about him by Nikos Kazantzakis features this man fighting battles in Egypt and Sparta. In another appearance, this man wins a lengthy argument about who should receive the armor of the dead (*) Achilles, causing Ajax to kill himself. In his most famous appearance, this man is called the "sacker of cities" and has extended affairs with Calypso and Circe, before return to his home island to slay the suitors of his wife Penelope. For 10 points, name this Greek hero whose journey home to Ithaca is the subject of his namesake Homeric epic.

ANSWER: Odysseus [or Ulysses] <Taylor/Ed. AS>

20. In the *Upanishads*, one of these things is alternately told by another that the self is the body, the dreaming conscious, the dreamless conscious, and finally the thing that lies behind the senses and is unknowable. Xenophanes' best known idea states that if animals were to create these things, then these thing would resemble animals. Spinoza's metaphysics is based on the idea that the entirety of the (*) universe is synonymous with one of these things. In Platonic thought, the demiurge is one of these things, and Aristotle hypothesizes an "unmoved mover," which is one of these things that sets the universe into motion. For 10 points, name these things, which atheists deny the existence of.

ANSWER: gods [or deities; accept demiurge or unmoved mover before mentioned; accept creator or similar answer indicating a being that creates the universe; accept Hindu gods] <Taylor/Ed. AS>

Bonuses:

1. This composer set out to publish all the music of his uncle and mentor Andrea, adding some of his own compositions to the end, which became much more famous than his uncle's work. For 10 points each:

[10] Name this composer who invented polychoral music during his position as organist at St. Mark's Basilica. His *Sacred Symphonies* represent an important transition between Renaissance and Baroque music.

ANSWER: Giovanni **Gabrieli**

[10] Gabrieli is usually credited as the first composer to specify this aspect of music in his scores. This term refers to how loud or quietly parts of a piece are played, and how that volume changes.

ANSWER: **dynamics**

[10] Gabrieli was active in this country, as was opera and madrigal pioneer Claudio Monteverdi and solo concerto forefather Antonio Vivaldi.

ANSWER: **Italy** [or **Italia**] <Taylor/Ed. TH>

2. Dave Eggers's novel *Your Fathers Where Are They? And the Prophets, Do They Live Forever?* has this unusual narrative property. For 10 points each:

[10] Name this property held by nearly all the novels of Ivy Compton-Burnett, *J.R.* by William Gaddis, and *Deception* by Philip Roth.

ANSWER: all in **dialogue** [accept descriptive answers indicating there is no narration outside of characters **speaking**]

[10] This 18th century French novelist wrote his book *Jacque the Fatalist* all in dialogue. He is also known for spearheading the enlightenment-era *Encyclopedie* with Jean le Rond d'Alembert.

ANSWER: Denis **Diderot**

[10] The dialogue novel form has its roots in the writings of this ancient Greek student of Socrates, who wrote lengthy dialogues some consider early novels such as *The Republic* and *The Symposium*.

ANSWER: **Plato** <Taylor/Ed. AS>

3. Name some pirates, for 10 points each:

[10] This English pirate of the Golden Age of Piracy supposedly would light his beard on fire and dual-wield pistols in combat. This captain of the Queen Anne's Revenge blockaded the port of Charleston until they gave him a crate of medicine.

ANSWER: **Blackbeard** [or Edward **Teach**]

[10] This guy began as a pirate-hunting privateer in the Indian Ocean before turning pirate himself. This man buried treasure on Gardiners Island, New York before being executed and left to rot in London.

ANSWER: Captain William **Kidd**

[10] This female pirate queen of Qing-era China is often considered the most financially successful pirate of all time. At the height of her power she commanded eighteen hundred ships and seventy thousand men while conducting opium smuggling campaigns.

ANSWER: Madame **Ching** [or **Ching** Sinh, or **Ching** I Sao] <Taylor/Ed. PT>

4. Tiffany and Co. designed the custom handle for one of these objects which depicted a buffalo hunt. For 10 points each:

[10] Name these objects, designed by such American companies as Smith and Wesson and Winchester.

ANSWER: **guns** [accept **pistols**, **handguns**, **rifles**, **firearms** etc]

[10] This New York City museum holds many custom designed American firearms in its Arms and Armor Department. This museum is the largest art museum in the United States.

ANSWER: The **Met**ropolitan Museum of Art

[10] Though they are better known for their glass work, Tiffany and Co. began as a company which made artworks from this material. The Met holds a set of spurs own by Paul Revere that are made of this material.

