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**TOSSUPS:**

1. **Terms like “At-risk”, “thick” and “Alice Walker” are splayed across the page in a 2017 Morgan Parker poem whose title references this older poem. In one of his letters, the author of this poem said it should be read as a series of sensations rather than a series of epigrams. This poem’s last stanza states “It was evening all afternoon” as the title figure “sat in the cedar-limbs.” This poem describes a figure who “rode over (\*) Connecticut / In a glass coach.” In this poem’s fifth stanza, the speaker contrasts “The beauty of inflections” with “the beauty of innuendoes.” This poem opens by noting the eye of the title animal was “The only moving thing” “Among twenty snowy mountains.” For 10 points, name this Wallace Stevens poem about a dark bird.**

**ANSWER: “Thirteen Ways of Looking at a Blackbird” (the Parker poem is “Thirteen Ways of Looking at a Black Girl”)**

<TH, Poetry>

2. **The Wisdom King Acala is usually depicted surrounded by this thing. Yama discovers a ‘thrice-born’ god of this thing to be hiding underwater after an expedition is organized by his brother Varuna. Ivan Tsarevich manages to yank the tail off a creature named for this thing in a slavic folktale in which it tries to steal some golden apples. Loki lost an eating contest to a personification of this phenomenon named (\*) Logi. Metanira stopped Demeter’s attempt to grant Demophon immortality by using this thing. Muspelheim is a Norse realm dominated by this phenomenon. The first hymn in the *Rig Veda* is devoted to a god of this thing; that Vedic god is Agni. For 10 points name this thing that Prometheus stole from Mount Olympus to give to humanity.**

**ANSWER: fire [accept flame; accept firebird]**

<JH, Mythology>

3. **Atuma et al. studied the surface of this substance by allowing charcoal to sediment on top it. *Listeria mono-cyto-genes* binds to E-cadherin on cells that secrete this substance. A delta F·5·0·8 mutation in the *C·F·T·R* gene affects the thickness of this substance. *H. pylori* survives in the body by burrowing into this substance. Pus and this substance change color due to the presence of myelo-peroxidase secreted during respiratory bursts. Foveolar cells and (\*) goblet cells secrete this substance. Skin and membranes that secrete this substance are anatomic barriers of the innate immune system. Although usually clear, this substance is green or yellow during bacterial infections. For 10 points, the excess secretion of what substance leads to sinus congestion?**

**ANSWER: mucus [accept mucoous membranes]**

<JS, Biology>

*Description acceptable.*

4. **Buuz** are eaten after a greeting ceremony involving the holding of blue silken *khadag* in an event of this kind in Mongolia. The alcoholic beverage *chhaang* is prepared on the first day of a 15-day celebration of this type practiced in Tibet called **Losar**. A festival of this type often involves the cooking of *Banh chung* and the cleaning of the house. (\*) *Tet* is this type of festival, as is a festival in a neighboring country that involves the giving of money in red paper envelopes and the making of paper lanterns. The occurrence of a festival of this type changes the zodiac sign associated with the next period of time it celebrates. For 10 points, the “Chinese” example of what holiday is usually celebrated over a month after Western celebration on January 1st?

ANSWER: **New Years** Holiday [accept **Losar** or **Tet** before they are mentioned; accept Chinese **New Years** or Vietnamese **New Years**; accept **New Years** Festival or Celebration; accept Lunar **New Years**]

<TH, Anthropology>

5. **The Eridanos was a freshwater river system that flowed millions of years ago where this now brackish body of water is located. In 2011, treasure hunters searching this body of water produced a sonar image of a supposed UFO called this body’s “anomaly,” though that image likely just showed a rock formation. The Gutasaga describes the history of an island in this body of water which contains Visby; that island is (\*)** Gotland. The Aland islands separate this sea from the Gulf of Bothnia, while the Gulfs of Finland and Riga are both offshoots of this body of water. Tallinn lies on the shores of, for 10 point, what sea that names the grouping of states that includes Estonia, Lithuania and Latvia?

ANSWER: **Baltic** Sea [prompt on **Gulf of Riga** before “Riga”; prompt on **Gulf of Bothnia** before “Bothnia”]

<JH, Geography>

6. **This work advocates seeing objects not in terms of relations to other objects or in temporal duration but instead under the aspect of eternity, thus introducing the phrase *sub specie aeternitatis* into Western thought. This work presents the threefold division of knowledge as the imagination, the intuition, and the intellection. This text defines humans bodies as limited (\*) modes of extension and human ideas as limited modes of thought. This work defines terms like substance, attribute, and mode in its axiomatic beginning section “On God,” which had a structure inspired by geometry texts. This work refers to “the eternal and infinite being” as “God or Nature,” neatly summing up its author’s pantheism. For 10 points, name this masterwork of Dutch thinker Baruch Spinoza.**

ANSWER: ***Ethics***, *Demonstrated in Geometrical Order* [accept ***Ethica***, *ordine geometrico demonstrata*]

