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Tossups:

1. A 1972 paper by Alchian and Demsetz argues that these entities arise on account of the ability to measure the marginal contributions of inputs and that they mainly serve to reduce information costs. Separate markets for key roles in these entities are analyzed in a paper about “Agency Problems” and the theory of [them] by Eugene Fama. Micro-economically, the size of these entities is optimized at the lowest point on the LAC [L-A-C] curve. A (*) 1937 article explains the origin of these entities as resulting from a desire to minimize transaction costs. In perfect competition, these entities face zero entry costs, so in the long run they can’t keep average total cost below their average revenue per product. For 10 points, Ronald Coase analyzed the “Nature of” what organizations that provide goods and services to consumers?

ANSWER: business firms [accept companies or corporations or businesses and equivalents/word forms; accept “The Nature of the Firm”]

2. This character is the subject of the last song on the album *Heretic Pride*, in which he declares “I am ready for my close-up today.” That song by the Mountain Goats describes this character “resplendent.” In a film appearance, this character robs Marion Chambers and is saved from being stabbed by a security guard played by LL Cool J. This character is called the (*) “boogeyman” by a girl who stabs him in the eye with a coathanger, and he was institutionalized after murdering his sister Judith while wearing a clown costume. He is later shot by his psychiatrist, Sam Loomis, but returns in another film to continue stalking his sister Laurie Strode, played by Jamie Lee Curtis. While he was originally going to wear a mask of Reagan in one scene, his iconic mask is a mask of William Shatner’s face covered in white paint. For 10 points, name this villain of the *Halloween* franchise.

ANSWER: Michael Myers [accept either underlined portion]

3. One side during this event relied on inaccurate tips from a bartender at the National Press Club as described in a book about this event, *One Hell of a Gamble*. The organizational process model was used to explain why one side placed stars on top of barracks and used a Star-of-David shape design during this event in Graham Allison’s *Essence of Decision*. During this event, one person faked a cold to leave a Chicago campaign stop. Four “Foxtrots” including B-59 were harassed by (*) depth charges during this event where Issay Pliyev may have been directly authorized to use FROGs as part of Operation Anadyr. One message sent during this event asked “let us take measures to untie that knot” before a second, harsher message demanded the removal of Jupiter missiles from Turkey. For 10 points, name this 13-day long crisis in October 1962 involving the delivery of Soviet nuclear weapons to a Caribbean island.

ANSWER: the Cuban Missile Crisis

4. One character in this work watches a group of young men playing a game with “suffocating intensity of purpose” but little apparent enjoyment, and notes that the “Sea Urchin” tries especially hard. That character in this novel asks a priest if there’s anything in a diary that might “offend a good pacifist.” One character in this book imagines a nuclear holocaust that destroys all zoos, inspiring his brother to go to (*) Africa to catch elephants. A character in this work uses football to win the loyalty of the youths in the village, and feuds with his brother about the circumstances of S’s death; that character in this novel encourages looting at a supermarket run by the Korean “Emperor,” and reveals that his mentally disabled sister committed suicide due to their incestuous relationship. For 10 points, name this novel about Takashi and Mitsusaburo, by Kenzaburo Oe.

ANSWER: *The Silent Cry* [or *Man'en Gannen no Futtoboru*, or *Football in the First Year of Man'en* or *Football in 1860*; accept Soccer in place of football]

5. *Descriptive answers acceptable.* One book by Eugen Weber studied a 34-year period in which these people, originally “savages,” were nationalized into citizens of their country. These people attacked the homes of their oppressors during the Great Fear. According to one 18th century conspiracy theory, these people were the target of the Famine Pact. Charles the Bad of Navarre defeated an army of these people led by Guillaume

Cale in 1358 at (*) Clermont-en-Beauvaisis. After pillaging by mercenaries during the Hundred Years' War, these people rose up in the Jacquerie. The first article of a decree by the National Assembly on August 4, 1789 "completely abolished" the feudal system that disproportionately imposed duties on these people. For 10 points, name these agricultural labourers at the bottom of feudal society in a country led by kings such as Louis XIV.
ANSWER: French peasants [or French serfs; or French farmers; accept anything that mentions these are lower-class French people who don't live in cities; prompt on anything that mentions that they are French]