ANSWER: **silver** [prompt on **metal** by asking "what kind of metal?"] <Taylor/Ed. TH>

5. This section of a larger work opens “Midway upon the journey of our life / I found myself in a forest dark” in Henry Wadsworth Longfellow’s translation. For 10 points each:

[10] Name this poem in which the protagonist meets a shewolf, a leopard and a lion before entering the title location. This poem, along with its other two parts, is written in a terza rima rhyme scheme.

ANSWER: **Inferno** [prompt on *The Divine Comedy*]

[10] *Inferno* was written by this Italian poet who also penned a biographically inspired collection about Beatrice in *The New Life*.

ANSWER: **Dante Alighieri** [accept either underlined portion]

[10] All three sections of *The Divine Comedy* conclude with this plural word. *Inferno* concludes “Dawn’d through a circular opening in the cave: / Thence issuing we again beheld” *these things*.

ANSWER: (the) **stars** [accept **stelle**] <Taylor/Ed. AS>

6. The classical Dulong-Petit law states that this property for a solid is equal to three times the gas constant. For 10 points each:

[10] Name this property that is equal to the temperature derivative of energy at constant volume or the temperature derivative of enthalpy at constant pressure. Dividing this property by mass yields specific heat.

ANSWER: **heat capacity**

[10] The classical calculations of heat capacity fails at lower temperatures because of the quantization of lattice vibration into these pseudo-particles. These collective excitations have optical and acoustic modes.

ANSWER: **phonons** [DO NOT ACCEPT “photons”]

[10] This quantum model estimates the phonon contribution to heat capacity by treating the phonons as particles in a box, in contrast to the Einstein model. This model features a temperature cubed term and returns the Dulong-Petit law at high temperatures.

ANSWER: **Debye** model <Taylor/Ed. JS>

7. A professor writing “Everything written on the board in this room is false” is an example of this paradox. For 10 points each:

[10] Name this type of paradox first identified by Eubulides. In it, a speaker makes a contradictory claim about the truth value of all their statements.

ANSWER: **Liar** paradox [or **Liar’s** paradox]

[10] Another paradox with origins in Greek antiquity is a dichotomy paradox named for this thinker, which states that “That which is in locomotion must arrive at the halfway stage before it arrives at the goal,” leading to the supposed impossibility of motion. This Greek thinker from Elea also wrote about a paradox involving Achilles and the Tortoise.

ANSWER: **Zeno** of Elea [accept **Zeno’s** paradoxes]

[10] Traditionally, paradoxes are addressed by refuting their setup or accepting their absurd conclusion, though modern philosophers like Graham Priest have suggested this position in which certain statements can simultaneously be true and false.

ANSWER: **dialetheia** [accept **dialetheism**; or literally from the Greek: **two truth**] <Taylor/Ed. AS>

8. At its peak in the 12th century this dynasty occupied the Maldives and controlled all of Sri Lanka. For 10 points each:

[10] Name this medieval Tamil kingdom based in southern India. Their king Rajendra undertook naval raids on the Srivijaya kingdom and led an expedition north to the Ganges.

ANSWER: **Chola** Dynasty

[10] One of the earliest references to the Chola is in an inscription from the reign of this Mauryan king of the 3rd century BCE. He may have converted to Buddhism after the Kalinga War and he commissioned some rock edicts.

ANSWER: **Ashoka**

[10] The Chola dynasty built many notable temples to this god, including Thanjavur. Chola era statues of this Hindu deity include one of him in his Nataraja form surrounded by a ring.

ANSWER: **Shiva** [or **Siva**; prompt on **Lord Of the Dance**] <Taylor/Ed. PT>

9. Name some things about podcasts that are not Chapo Trap House, for 10 points each:

[10] This spin-off of *This American Life* is hosted by Sarah Koenig. Its first season investigated the murder of high school student Hae Min Lee while the second focused on former prisoner of war Bowe Bergdahl.

ANSWER: **Serial**

[10] This podcast focuses on the unnoticed architecture and design that shapes the built world, and is hosted by Roman Mars. Episodes have discussed the origins of Freud's couch, inflatable dancing men at car dealerships, and the fortune cookie.

ANSWER: **Ninety-Nine Percent Invisible** [accept **99PI**]

[10] This organization produces dozens of podcasts, many of which are recordings of their radio programs like *All Things Considered* and *Planet Money*. Their music department hosts the Tiny Desk Concert series.