<TH, Philosophy>

7. **A novel by this author ambiguously closes with an old man wading through some water as a ferryman questions his wife Beatrice before agreeing to take them to an island together. In that novel by this contemporary author, a mist of forgetfulness is spewed by a sickly dragon until he is killed by Sir Gawain. This author wrote about Ruth and (\*) Tommy in a novel in which strict teachers called guardians watch over students at a Hailsham boarding school. In that novel by this author, Kathy often passionately dances to the title Judy Bridgewater song. That novel follows a group of clones raised to donate organs to others. For 10 points, name this author of *The Buried Giant*, the winner of the 2017 Nobel Prize for Literature who wrote *Never Let Me Go*.**

ANSWER: Kazuo **Ishiguro**

<TH, Long Fiction>

8. This musician wrote “Shuffle Boil” and “Brakes Sake” for the album *Nica’s Tempo* by Gigi Gryce. This bandleader included the tracks “Bolivar Blues” and “Bright Mississippi” on a Hard Bop album named for his “Dream.” This man plays celeste instead of his usual instrument in his song named after Pannonica de Koenigswarter from his album (\*) *Brilliant Corners*. Other albums by this man include *Underground* and *Straight, No Chaser*, both of which include his percussive piano style. For 10 points name this eccentric, hat-wearing jazz pianist who composed the standard “Round Midnight” and whose surname makes him sound like a religious figure.

ANSWER: Thelonious Monk

<JH, Jazz>

9. Andreas Zeller pioneered the “delta” method that automates this process by iteratively testing more granular subsets of the input. Compiling with the gcc flag -g (“dash g”) generates information that can be used with programs like GDB to assist with this process. An informal way to do this process is to talk to a rubber duck. Stack traces and (\*) breakpoints are used to examine state in this process, and a simple method for this process uses print statements to follow code execution. The name for this process was coined when Grace Hopper and her associates removed a moth from a computer. For 10 points, what is this process of finding and fixing errors in a program?

ANSWER: debugging [accept anything descriptive that is synonymous to: fixing errors, finding errors, detecting defects, finding bugs; removing bugs, locating errors, etc.; prompt on testing code or running tests]

<JS, Other Science CS>

10. This city was apocryphally surrounded by a serpent wall, formed by hundreds of sculptures of snakes. A two-way aqueduct in this city was designed in part by a poet whose name translates as “hungry coyote.” A series of canals divided this city into four main sections, which were further subdivided into districts known as *calpullis* (call-poo-yees). Much of this city’s food was provided by floating gardens known as (\*) *chinampas*. Leaders based in this city would often fight ritual conflicts called “flower wars” to capture human sacrifices for the rain god Tlaloc. This city, once home to the Templo Mayor, was legendarily founded after a tribe saw an eagle clutching a snake atop a cactus. For 10 points, name this city built on Lake Texcoco, an Aztec city-state once ruled by Montezuma.

ANSWER: Tenochtitlan

<TH, World History>

11. This is the fourth note of the Guidonian hand used in sight singing. When using integer notation, this note belongs to pitch class zero. The Ionian mode using all natural notes begins with this note. This note is directly across from F sharp in the Chromatic circle, meaning this note and F sharp form a tritone interval. F is the subdominant in the major key starting with this note. In the A minor triad, this note is the (\*) third. The relative minor of the major key of this note is A minor, while the minor key of this note has three flats. When using the Alto Clef, this note appears on the middle line. This note is the root of a major triad that also includes E and G as third and fifth respectively. For 10 points, name this note whose major key signature has no flats or sharps.

ANSWER: C [accept fa or ut until “zero”; accept C major; accept C minor]

<JF, Classical Music>

12. A mild one-step process for elimination of this functional group proceeds by reacting it with phosphorus oxy-chloride to form a chloro-phosphate ester leaving group. Silyl ethers are protecting groups for this functional group that is converted to an alkyl halide when reacted with a hydro-halic acid. This functional group is deprotonated before undergoing an S<sub>N</sub>2 reaction with an alkyl halide to synthesize ethers. A (\*) carboxylic acid and this functional group are refluxed to produce esters in a reaction named for Fischer. This functional group used in the Williamson synthesis increases the boiling point of molecules due to formation of hydrogen bonds. Methanol contains, for 10 points, what functional group in which an O·H group binds to carbon?