6. One of these things mediates the "tagmentation" reaction used to prepare samples for Illumina sequencing. In 2001, Kapitonov and Jurka became the first ones to report a "rolling-circle" type of this entity called "helitron" in *Arabidopsis thaliana*. Inverse PCR after self-ligation is commonly used to locate these things after a commonly-used mutagenesis procedure in *Drosophila*; in that screen, a type of these known as (*) P elements is used. A synthetic type of this called Sleeping Beauty can be used for DNA modification in vertebrates. One type of this entity can be classified depending on whether it possesses the ability to encode for a reverse transcriptase; that is their "retro" type.. One type of these contains inverted repeat sequences at its two ends for recombinase recognition used in its "cut-and-paste" mechanism. For 10 points, name these jumping genes.
ANSWER: transposons [accept transposase; prompt on jumping genes]

7. This property is possessed by entities such that if one splits the yield of a tree into five parts, there are more than m marked positions in the xyz component of the yield. Ogden's Lemma gives conditions for when this property holds, and is a generalization of a theorem stating that the vwx component of a five-part string will always be less than the length p if the string is part of a set that has this property. The more complex of the two pumping lemmata applies to entities with this property, which is possessed by (*) Type-2 structures. Constructs with this property cannot generate the empty string when written in Chomsky Normal Form. The theory of languages with this property underlies LL and LR parsers. The left-hand side of a production rule is always a nonterminal in languages that possess, for 10 points, what property, whose name refers to the inability of a language's generating symbols to delete string terminals?
ANSWER: context-free grammar [or context-free language; prompt on CFG]

8. This poem originally contained a line about "the tittering world" dancing. It describes a river that "hears no sound, save his own dashings" and lists concepts like "stern agony" and "the narrow house" that drive the reader to listen to a "still voice" that "comes from all around -- Earth and her waters, and the depths of air." This poem advises its listener to "take the wings of morning" and "pierce the (*) Barcan wilderness," and prophesies he will "be a brother to the insensible rock" and join the "patriarchs of the infant world." This poem, which describes "hills rock-ribbed and ancient as the sun," centers on a figure "who in the love of Nature holds / Communion with her visible forms," and it urges readers to "approach thy grave / like one who...lies down to pleasant dreams." For 10 points, name this poem by William Cullen Bryant about the "contemplation of death."
ANSWER: Thanatopsis

9. One leader of this party hurt its electoral chances by claiming that their opponents' platform would require "some form of a Gestapo" to implement. Many members of this party used to belong to the Monday Club. This party's leadership contenders apply to its 1922 committee, named for the year in which a meeting at the Carlton Club persuaded this party to leave a coalition. George Soros greatly profited from a decision by one leader of this party to withdraw from the (*) European Exchange Rate Mechanism in 1992, which led to the Black Wednesday currency crisis. That Prime Minister from this party took office after his predecessor was forced out over an unpopular poll tax; that preceding leader of this party closed unprofitable coal mines and beat Argentina in the Falklands War. For 10 points, name this British political party of John Major and Margaret Thatcher.
ANSWER: Conservative and Unionist Party [or Tories; or Tory Party; or Cons]

10. This deity orders gold stripped from a statue for personal adornment and presides over Var, guardian of promises, and Syn, who locks doors in halls. This deity intercedes on behalf of the childless king Rerir, and she sends a maid to warn Geirrod about a stranger whom no dogs would attack. This child of Fjorgynn defends a god accused of knocking at doors as a fortuneteller in the *Lokasenna*, only to be accused of sleeping with her husband's brothers as a result. This goddess has (*) handmaidens named Lofn, Hlin, Gna, and Fulla, and she is able to weave clouds. She ignores an object she thinks is unthreatening while travelling and asking every

other object not to harm her son. Loki then exploits her mistake by fashioning a weapon made from mistletoe. For 10 points, name this Norse goddess of wisdom, marriage, and love, the mother of Baldr and wife of Odin.
ANSWER: Frigg