ANSWER: **National Public Radio** <Taylor/Ed. TH>

10. Mandibular versions of these structures are anchored by two roots, while maxillary are anchored by three roots. For 10 points each:

[10] Name these structures found in the human body in which blood vessels are surrounded by layers of dentin and enamel.

ANSWER: **teeth** [accept **molars**]

[10] In the Universal Numbering System, teeth are numbered from one in the maxillary left corner of the mouth, to this number in the mandibular left. This is the number of teeth, including wisdom teeth, in the adult human mouth.

ANSWER: **32**

[10] This connective tissue fastens the tooth to the alveolar bone on which it sits. The other end of this tissue attaches to the tooth's root cementum.

ANSWER: **periodontal** fiber or ligament [accept **PDL**] <Taylor/Ed. JS>

11. In this author's only comedy, the magician Alcandre shows Pridamant the exploits of his son Clindor and his lover Isabel using a device in a cave. For 10 points each:

[10] Name this author *The Illusion of Theater* who wrote about a conflicted Roman advisor tasked with assassinating Augustus in his tragedy *Cinna*.

ANSWER: Pierre **Corneille**

[10] Corneille is best known a play about a legendary Spanish hero who defends his country from a Moorish invasion. Name either the play or the hero on whom it is based.

ANSWER: *Le* **Cid** [or El **Cid**]

[10] Corneille wrote in this language, which was also used by his contemporaries Moliere and Jean Racine.

ANSWER: **French** [or **Français**] <Taylor/Ed. AS>

12. This speech notes "Uncle Sam's hands are dripping with blood. Dripping with the blood of the black man in this country." For 10 points each:

[10] Give this speech delivered less than a month after its speaker's break with the Nation of Islam. This speech was delivered at a Methodist church in Cleveland and advises African Americans to vote for change, but claims it may be necessary to take up arms if injustices continue.

ANSWER: **"The Ballot or the Bullet"**

[10] "The Ballot or the Bullet" was an oration given by this activist, whose rejection of the Nation of Islam led to his 1964 assassination. He remarked "the chickens are coming home to roost" upon the assassination of JFK.

ANSWER: **Malcolm X** [or Malcolm **Little** or el-Hajj Malik **el-Shabazz**]

[10] In an iconic *Ebony* magazine photo of Malcolm X, he can be seen peering through the blinds of a window while holding one of these objects.

ANSWER: a **gun** [accept a **rifle**; or a M1 **carbine**] <Taylor/Ed. PT>

13. Answer some questions about serial killers once active in the state of Florida, for 10 points each:

[10] Danny Rolling was known as the “ripper” of this North-Central Florida city. In this city, he killed five female students at Santa Fe Community College and the University of Florida.

ANSWER: **Gainesville**, FL

[10] This prolific killer was apprehended in near the Florida-Alabama border in 1978, a month after invading the Chi Omega sorority house in Tallahassee and committing a double murder.

ANSWER: Ted **Bundy**

[10] This woman is usually referred to as America’s first female serial killer. She worked as a hitchhiking prostitute along Florida’s I-75 and claimed that all her killings were in self-defence against men attempting to rape her.

ANSWER: Aileen “Lee” **Wuornos** <Taylor/Ed. TH>

14. Answer some questions about the practice of firewalking, in which participants transverse red hot embers or coals, for 10 points each:

[10] The Sawau clan of this Pacific Island nation is famous for their firewalks. The Itaukei is the dominant ethnic group of this nation which also features a large Indian population.

ANSWER: Republic of **Fiji**

[10] In several African and Oceanic cultures, firewalks can act as one of these ceremonies in which a subject ritualistically moves from one social group to another. Bat or bar mitzvahs are seen as this type of ceremony.

ANSWER: **rites of passage** [prompt on **coming of age**]

[10] Firewalks are practiced in regions of Bulgaria and Greece that practice this sect of Christianity. This branch is the dominant form of Christianity in Russia.

ANSWER: Eastern **Orthodox** Christianity <Taylor/Ed. AS>

15. Name some examples of the “anti-novel” in which traditional linear narrative is abandoned in favor of experimentation. For 10 points each:

[10] This Julio Cortázar novel features 43 “expendable chapters” along with its 56 “first book” chapters. Readers are encouraged to read the book’s chapters in any order they wish.

ANSWER: **Hopscotch** [or **Rayuela**]

[10] This man’s *The Castle of Crossed Destiny* has its plot created by the reader by selecting a series of tarot cards at the beginning. He also experimented with bizarre narrative and metafiction in a novel in which you, the reader, fall in love with Ludmilla, the other reader.