ANSWER: alcohols [accept hydroxyl; accept OH before mention]

<LL, Chemistry>

13. Four women use a sheet to bounce a man-sized doll into the air in this artist's painting *The Straw Manikin*. A portrait of this artist's one time lover depicts her pointing to his initials drawn in the sand in front of her and is usually titled *The Black Duchess*. A off-balance man vomits onto a pile of bodies in this artist's *This is What You Were Born For*, part of his series of 82 prints called (\*) *Disasters of War*. Another series of prints by this artist frequently depicts anthropomorphic donkeys. This artist of *Los Caprichos* depicted a goat-headed demon lording over a witch gathering and a wild-eyed Titan holding his half-consumed offspring in his most famous series. For 10 points, name this Spanish artist whose Black Paintings includes *Saturn Devouring his Son*

ANSWER: Francisco Goya [accept Francisco Jose de Goya y Lucientes]

<TH, Painting>

14. This author describes holding onto a wet dog and realizing the humanity of a condemned Hindu man as he steps aside to avoid a mud puddle in an essay where he ends up laughing heartily and drinking whiskey near a hanged body. This author of "A Hanging" opened another essay by noting that in Moulmein he was hated by a large number of people, the only time in his life where he was important enough for this to happen. This author described "wear[ing] a (\*) mask, and his face grown to fit it" while being watched by thousands of natives who expect him to kill a rampaging animal in an anti-imperialist essay with similar themes to his first novel *Burmese Days*. "Shooting an Elephant" is by, for 10 points, what author who also wrote the novel *1984*?

ANSWER: George Orwell [accept Eric Arthur Blair]

<TH, Other Lit>

15. In a subfield of optics named for this scientist, image formation is a linear system whose response is specified by the optical transfer function. Ringing effects are caused when functions named for this man overshoot jump discontinuities in the Gibbs phenomenon. An energy balance equation named for this scientist sets the heat flux density equal to the negative of the thermal conductivity times the gradient of (\*) temperature. A function is expressed as an infinite sum of sines and cosines in this scientist's series. A namesake law of conduction was developed by, for 10 points, what scientist whose namesake transform takes a function from the time domain to the frequency domain?

ANSWER: Joseph Fourier [accept Fourier optics; accept Fourier series; accept Fourier transform; accept Fourier's law of conduction]

<LL, Physics>

16. If the world of Primordial Man or *Adam Kadmon* is excluded, this is the number of “Worlds” studied in Kabbalah. A complex Hebrew acrostic spelling out a word with this many letters appear in both the Book of Esther and in Psalm 96. Rebekah and Rachel are among this number of Matriarchs of the faith in Judaism. “How is this (\*) night different from all other nights?” is asked by a child before Passover seder in a set of this many questions. Ezekiel sees the throne of God supported by this many wheel-creatures at the beginning of his namesake book. Though it is often transliterated as the six-letter *Yahweh*, the name of God that appears in the Torah contains this many letters. The Book of Numbers is, for 10 points, what numbered book of the Torah, the second to last?

ANSWER: **four**

<TH, Religion>

17. In one of these locations, a John Donne scholar named Vivian Bearing has *The Runaway Bunny* read to her. This type of location, which is the primary setting of Margaret Edson’s play *W;t* (“Wit”), is where a character from another play jokes that he gets underpaid to take care of white people. An ex-drag queen named Belize who works in one of these places finds a man’s secret stash of (\*) AZT. In that play, this type of location is where the ghost of Ethel Rosenberg sings a children’s song to Roy Cohn shortly before his death. For 10 points, Tony Kushner’s *Angels in America* features what type of building, where AIDS patients are often treated?

ANSWER: **hospitals** [accept synonyms, such as **clinics**, **infirmaries**, and **doctors** offices]

<TM, Drama>

18. This adjective appears in the name of a theory that John Sweller developed while studying how students solved problems. This term and “negative” are used to describe a triad of depression symptoms outlined by Aaron Beck. Edward Tollman’s observations of rats navigating a maze led him to develop a theory of a type of internal (\*) “map” described by this adjective. Festinger and Carlsmith had participants perform mundane tasks in a study of a concept denoted by this term wherein a person simultaneously holds two conflicting beliefs; that concept is referred to as this type of “dissonance.” For 10 points, name this term which describes a type of behavioral therapy used in the treatment of many psychological disorders and which is a synonym of “mental.”

ANSWER: **cognitive** [accept **cognitive** load (theory) or **cognitive** triad or **cognitive** maps or **cognitive** dissonance or **cognitive** behavioral therapy; prompt on **dissonance** before mention]

<AS, Psychology>

19. W. Elliot Brownlee has written a history titled for “[policies of this type] in America.” In addition to arguing that policies of this type kill “the spirit of adventure” in a 1924 book subtitled *The People’s Business*, Andrew W. Mellon advocated for a progressive reform of these policies in his namesake “plan.” In a pamphlet titled *[this thing] No Tyranny*, Samuel Johnson rebuked the idea of American self-governance. The (\*) Sixteenth Amendment allowed Congress to enact one of these policies without basing it on state populations. Grievances towards the Stamp and Sugar Acts led to a slogan that denied the implementation of these policies “without representation.” For 10 points, name these revenue-raising policies that come in capital gains and income varieties.