11. A king with a backstory almost identical to Oedipus is said to have built this empire's first capital out of black sandstone. A foreign account of this empire described its people as having no tables, chairs, or bowls in their homes, and says that they walked around in only loincloths. It's ambiguous whether this empire's founder, who built the Roluos temples, was tutored on Java or in the similar-sounding Champa kingdom found directly to this empire's east. An account of this empire was written by the Chinese official (*) Zhou Daguan. The greatest monument constructed by this empire was deliberately designed to look like the *axis mundi* from Hindu cosmology. Its capital was built by its founder Jayavarman II. For 10 points, name this empire that built temples designed to look like Mount Meru, notably including Bayon and Angkor Wat.
ANSWER: Khmer [prompt on Angkor Empire until mentioned; prompt on Cambodia]

12. In one book, a radio producer for the BBC becomes obsessed with these people after being mugged by a woman who hisses a derogatory insult at him. Julian Treslove's friend Sam is one of these people, and his "question" provides the title of a 2010 novel by Howard Jacobson. One of these people tries to drown herself in the Thames after failing to find her mother and brother, but is rescued by a man loved by Gwendolyn Harleth. Mirah Lapidoth ends up marrying her rescuer, a member of this group who was raised by Sir (*) Hugo Mallinger after his mother's death. *Daniel Deronda* caused controversy due to the fact that its protagonist was idealistic and sympathetic, as members of this group were frequently caricatured as sinister or avaricious. For 10 points, name this religious group whose members include Sir Walter Scott's Rebecca and Shakespeare's Shylock.
ANSWER: Jewish people [or Jews; accept "The Finkler Question" before "these people" is read]

13. It's not in Spain, but an early vocal work by a composer from this city contains a movement *Duo Seraphim* for three tenors representing the trinity; Andrew Parrott was the first to conduct the the lengthy *magnificat* of that piece a fourth lower than its original pitch. Each of the first two books of Mendelssohn's *Songs Without Words* ends with a piece meant to evoke this city, which was home to the composer of *Vespers of the Blessed Virgin*. This city was home to a girl's orphanage called the (*) Ospedale della Pieta, where the composer of *L'Estro Armonico* taught violin. The *barcarole* was developed by workers in this city's main thoroughfares, as its name literally means "boat-song." For 10 points, Claudio Monteverdi and Antonio Vivaldi worked in what city, where religious music was often performed at St. Mark's Basilica?
ANSWER: Venice [or Venezia]

14. In a Laguerre-Gaussian laser mode, this quantity is proportional to the Gouy phase. This quantity was independently discovered by Nikolay Umov, who generalized it to liquid media. This quantity in a cylindrical capacitor located an in H-field produces a clockwise energy flow. If a conductor has significant resistance, this quantity will tilt towards the conductor and become perpendicular to the surface. This quantity divided by the (*) speed of light yields radiation pressure. The negative divergence of this quantity is found by the time derivative of energy density, plus current density times electric field. This quantity is equal to the cross product of electric and magnetic field vectors, divided by vacuum permeability. Intensity is the time-average of this quantity. For 10 points, name this vector quantity symbolized S, which represents energy flux density and points in the direction of propagation of an electromagnetic field.
ANSWER: Poynting vector

15. This man's theory of essence posits that it can exist in the external world, in the mind, or by itself without any mode of existence, which is called radical contingency. This man wrote his two earliest works under the guidance of "the Second Teacher" whose commentary elucidated a book he read forty times without comprehending. In the beginning of this philosopher's "Treatise on the Soul", he describes a thought experiment where a blind man (*) suspended in the air cannot affirm his own self-existence. The Incoherence of the Philosophers criticizes this man's viewpoints on Aristotelian philosophy, which was earlier summarized by Al-Ghazali in *The Intentions of the Philosophers*. For 10 points, name this early Islamic philosopher who summarized Galen's work in *The Canon of Medicine* and wrote *The Book of Healing*.
ANSWER: Avicenna [or Ibn Sina]

16. In one work from this literary movement, a character smashes a mirror after searching for the mark of Cain on his forehead; in that work, Guelfo is enraged that his father arbitrarily chose his twin brother Ferdinando to honor as the firstborn. A parody of one novel from this movement fills a gun with chicken blood and was written in response to the title character's "fever," a fad inspired by this movement in which young men dressed in yellow pants and blue jackets. A woman in a novel from this movement asks the protagonist to read some poems by (*) Ossian, after which he attempts to embrace her. After asking Lotte to borrow two pistols from her husband Albert, Werther uses them to commit suicide. For 10 points, name this proto-Romantic German literary movement whose members included Maximilian Klinger and Johann von Goethe.