ANSWER: Italo **Calvino**

[10] Maybe the first non-linear novel was this most well known work by Miguel de Cervantes, whose title wannabe knight tilts at some windmills and has his book collection burned.

ANSWER: **Don Quixote** <Taylor/Ed. AS>

16. The Bermuda-Azores high refers to a region of the north Atlantic that features very high values for this atmospheric property. For 10 points each:

[10] Give this atmospheric property that names a somewhat orderly series of belts that circle the Earth in a latitudinal direction. Constant lines of this property on meteorological maps are plotted as isobars.

ANSWER: atmospheric **pressure**

[10] Regions of trade winds sandwich this zone of equatorial low pressure featuring calm and variable winds. This zone’s name comes from sailing ships often becoming stuck in this zone due to a lack of wind.

ANSWER: the **doldrums** [or **Intertropical Convergence Zone**]

[10] These prevailing surface winds blow from the polar high pressure zones to the subpolar low pressure zones. These cold, dry winds are named for their compass direction of travel.

ANSWER: polar **easterlies** [accept polar **Hadley cell**] <Taylor/Ed. JS>

17. Identify some British painters of double portraits, for 10 points each:

[10] This Englishman painted a young couple on their estate along with their small dog in *Mr. and Mrs. Andrews*. This man is also known for his enigmatic *The Blue Boy*.

ANSWER: Thomas **Gainsborough**

[10] This modern painter depicted a soon-to-be divorced couple along with their white cat in *Mr. and Mrs. Clark and Percy*. He also painted a poolside scene in *A Bigger Splash*.

ANSWER: David **Hockney**

[10] This originally German court painter for Henry VIII painted two well dressed fellows in *The Ambassadors*. That painting sadly does not feature a dog or cat but it does include a distorted skull.

ANSWER: Hans **Holbein** the Younger <Taylor/Ed. TH>

18. This innovation largely replaced the use of woodblock printing practiced in the late Middle Ages, for 10 points each:

[10] Name this technology vital in the spread of ideas and texts in the early Renaissance. Though the origin of this innovation is disputed among the Dutch, French, Germans, and Italians, it is usually credited to Johann Gutenberg at Mainz.

ANSWER: **moveable type** [or the **printing press**]

[10] The first man to use moveable type to print texts in English was this man, who wrote and translated many of the works himself. This man printed the first verses of the Bible in English in his translation of *The Golden Legend*, and also produced the first English translation of *Aesop's Fables*.

ANSWER: William **Caxton**

[10] The proliferation of text due to movable type caused Pope Alexander VI to issue the bull *Inter Multiplices*, which called for local authorities to engage in this practice, which required printers to get approval from the church called *imprimatur* before printing texts.

ANSWER: **copyright** [accept descriptive answers] <Taylor/Ed. PT>

19. The last human Guru of this religion introduced a warrior community called the *Khalsa*. For 10 points each:

[10] Name this Indian religion whose followers follow the Five K's, including not cutting one's hair in *kesh* and carrying a small dagger called a *kirpan*.

ANSWER: **Sikhism**

[10] After *Amrit*, Sikh baptism, many male Sikhs take the surname Singh, while many female Sikhs take this surname, which means "princess" in Punjabi.

ANSWER: **Kaur**

[10] The Gurbani, part of this larger holy text, refers to all Sikhs as female. This holy book of Sikhism is referred as the eleventh guru.

ANSWER: Guru **Granth** Sahib [accept Adi **Granth**] <Taylor/Ed. TH>

20. This theory assumes that a central metal's *3d* electrons only feels coulombic interactions from the charges on ligands. For 10 points each:

[10] Give this theory of transition metal coordination complexes in which d-orbitals are split into the low energy t_{2g} set and the higher energy e_g set.

ANSWER: **crystal field** theory [accept **CFT**]

[10] The reference geometry for CFT is a molecular geometry whose six bonded atoms or ligands define the vertices of a solid with this many faces. A rule violated by boron and aluminum states that atoms tend to have this many electrons in their valence shell.

ANSWER: **six** [accept **octet** rule]

[10] Atoms of this series can weakly interact with ligands due to their partially filled *4f* shells. This series, which contains gadolinium and erbium, undergoes a namesake faster-than-expected contraction of radii across the series.

ANSWER: **lanthanides** [prompt on **rare earth** elements] <Taylor/Ed. JS>