ANSWER: federal **taxes** [accept **taxation**; accept **Taxation**: *The People’s Business*; accept “No **taxation** without representation”; accept specific types of **taxes** like income or sales]

<TH, American History>

20. In 2019, a newspaper in this country called George Soros “an enemy of [this country’s] people” because Soros openly shorted this country’s currency. In 2018, the Catholic Church agreed to recognize bishops that this country’s government also approved. This country’s government forced the cancellation of a (\*) dance performance in Seoul due to a troop’s connection to a spiritual movement they refer to as an “evil cult.” This country has aggressively pursued a global infrastructure project called the Belt and Road Initiative. A 2018 United Nations report noted “mass surveillance disproportionately targeting ethnic Uighurs” (“WEE-ghurs”) in this country. For 10 points, name this country led by Xi Jinping.

ANSWER: People’s Republic of China [do not accept or prompt on “Republic of China” or “Taiwan”]

<JM, Current Events>

21. At the end of a 2018 film, a character with this profession removes a suicide vest and wraps himself in barbed wire before making out with a pregnant character played by Amanda Seyfried. Ethan Hawke plays a character with this profession who considers becoming an eco-terrorist in that Paul Schrader-directed film. A character with this profession discovers a colleague played by Max von (\*) Sydow dead of a heart attack right before grappling with a girl named Regan and throwing himself down some stairs. A character with this profession shouts “the power of Christ compels you” at a Linda Blair-played girl in a 1973 horror movie. For 10 points, name this profession held by the lead male actors in the films *First Reformed* and *The Exorcist*.

ANSWER: priest [accept minister, preacher, or clergy; accept exorcist until mentioned]

<TH, Pop Culture Movies>

22. This ruler forgave his killer by saying “live on, and by my bounty behold the light of day,” after dying whilst besieging the castle Châlus-Chabrol. This ruler’s coronation led to the death of Jacob of Orléans as part of a massacre of Jews. This ruler was forced to retreat to Saintes after failing to take La Rochelle during the revolt of 1173-74, which was led by his older brother (\*) Henry the Young King against their father Henry II. This ruler conquered Cyprus in 1191 after Isaac Komnenos took his sister Joan and his fiancé, Berengaria of Navarre prisoner. This ruler won at the Battle of Arsuf but was unable to conquer Jerusalem in 1192. For 10 points name this “brave” English king who led the unsuccessful Third Crusade against Saladin.

ANSWER: Richard I [Accept Richard the Lionhearted; prompt on Richard]

<JH, European History>

23. One of these things in modern-day Nigeria was built in honor of the Ijebu noblewoman Bilikisu Sungbo, although others hypothesize that it was built on the order of the Queen of Sheba. Within the Sindh province of Pakistan, there exists a large one of these objects known as Ranikot that was built by the Talpurs. Construction of Austrian towns characterized by this feature rapidly increased in the 11th century. One of these objects built on the order of Emperor Anastasius (\*) stretched from the Black Sea to the Sea of Marmara, and was built in Thrace to protect Constantinople from invaders. For 10 points, Qin Shi Huang Di mythically was said to have used bodies in the construction of a “great” object of what type in China?

ANSWER: walls [accept ditches; accept forts; accept fortifications; accept eredo; prompt on castles, or other terms that indicate large defensive barricades]

<TM, Other History>

24. A Nicholson Baker novel with this one word title transcribes a lengthy phone conversation between a man and a woman on a sex party line. A budget classical music record label with this one word name was the first to release a recording of all of Schubert's piano sonatas and is known for its "25 Classics" series. A media conglomerate with this name owns the websites (\*) *Verge*, *Eater*, and *Polygon*. Ezra Klein is the editor-at-large for a media website of this name, which publishes a series of "explainers." This is the first word in a two word Latin phrase that roughly means "the opinion of the majority of people." For 10 points, give this Latin word meaning "voice," which often proceeds *populi*.

ANSWER: **Vox**

<TH, Other Academic>

## BONUSES:

1. Following its 1763 creation, this construct marked the northern extent of slavery in the U.S., prior to the Missouri Compromise. For 10 points each:

[10] Name this line of demarcation that settled border disputes between Pennsylvania, Maryland, Delaware and Virginia after being surveyed by its two namesake men.

ANSWER: **Mason-Dixon** Line [accept **Mason** and **Dixon** Line; accept **Mason**'s and **Dixon**'s Line]

[10] Between 1701 and 1765, the predecessors to these two American states fought a so-called "Line War," which consisted of a series of small skirmishes, culminating with George III establishing a border from Point Jervis to the Hudson River. Name both.

ANSWER: Province of **New York** and Province of **New Jersey** [prompt on partial answer]

[10] This was the southernmost of the two neighboring states that participated in the bloodless Honey War, whose only victims were some honey bee trees. During the Civil War, secessionist guerillas known as bushwhackers were most commonly found in this state, where they often were opposed by a different neighboring state's Jayhawkers.

ANSWER: **Missouri** (The unnamed states are, respectively, Iowa and Kansas)

<TH, American History>

2. This state's Shark Bay is famed for its massive sea-grass beds, dugong breeding population, and collection of geologically important stromatolites. For 10 points each:

[10] Name this state, whose northwestern Ningaloo Coast features an extensive network of Karst waterways and caves. The Gibson and Great Sandy Deserts dominate much of the middle of this State.