ANSWER: Sturm und Drang [or Storm and Stress; accept "drive" or "urge" in place of stress; accept Sensibility]

17. He's not Seinfeld, but this artist claimed he wanted to write a television special about nothing and call it "The Nothing Special." This artist drew high heels with captions such as "to shoe or not to shoe" in *A Recherche du Shoe Perdu*. This artist depicted events including the death of 129 people in a plane crash and car crashes in silver and orange in his *Death and Disaster* series. A chat with Ivan Karp about "wonderfully pastoral" animals led this artist to put bright (*) cow's heads on wallpaper. This artist filmed John Giorno for five hours in *Sleep* and the Empire State Building for eight hours in *Empire*. At the height of the Cultural Revolution, he irreverently ripped off propaganda posters for silkscreen prints of China's leader. For 10 points, name this Pop artist who worked in "the Factory" who made paintings of Campbell's Soup Cans.

ANSWER: Andy Warhol

18. This functional group and an alpha-bromoester activated by zinc metal forms a beta-ketoester in the Blaise reaction, and they are synthesized from aryl halides in the Rosenmund-von Braun reaction. A fragmentation variant of the Beckmann rearrangement produces an alkyl halide and this functional group. Adding Grignard reagents to this functional group, then hydrolyzing, results in a ketone via an (*) imine intermediate. IR spectra of these compounds have a strong peak around 2250 inverse centimeters, and it's not in latex but this functional group is used to form a polymer used in laboratory gloves. For 10 points, name this functional group which consists of a carbon triple bonded to a nitrogen.

ANSWER: nitrile or ciano

19. In Ethiopia, a *debtera* creates a *kitab* in order to prevent instances of these events done in response to an occurrence of a *buda*. An Old Testament account of one of these events involved David playing a harp and Sarah strangling seven men. A young boy in the New Testament falls into both water and fire before being involved in one of these events, an instance of which occurs in every gospel except John. Either one or two men subject to a miracle of Jesus were involved in this kind of event which ended with (*) pigs being drowned in a lake. In Islam, a variety of this action called a *ruqiya* is performed by reciting the Throne Verse to foil Iblis. A deliverance ministry is related to this type of event, a film about which was based on the case of Anneliese Michel. For 10 points, name this action which Jesus carried out in order to expel the demon Legion.

ANSWER: exorcism [accept meaningful equivalents like driving out spirits; accept demonic possession in general or equivalents]

20. An essay by Peter Wollen compares these things to the element of "ice," saying they have "cryogenic power." Another analysis of these things discusses their power of both *studium* and *punctum*, or the "civility" and "pricks." An essay about these things begins by stating "Humankind lingers unregenerately in Plato's Cave" and notes that humanity is educated by these creations, which are "experience captured." An essay by Roland (*) Barthes whose title mentions the word "lucida" is about the power of looking at these things. Another essay about these things notes that to create them is to violate people, since to use the object that creates them is to engage in "subliminal murder"; that essay is by Susan Sontag. For 10 points, name these things which Diane Arbus produced, one of which shows a child with a toy hand grenade in Central Park.

ANSWER: photographs [or photos; prompt on cameras or film; do not accept or prompt on "films" or "works of art" that do not mention photos.]

Bonuses:

1. Swarming archers of these people defeated forces representing Louis the Child in a 910 battle. For 10 points each:
[10] Name these nomads who were defeated at the Battle of Riade by Henry the Fowler. They first entered the Carpathian Basin under the leadership of Arpad.