ANSWER: **Western Australia**

[10] This capital of Western Australia is consistently ranked one of the world's most liveable cities. This city on the Swan River is one of the most remote large cities in the world, lying about 1300 miles from the nearest large city.

ANSWER: **Perth**

[10] The entirety of Western Australia is crossed by one of these structures meant to keep out rabbits and emus. The majority of the Hungarian border barrier, meant to keep out refugees, consists of one of these typically see-through structures adorned with barbed wire.

ANSWER: **fence** [do not accept "wall"]

<TH, Geography>

3. Answer some questions about how human activities are devastating our oceans. For 10 points each:

[10] After an oil spill, *Cycho-clasticus* is used in the bioremediation of these hydrocarbons that are potentially carcinogenic to humans and aquatic organisms. Small examples of these hydrocarbons with two or three rings, like anthracene and naphthalene, are soluble in water.

ANSWER: **polycyclic aromatic hydrocarbons** [accept **P·A·Hs**; prompt on partial answer]

[10] P·A·Hs, P·C·Bs, and other pollutants from industrial processes build up in marine food webs via this process. This process refers to the buildup of pollutants and other substances in successive trophic levels.

ANSWER: **biomagnification** [accept **bioamplification** or **biological magnification**]

[10] Littering and illegal dumping is the primary source of the Great Pacific garbage patch, the largest accumulation of this material in Earth's oceans. P·E·T, P·V·C, and B·P·A are used in bags of this material that entangle sea turtles.

ANSWER: **plastic** [accept any specific kind of plastic]

<JS, Biology>

4. For 10 points each answer some questions about compositions inspired by moonlight:

[10] This composer wrote a piano piece inspired by Paul Verlaine's poem "Clair de Lune." A flute solo opens his piece *Prelude to the Afternoon of a Faun*.

ANSWER: Claude **Debussy**

[10] Claude Debussy's "Clair de Lune" was one of four movements in this piano suite named for a dance that originated in Northern Italy.

ANSWER: Suite **Bergamasque**

[10] The town of Bergamo is the home of the namesake French pantomime who suffers from "moon sickness" in this atonal work in 21 parts by Arnold Schoenberg.

ANSWER: **Pierrot Lunaire**

<JF, Classical Music>

5. Answer some questions about the peace making efforts of Romanov Princess regent Sophia Alekseyevna, for 10 points each:

[10] Sophia was in power when Russia signed the Treaty of Nerchinsk, which set the border between Russia and this nation. Throughout the 17th century, cossacks clashed with forces of this country, culminating in the Siege of Albazin.

ANSWER: **China** [accept **Qing** Dynasty]

[10] Sophia oversaw the signing of the Treaty of Perpetual Peace with this nation west of Russia. Earlier, this nation's king Sigismund III had intervened in Russian conflict by sponsoring False Dimitris during the Time of Troubles.

ANSWER: **Poland**-Lithuania Commonwealth [accept **Poland**; accept **Lithuania**; accept **Polish**-Lithuanian Commonwealth]

[10] Sophia ruled Russia during the minority of this younger half-brother of hers who expanded and modernized Russia according to Enlightenment tenants. He founded a namesake capital of Russia that lasted until 1917.

ANSWER: **Peter the Great** [accept **Peter I**; accept **Peter Alexeyevich**; prompt on **Peter**]

<TH, European History>

6. Gilles Deleuze wrote that change and newness occurs when repetition of thought fails to reproduce the original object of contemplation exactly in a book pairing this concept with repetition. For 10 points each:

[10] Give this word, a French misspelling of which is used to refer to the idea that a sign or word is insufficient to bring forth its meaning, and that meaning must be derived by the contrast between words.

ANSWER: **différance** [or **différance**]

[10] The term "différance" appears widely in the work of this French thinker who pioneered textual deconstruction in his book *Of Grammatology*.

ANSWER: Jacque **Derrida**

[10] Derrida's work, along with other thinkers like Jean Baudrillard ("buh-dree-ARE") and Michel Foucault ("foo-KOH"), is broadly defined as being part of this movement that rejects metanarratives. Jean-Francois Lyotard wrote a book titled for its "condition."

ANSWER: **postmodernism**

<TH, Philosophy>

7. Answer some questions about sequels to American novels, for 10 points each:

[10] Arguably the most famous sequel in American literature, this Mark Twain novel follows the events after *Tom Sawyer*.

ANSWER: Adventures of ***Huckleberry Finn***

[10] In *Closing Time*, which is a sequel to this novel, such characters as Milo Minderbinder and Chaplain Tappan wrestle with the fears and aches of old age and cancer.

ANSWER: ***Catch-22*** (by Joseph Heller)

[10] The final novel by John Updike is titled for the “widows” of this fictional Rhode Island town, and is a sequel to an earlier novel titled for the “witches” of this place.