ANSWER: Magyars [or Hungarians]

[10] The Magyars were decisively defeated by this King of Germany at the Battle of Lechfeld in 955. This son of Henry the Fowler would later become Holy Roman Emperor in 962.

ANSWER: Otto I [or Otto the Great; or Otto I der Grosse; prompt on Otto]

[10] According to Gardizi and Ibn Rustah, the Magyar tribes had a dual-monarchy system divided between these two roles. One was a war chief, while the other was the religious head or the ceremonial leader. Name either.

ANSWER: Gyula or Kende [accept Yula, Gula, or Gila for “Gyula” and Kundu or Kunde for “Kende”; accept either underlined]

2. This essay asks, “When you removed the gag that was keeping these black mouths shut, what were you hoping for? That they would sing your praises?” For 10 points each:

[10] Name this essay by Jean-Paul Sartre that opens Senegalese president Léopold Sédar Senghor’s 1948 collection of Francophone poetry, *Anthology of New Black and Malagasy Poetry*.

ANSWER: “Black Orpheus” [or “Orphée Noir”]

[10] This term refers to Senegalese spoken-word poets and musicians. These bards, known as “praise singers,” passed down poems and stories like the *Epic of Sundiata*.

ANSWER: griots [or jeli or guelwel or gawlo or iggawen]

[10] This editor of the *Black Orpheus* magazine criticized Senghor’s Negritude movement by saying “a tiger does not proclaim his tigritude; he pounces.” He is more famous for plays like *Death and the King’s Horseman*.

ANSWER: Wole Soyinka

3. In 2006, scientists from Lawrence National Laboratory created the seventh element of this group by bombarding Californium with Calcium. For 10 points each:

[10] Name these elements that include xenon and argon. These elements occupy group 18 in the periodic table and earned their nickname due to their low reactivity.

ANSWER: noble gases [or Group 18 before it is read]

[10] Under high pressure, noble gases form excimers, in which this many atoms of a given noble gas are bound together. A molecule with this many atoms has one vibrational degree of freedom.

ANSWER: two

[10] This model was developed by its namesake while studying the interaction between two argon atoms. This model contains a twelfth power term representing repulsion and a sixth power term representing attraction.

ANSWER: Lennard-Jones Potential

4. This school combined use of Greek philosophy, or *falsafa*, with *kalam* in an attempt to solve the problem of evil and other conundra. For 10 points each:

[10] Name this rationalist school of theology prominent under the Abbasids, who persecuted this school’s opponents during the *mihna*.

ANSWER: Mu’tazili School [or Mu’tazila]

[10] Anti-Mu’tazili scholars argued that theology should instead be rooted in the Quran and this body of Islamic traditions, which are based on how Muhammad conducted his life and lends its name to a branch of Islam.

ANSWER: sunnah [which Sunni Islam is named after]

[10] An important source of *sunnah* are these sayings of Muhammad, which were compiled in the 8th to 10th centuries by scholars like al-Bukhari.

ANSWER: hadiths

5. A 2016 archaeological dig at Phaleron near this city uncovered what is possibly the graves of supporters of Cylon. For 10 points each:

[10] Name this Greek city-state that was defeated by Lysander at Aegospotami, which forced it to sue for peace in the Peloponnesian War with its rival, Sparta.

ANSWER: Athens [or Athina; or Athenai]

[10] After the war, Lysander imposed this pro-Spartan government on Athens. Named for the number of oligarchs it comprised, it was led by Critias, who executed democrats over the objections of Theramenes.

ANSWER: the **Thirty Tyrants** [or oi **triakonta tyrannoi**]

[10] The Thirty Tyrants were defeated by this Athenian leader of the Phyle campaign who then negotiated the restoration of democracy with Pausanias. During the Corinthian War, his success caused the Persians to switch sides.

ANSWER: **Thrasybulus**

6. This procedure can be used to test for HIV in the blood serum. For 10 points each:

[10] Name this laboratory procedure used to detect a protein using antibodies. It was named as a pun on Southern blotting, which is used to detect DNA.

ANSWER: **Western** Blotting

[10] Western blotting is frequently performed on these two types of membrane due to their ability to hydrophobically bind with proteins. Name either.