ANSWER: ***Eastwick*** [accept *The Witches of Eastwick* or *The Widows of Eastwick*]

<BK, Long Fiction>

8. Momentum of these quasi-particles is not conserved in Umklapp scattering, in which they are annihilated with each other. For 10 points each:

[10] Name these bosons that are the quantum mechanical vibration modes of a lattice. The optical type of these quasi-particles have a non-zero frequency at the center of the Brillouin zone.

ANSWER: **phonons**

[10] Phonons in general travel at the speed of this phenomenon, which is called Mach 1. In dry air, the speed of this phenomenon generated by longitudinal waves is 343 meters per second.

ANSWER: **sound** [accept speed of **sound**; accept **sound** waves]

[10] In plots of the dispersion relation, branches corresponding to this type of phonon have a “v” shape that levels off near the boundaries of negative  $\pi$  over  $a$  and  $\pi$  over  $a$ . This type of phonon represents motion in which positive and negative ions in a crystal move together.

ANSWER: **acoustic** phonon [accept **acoustical** phonon]

<LL, Physics>

9. Examples of this type of good include intercity bus travel, which is time-consuming but preferable when income is restricted. For 10 points each:

[10] Name this type of good that is contrasted with a normal good. For this type of good, income elasticity is negative. A special type of this type of good is a Giffen good.

ANSWER: **inferior** goods

[10] The determination of normal versus inferior goods can be made by calculating the income elasticity, which is done by dividing the percent change in this quantity by the percent change in income. The price of a product is determined where the downward sloping line representing this quantity intersects the supply curve.

ANSWER: **demand**

[10] An elasticity of demand of zero is characteristic of goods described by this word. Prices or wages are said to experience this phenomenon when they are resistant to change.

ANSWER: **sticky** [accept **stickiness**; accept **rigidity**]

<TH, Economics>

10. This poem is written in the form of a villanelle, with five tercets followed by a quatrain. For 10 points each,  
[10] Name this poem, which is often read at funerals. The author of this poem addresses wise, good, wild, and grave men before finally addressing the speaker's father, who is presumably dying.

ANSWER: "**Do not go gentle into that good night**"

[10] This Welsh author of *Under Milk Wood* penned "Do not go gentle into that good night."

ANSWER: Dylan **Thomas** [or Dylan Marlais **Thomas**]

[10] The second line of the poem describes how "old age should" perform *this action* "and rave at close of day." Give the specific word from the poem.

ANSWER: **burn** [do not prompt or accept on putative synonyms]

<DG, Poetry>

11. Ed Kashi's photobook *The Curse of the Black Gold* was used as evidence of human rights violations during a trial for this company. For 10 points each:

[10] Name this oil giant. The death of Ken Saro-Wiwa occurred as a direct result of the continued support for African corruption by this world's largest non-state-owned petroleum enterprise.

ANSWER: Royal Dutch **Shell** [accept **R.D.S.A.**; accept **R.D.S.B.**]

[10] Much of Shell's political malfeasance occurs in this most populous African country, which is also where Saro-Wiwa worked prior to his 1995 execution that was ordered by a leader in Abuja.

ANSWER: Federal Republic of **Nigeria**

[10] Ken Saro-Wiwa was a member of the so-called Ogoni Nine, a group of activists who were hanged for the absurd crime of inciting murder, by this aforementioned Nigerian strongman, who supposedly perished on top of his concubines after eating a poisoned apple.

ANSWER: Sani **Abacha**

<BK, World History>

12. These objects are central to bunraku theatre. For 10 points each:

[10] Name these objects. It famously takes 10 years of practice with the feet, 10 years with the left hand, and 10 years with the head before a starring role operating these things is awarded in certain acting troupes.

ANSWER: **puppets** [accept **marionettes**]

[10] Puppets are employed to great effect in this prolific Japanese playwright's works such as *Love Suicides at Sonezaki* and *Battles of Coxinga*.

ANSWER: **Chikamatsu** Monzaemon

[10] Bunraku theatre often employs the use of a taiko, which is this type of instrument. The tempo of the beat from one of these instruments steadily increases throughout Eugene O'Neill's play *The Emperor Jones*.

ANSWER: **drum**(s) [or **percussion** instruments]

<JF, Drama>

13. Lafcadio Hearn collected horror stories from this country in his collection *Kwaiden*. For 10 points each:

[10] Name this country whose folk monsters include the *tengu* and the *kappa*, both examples of *yokai*.

ANSWER: **Japan** [accept **Nihon** or **Nippon**]

[10] A type of Yokai called Ashi-arai-yash-iki is a giant that shoves this body part into houses, demanding people to wash it.

ANSWER: **foot** [accept **feet**]

[10] Another type of Yokai called the *tenome* had these body parts on their hands. The Mokumokuren Yokai is a haunted Shoji screen who would steal these body parts from unsuspecting people.