ANSWER: **nitrocellulose** or **PVDF** [or **Polyvinylidene Difluoride**]

[10] This protein assay is often used to quantify the amount of protein in solution. Unlike the BCA assay, this assay uses Folin-Ciocalteu reagents, and the paper detailing this assay is the most highly cited scientific paper ever.

ANSWER: **Lowry** Protein Assay

7. Edvard Munch's experiences with these people in Munich inspired his painting of Christmas, 1904, and may also have inspired his earlier *Vampire*. For 10 points each:

[10] Identify these people, who are depicted in Berlin using bright colors in characteristic Expressionist style in many *Strassenszene* works by Ernst Kirchner.

ANSWER: German **prostitutes** [prompt on **women**]

[10] Kirchner belonged to this group of artists, considered less romantic than their Blaue Reiter contemporaries. Its members included Fritz Bleyl and Erich Heckel, and they aimed to connect the art of the past and future.

ANSWER: Die **Brucke** [or The **Bridge**]

[10] Members of Die Brucke often used or adapted this medium, popularized in the Northern Renaissance by works such as Durer's *Melencolia I* and *Four Horsemen of the Apocalypse*.

ANSWER: **woodcuts**

8. "Ode on the Death of the Duke of Wellington" and "Charge of the Light Brigade" were both written by a holder of this office. For 10 points each:

[10] Name this honorary literary position in the United Kingdom, holders of which are expected to write poetry for important national events. Alfred Tennyson had this role for 42 years, and Ted Hughes had this role for 14 years.

ANSWER: **Poet Laureate** of the United Kingdom

[10] This first official poet laureate under Charles II received an annual "butt of Canary wine" along with his monetary salary. His works include *Annus Mirabilis* and the satirical *Mac Flecknoe*.

ANSWER: John **Dryden**

[10] This current British poet laureate is the first woman, Scot, or openly LGBT person to hold the position. She wrote from the perspective of an artist's model in "Standing Female Nude," which also titles her first collection.

ANSWER: Carol Ann **Duffy**

9. C. D. Anderson imaged this particle for the first time in a cloud chamber. For 10 points each:

[10] Name these particles, used in PET scans and emitted by potassium-40 decays. These particles correspond to negative energy solutions to the Dirac equation.

ANSWER: **positron** [or **antielectron**]

[10] The fact that there's more matter than antimatter in the universe is a problem called the "asymmetry" of these particles. These particles were generated when the Sakharov conditions were met.

ANSWER: **baryon**

[10] This experiment, a prototype of which was launched on STS-9, is mounted to the S3 truss on the International Space Station and is designed to detect positrons in cosmic rays.

ANSWER: **Alpha Magnetic Spectrometer** [or **AMS-02**]

10. This piece opens with a sleepy lullaby in its *Larghetto affettuoso* first movement and ends with alternating allegro assai and andante sections representing the agitated supernatural dream that inspired it. For 10 points each:
[10] Name this difficult solo piece which uses tons of double stops. It became the basis for an 1849 ballet by Cesare Pugni [CHEH-zah-ray POO-nyee].

ANSWER: “**Devil’s Trill**” Sonata [or Violin **Sonata** in **G minor** by Giuseppe **Tartini**]

[10] This virtuoso composer was also rumored to have made a deal with the devil; the trill-heavy thirteenth piece of his *24 Caprices for Solo Violin* is nicknamed the “Devil’s Chuckle.”

ANSWER: Niccolò **Paganini**

[10] In *Micrologus*, Guido of Arezzo rejected the use of this musical interval, which was often called “devil in music.” This dissonant interval was often rejected due to its difficulty to vocalize.

ANSWER: **tritone** [accept equivalents, such as **diminished fifths** or **augmented fourths**]

11. This Pacific nation serves as the depository of the Trans-Pacific Partnership. For 10 points each:

[10] Name this country currently led by Prime Minister Key, whose female predecessor heads the United Nations Development Project and was one of the candidates to replace Ban Ki-Moon as UN Secretary-General.