ANSWER: **eyes**

<JH, Mythology>

14. Peter Kropotkin argued that mutual aid does not occur because of expectation of reward, but instead because of an instinctive feeling of this kind, which binds people together because of shared sympathies and interests. For 10 points each:

[10] Give this term that describes a social cohesion that emerges in small, undifferentiated societies as “mechanical” which changes to an interdependent “organic” variety as specialization increases.

ANSWER: **solidarity**

[10] The differences between mechanical and organic solidarity were discussed by this thinker in his book *The Division of Labour in Society*. He also wrote a classic study in the causes of different suicide rates among Catholics and Protestants.

ANSWER: Emile **Durkheim**

[10] Durkheim was a proponent of a paradigm of sociology described as a “structural” type of this theory. This paradigm views societies as systems whose component parts work together to promote stability, and it is often contrasted with symbolic interactionism and conflict theory.

ANSWER: structural **functionalism**

<TH, Sociology>

15. A sentence that uses this word eight times consecutively was first presented in Dmitri Borgmann’s *Beyond Language: Adventures in Word and Thought*. For 10 points each:

[10] Give this word, which in a repetitive sentence demonstrating lexical ambiguity is used to refer to the action of bullying, a city in New York, and a large North American mammal.

ANSWER: **buffalo** [accept **Buffalo** buffalo Buffalo buffalo buffalo Buffalo buffalo]

[10] Another repetitive example sentence demonstrating lexical ambiguity uses this three letter word eleven consecutive times in discussing James and John’s attempts to please an English teacher.

ANSWER: **had**

[10] The grammatically correct sentence “James, while John had had ‘had’, had had ‘had had’; ‘had had’ had had a better effect on the teacher” is made much easier to understand by applying this thing to it, which provides pauses and intonation. This component of written language is the subject of the book *Eats, Shoots, and Leaves*.

ANSWER: **punctuation** [accept specific types of **punctuation** like **commas** or **quotation marks**]

<TH, Other Academic>

16. Name some authors who were members of the American Anti-Imperialist League, an organization opposing U.S. intervention overseas. For 10 points each:

[10] This writer satirized American moral superiority over those in the Philippines in his essay “To the Person Sitting in Darkness.” He explored themes of social justice in *The Prince and the Pauper* and *Pudd'nhead Wilson*.

ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

[10] This writer turned to poetry and socialism later in life, leading him to join the league in 1898. He is best known today for his novel *The Rise of Silas Lapham*.

ANSWER: William Dean **Howells**

[10] Charles Eliot, a Harvard scholar with this surname, was also a notable member of the league and names a series of poetry lectures given at Harvard. A different man of this surname founded a New York-based publishing company known for its critical editions and literary anthologies.

ANSWER: **Norton** [accept Charles Eliot **Norton** or William Warder **Norton**]

<TH, Mixed Lit>

17. In a neoclassical sculpture depicting these two figures, one extends his wings as he leans down to deliver a “reviving” kiss. For 10 points each:

[10] Name these two mythological figures featured in Apuleius's *The Golden Ass*, who are depicted embracing in an Antonio Canova sculpture.

ANSWER: **Cupid** and **Psyche** [accept **Eros** instead of **Cupid**]

[10] This French Rococo artist painted the sumptuous *Psyche showing her Sisters her Gifts from Cupid*, but is better known for painting erotic scenes like *Blind Man's Bluff* and *The Swing*.

ANSWER: Jean-Honore **Fragonard**

[10] This Pre-Raphaelite Brotherhood artist showed some glum looking maidens scattering flowers and playing instruments in his *The Wedding of Psyche*. His other mythological scenes include *The Beguiling of Merlin* and *King Cophetua and the Beggar Maid*.

ANSWER: Edward **Burne-Jones**

<TH, Painting + Sculpture>

18. The phase diagram for this material typically plots temperature on the y-axis and weight percent carbon on the x-axis. For 10 points each:

[10] Name this alloy that consists of iron with small amounts of carbon and other metals. When this alloy contains 10.5 percent or more of chromium it is considered its corrosion-resistant “stainless” variety.

ANSWER: **steel** [accept stainless **steel**]

[10] Ferritic steel exists in this crystal structure, unlike austenitic steel which has F·C·C structure. This crystal structure features two atoms per unit cell and a packing fraction of 68 percent.

ANSWER: **body centered cubic** [or **B·C·C**; do not accept or prompt on partial answer]

[10] This metastable type of steel that appears in a iron-carbon solid solution can only be formed in a quenching process. It appears at low temperatures across all concentrations of carbon on typical steel phase diagrams.

ANSWER: **martensite** [accept **martensitic** steel]

<TH, Chemistry>

19. Answer some questions about classic Playstation 2 games, for 10 points each:

[10] Regarded as one of the greatest games of all time, this spiritual successor of *Ico* features the protagonist Wander facing off against sixteen gigantic monsters in order to restore the life of a girl named Mono.

ANSWER: **Shadow of the Colossus**

[10] The “Black” entry of this vehicular combat series was released for the PS2. Playable vehicles in this series include Darkside, Firestarter, Calypso, Flower Power and Sweet Tooth, which is driven by the evil clown, Needles Kane.