ANSWER: **New Zealand** [or **Aotearoa**]

[10] After two referenda in 1992–93, New Zealand’s legislature adopted this voting method in which overhang seats are awarded to make the seat count more proportional. It is also the system used to elect the German Bundestag.

ANSWER: **Mixed Member Proportional** Representation [or **MMP**; prompt on **Mixed Member**, **proportional** representation, **PR**, or **proportional voting**]

[10] New Zealand’s foreshore and seabed are subject to claims by this largest indigenous group, which has seats specifically allocated to it in the national legislature.

ANSWER: **Maori** people

12. Name some things related to mythological fish, for 10 points each.

[10] In Shinto mythology, this giant catfish lives under Japan. When his guard Kashima loses concentration, he thrashes around and causes earthquakes.

ANSWER: O-**Namazu**

[10] In one myth, Aphrodite turns herself and Cupid into koi fish in order to escape this monster. He mated with Echidna to create many monsters and was cast into Tartarus after losing a battle with Zeus.

ANSWER: **Typhon**

[10] While cooking the Salmon of Knowledge, Finn McCoul licks a drop of fat that falls onto this part of his body. Finn was able to draw on this knowledge just by biting this body part.

ANSWER: his **thumb** [prompt on **finger** or **hand**]

13. An extremely successful campaign under this man’s reign was capped off by the Battle of al-Qadisiyyah. For 10 points each:

[10] The first Muslim invasion of North Africa was ordered by this caliph, whose forces defeated Count Gregory at the Battle of Sufetula in present-day Tunisia, thereby ending the Exarchate of Africa.

ANSWER: Caliph **Umar**

[10] The Umayyad conquest of Africa reached Ceuta, which was the last stronghold of this empire’s Exarchate of Africa. This Christian empire also ruled modern-day Egypt and Turkey until they were captured by Muslims.

ANSWER: **Byzantine** Empire [or **Eastern Roman** Empire; or **ERE**; or Empire of the **Greeks** before “Greece” is read; prompt on **Roman** Empire]

[10] The Islamic conquest of Africa was taken even further west by this ruling dynasty of Morocco, which was founded as part of a revivalist movement by Abdallah ibn Yasin in the mid-11th century.

ANSWER: **Almoravid** dynasty [or **Almoravids**]

14. Miguel Palacios argued that this work was inspired by the writings of Islamic scholars like Ibn Arabi, who described Muhammad’s night journey to Heaven. For 10 points each:

[10] Name this epic poem in which the author descends into Hell and ascends a mountain with Virgil. Virgil leaves the author of this poem to ascend through the nine celestial spheres of Heaven with Beatrice.

ANSWER: The **Divine Comedy** [or **Divina Commedia**; anti-prompt on specific parts like The **Inferno**]

[10] In this section of the *Divine Comedy*, an angel draws the letter “P” on Dante’s forehead seven times, standing for peccatum, or sin. In this section, Dante encounters the lazy Belacqua and the murder victim Pia de Tolomei.

ANSWER: Purgatorio [or Purgatory]

[10] In his *Conversations on Dante*, this author called Dante's cantos "missiles for capturing the future" and claimed that the reader is always a translator. This lover of Akhmatova wrote "A Stalin Epigram."

ANSWER: Osip Mandelstam

15. This thinker has advocated for "resource egalitarianism" in his argument against John Rawls' Difference Principle. For 10 points each:

[10] Name this philosopher and proponent of the "right answer thesis" in legal theory who imagined shipwrecked survivors who hold an auction to distribute resources in his book *Sovereign Virtue*.

ANSWER: Ronald Dworkin

[10] Dworkin graduated from this university's law school. Emerson gave his "Divinity School Address" at this university, where Michael Sandel teaches an extremely popular course on justice.

ANSWER: Harvard University

[10] Sandel is associated with this view, which rejects Rawls' liberal theory. Proponents of this view have criticized liberal theory assuming the capacity for an abstract, universal analysis of justice removed from cultural context.

ANSWER: communitarianism

16. This company premiered such works as *Prelude to the Afternoon of a Faun* and *Jeux*. For ten points each:

[10] Name this company directed by Sergei Diaghilev and featuring such dancers as Rudolf Nijinsky and Anna Pavlova.

ANSWER: Ballets Russes

[10] The Ballets Russes premiered this Stravinsky ballet, whose acts include "The Princesses' Game with the Golden Apples" and "Dialogue of Koschei and Prince Ivan." Giant puppets replace the title avian in one reworking.

ANSWER: *The* Firebird [or *L'Oiseau de feu*]

[10] This set designer for the Ballets Russes painted two women running across rocks on the curtain of *Le Train Bleu*. He designed costumes for Satie's *Parade* which forced dancers to wear boxy costumes representing buildings.

ANSWER: Pablo Picasso

17. The title essay of this collection calls the Doors "the Norman Mailers of the Top Forty" and "missionaries of apocalyptic sex." For 10 points each:

[10] Name this essay collection, which asserts that "We tell ourselves stories in order to live." It includes interviews with Manson follower Linda Kasabian and descriptions of Black Panther meetings.

ANSWER: *The* White Album

[10] *The White Album* was written by this author of *Slouching Towards Bethlehem* and *Salvador*. A proponent of New Journalism, she wrote about her husband's death in *The Year of Magical Thinking*.

ANSWER: Joan Didion

[10] Didion wrote about growing up in this non-Oregon state also home to Ken Kesey and the Merry Pranksters; Allen Ginsberg wrote about a "supermarket in" this state.

ANSWER: State of California

18. Answer some questions about getting space probes around the solar system, for 10 points each:

[10] Voyager 1 used this maneuver around Jupiter and Saturn in order to gain enough energy to leave the solar system. In this maneuver, an object enters and leaves a gravitational field to gain velocity.

ANSWER: gravity assist [or slingshot; or swing-by]

[10] This probe, the first to leave the solar system, is the namesake of an "anomaly" in which is slowed down more than expected. This was later calculated to be due to loss of radiation pressure from the sun.

ANSWER: Pioneer 10

[10] This probe entered orbit of Mercury in 2011. Like Voyager, it took a "family portrait" of the Solar System, through from the opposite direction.

ANSWER: MESSENGER

19. Performing this technique using least squares generates the best least unbiased estimator by the Gauss-Markov theorem. For 10 points each:

[10] Identify this basic statistical technique widely use in social science. Its "linear" form estimates the coefficients for a linear correlation between an independent variable and one or more dependent variables.

ANSWER: **regressions** [or **regression analysis**; accept anything with the word **regression**; prompt on estimation]
[10] Running a basic linear regression on unemployment and GDP figures may give this empirical result named for an American economist, which states that a 1% increase in unemployment correlates with a 2% drop in GDP.

ANSWER: **Okun's Law**

[10] This statistical issue can be caused by omitted-variable bias. It occurs when the error term in a regression is correlated with one or more of the independent variables. This word's adjectival form names an economic growth theory similar to the neoclassical model which argues human capital and tech are the primary drivers of growth.

ANSWER: **endogeneity** [or **endogenous**, or other word forms; accept **endogenous** growth theory]

20. This event's common name was coined by a Choctaw leader upon reaching Little Rock. For 10 points each:

[10] Give this name for a series of events that began with the passing of the Indian Removal Act of 1830. During these events, the Cherokee, Choctaw, Chickasaw, and other tribes from the Southeastern US were forcibly relocated.

ANSWER: the **Trail of Tears** [prompt on answers mentioning relocating or removing Native Americans; anti-prompt on answers about specific peoples such as relocating the Cherokee, relocating the Choctaw, etc.]

[10] Among the displaced peoples were the Seminoles, whose resistance to American troops in Florida was led by this adviser to Micanopy. He fought one of the most effective Native campaigns until his capture in 1837.

ANSWER: **Osceola**

[10] One of the observers of the Trail of Tears was this author of *The Old Regime and the Revolution*, who said that all watchers felt "one's heart wrung." Watching likely coloured his later views on the French conquest of Algeria.

ANSWER: Alexis de **Tocqueville** [or Alexis-Charles-Henri Clérel de **Tocqueville**]