ANSWER: **Twisted Metal**

[10] This video game series got its start on the PS2 with the “Damacy” entry in 2004. This series involves rolling around a magically adhesive ball that collects random objects that increase the player’s size.

ANSWER: **Katamari**

<JH, Pop Culture Games>

20. In his book *House on Fire*, epidemiologist William Foege chronicled his involvement in a world-wide campaign regarding this disease, which had earlier decimated Khoisan populations after being introduced to the Cape Colony. For 10 points each:

[10] Name this infectious disease characterized by the formation of namesake pustules all over the body; the World Health Organization declared it to be eradicated in 1977.

ANSWER: **smallpox** [accept *variola minor* or *variola major*]

[10] Although the experiments of this English scientist have sparked controversy for his experimenting on the unaware boy James Phipps, those experiments did result in this man utilizing milkmaid knowledge to pioneer the world’s first smallpox vaccine.

ANSWER: Edward **Jenner**

[10] When she wasn’t being pined after by Alexander Pope, this woman was introducing smallpox inoculations to Britain, after seeing variolation being widely used throughout her time in the Ottoman Empire.

ANSWER: Lady Mary **Wortley Montagu** [accept either underlined portion; accept Lady Mary **Pierrepont**]

<TH, Other History>

21. Musical ratios inspired the 2 to 1 relation of the two smaller domes to the large central dome in this building. For 10 points each:

[10] Name this Renaissance era chapel, designed either by Filippo Brunelleschi, Giuliano da Maiano, or Michelozzo. This building, which lies south of the Basilica di Santa Croce, has geometric interiors inspired by Roman buildings.

ANSWER: **Pazzi** Chapel

[10] The Pazzi Chapel is found in this Italian city, where Brunelleschi designed the dome and Lorenzo Ghiberti designed the bronze doors for its Baptistry.

ANSWER: **Florence**

[10] Six of the Corinthian examples of these load-bearing architectural features appear on the front portico of the Pazzi Chapel.

ANSWER: **columns**

<TH, Architecture>

22. In 2016, the Philippine Air Force formed the number 69 to celebrate this politician's 69th birthday. For 10 points each:

[10] Name this President of the Philippines since 2016, who came to power with promises of brutal anti-crime reprisals. This leader of the PDP-Laban Party has pursued closer economic and military ties with China.

ANSWER: Rodrigo **Duterte**

[10] In response to terror attacks by the Islamic State-affiliated group Maute, Duterte issued Proclamation No. 216, declaring martial law on this island. This island is home to the Moro people and Davao City, where Duterte was once mayor.

ANSWER: **Mindanao**

[10] Duterte has criticized this organization for opposing his war on drugs. In December 2018, Duterte said that this organization should allow its leaders to "come out in the open, cancel celibacy and allow them to have boyfriends."

ANSWER: Roman **Catholic Church**

<JM, Current Events>

23. This dynasty's sixth caliph, al-Walid I, constructed a massive mosque over a Roman temple-turned-cathedral after this dynasty's conquest of Damascus, which became their capital in 661 AD. For 10 points each:

[10] Name this early caliphate that succeeded the Rashidun. This caliphate fell apart after losing a decisive battle to the Abbasids at the Battle of Zab River.

ANSWER: **Umayyad** Caliphate [accept **Omayyad** Caliphate]

[10] Even after the fall of the Umayyad Caliphate as a whole, an "Emirate" and a "Caliphate" named for this city lived on in areas throughout the Iberian Peninsula, where they feuded with Christian forces during the *Reconquista*.

ANSWER: **Córdoba** [accept Emirate of **Córdoba**; accept Caliphate of **Córdoba**]

[10] Following the disintegration of the Córdoba Caliphate came the rise of these small Muslim-ruled states, whose name translates as "factions." The most powerful of these states was centered on the modern city of Seville, then ruled by the Abbadid family.

ANSWER: **taifa** [prompt on emirates]

<JS, World History>

24. A distribution has a heavy one of these things if its survival function cannot be bounded by a decreasing exponential function. For 10 points each:

[10] Name this part of a distribution that is heavy in the Pareto, Weibull ("vey-bool"), and Cauchy ("coh-shee") distributions. This part of a distribution is far away from the mean.

ANSWER: **tail** [accept long-**tailed**; accept heavy-**tailed**; accept fat-**tailed**]

[10] For heavy-tailed distributions this second central moment of a distribution function is typically, but not always, undefined. For a random variable X, this quantity is given by the expected value of the squared difference between X and the expected value of X.

ANSWER: **variance** [accept sample **variance**; accept population **variance**; accept **s squared**; accept **sigma squared**]

[10] These extreme values that are far away from the majority of points in a data set are more common in heavy-tailed distributions. These points are typically outside of the "whiskers" in a box plot.

ANSWER: **outliers**

<JS, Other Science Math>