

Cane Ridge Revival

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TOSSUPS

1. **One character in this play says that he would be miserable if he were rid of his wife, because getting rid of her is his only hope, and one should never outlive one's hopes. In Act Five, two characters in this play break an oath not to reveal another character's affair, because that oath was sworn on a poetry collection instead of on a bible. One character in this play states his future wife cannot have a female confidante or chase after fops at the theatre, making these conditions of their marriage in its (*) "proviso scene". In this play, a servant disguises himself as his employer's uncle, Sir Rowland, in order to falsely woo Lady Wishfort. This play begins in a chocolate house and ends with Foible's revelation of Mrs. Marwood's affair, destroying Fainall's blackmail scheme. For 10 points, name this Restoration comedy that concludes with Millament's imminent marriage to Mirabel, by William Congreve.**

ANSWER: *The Way of the World*

2. **WARNING: DESCRIPTION ACCEPTABLE**

DMAP analogues can accomplish this process kinetically in solutions of secondary alcohols. This specific process often involves collecting a precipitate that has reacted with a potassium antimonyl salt, mandelic acid or brucine, then recrystallizing it from glacial acetic acid. It's not unique to biomolecules, but the success of this process is measured by dividing the observed value of alpha by concentration and path length, or by analyzing the products with ORD or (*) CD spectroscopy. For molecules in the C3 point group, this process yields solutions designated lambda and delta. The goal of this non-synthetic process is 100% e.e. It was first performed using crystals of tartaric acid by Louis Pasteur, who discovered that the two resulting solutions each rotated plane-polarized light. For 10 points, name this process of isolating the halves of a racemic mixture.

ANSWER: chiral/enantiomer/optical isomer resolution [or separating enantiomers or equivalents; accept any answer with resolution or word forms; accept separating racemates/racemic mixtures or equivalents before mentioned; accept deracemization or word forms; prompt on ANY answer with one or more of the following words or word forms of them: "enantiomers," "chiral," "isomers," "diastereomers," "racemic," "asymmetric;" prompt on "separation" or equivalents; prompt on "purification" or equivalents]

3. **Lyndon Johnson forced one man who held this position into a humiliating horseback ride in public during a state visit by Ludwig Erhard. Barry Goldwater excoriated a different man who served in this position as the supposed mastermind of the "Daisy" Ad. One person who held this position was granted immunity by Patrick Fitzgerald to testify that (*) Scooter Libby had told him about Valerie Plame's job at the CIA weeks before Libby claimed to have learned it. The first person to hold this position formally was Stephen Early, and one man who held it became the namesake of legislation mandating gun-purchase background checks after he was seriously injured by John Hinckley; that man is James Brady. For 10 points, name this position held by Ari Fleischer and Bill Moyers that involves briefing the media.**

ANSWER: White House Press Secretary

4. This region's grottoes are inhabited by red-eyed, priest-hating female spirits that seduce men at twilight near large stones. The last person to die in this region during the year takes over as the blind, cart-driving psychopomp Ankou. According to some myths from this region, a girl who strangles her lovers with a magical black mask is finally punished by being transformed into a morgen. It's not Cornwall, but Hoel is a mythical king of this region, whose folktales are preserved in the *Barzaz Breiz*. A kingdom in this region was founded by Conan Meriadoc, whose son (*) Gradlon fathered a girl who stole a key from a hunchback to please the monstrous Cado. That sinful enchantress, Dahut, brings about the sinking of this region's City of Ys. For 10 points, name this region in northwestern France.

ANSWER: Brittany [or Bretagne; or Breton mythology; prompt on "Celtic" mythology; prompt on "France" or other less specific answers; do not accept Britain]

5. The Blueseed project seeks to create a platform to skirt US laws against this action. One proposed bill concerning this action redefines the term "aggravated felony;" that is the proposed SAFE Act. One proposed method for approving this action requires the people who do it to generate \$750,000 dollars in revenue and create five (*) jobs; that is the INVEST program. A lobbying group concerned with the issue also supported the Keystone XL pipeline in an attempt at coalition-building, causing some of its supporters to withdraw. That organization, which is backed by the tech industry, is FWD.us. Occupations are divided into "zones" in a proposed points-based system for this process, which would reward those with advanced degrees. For 10 points, identify this process, which can involve the issuance of an H1-B visa or a green card.

ANSWER: Immigration to the United States

6. One author with this name described a man "on the mouldy side of the rock of the world" who cries, "Crumble, O statues of liberty, O nails planted in breasts." That author with this name wrote a collection whose title character is "neither a star, nor a prophet's inspiration" but "a king whose dreams are palaces" "in the dominion of the wind." A character with this name is compared to a "dive-dapper peering through a wave" when his "pure shame and awed resistance" lead him to be called a (*) "thing like a man, but of no woman bred." That character laments, "My day's delight is past" after his horse runs off with a mare. The lover of that "rose-cheek'd" character with this name compares him to a deer while asking for kisses and denounces Death as a "Grim-grinning ghost" after he dies while hunting. For 10 points, give this shared name of the author of *Songs of Mihyar of Damascus* and a Shakespearean lover of Venus.

ANSWER: Adonis [accept Ali Ahmad Said Esber (either underlined name) before "character with this name"]

7. The largest molecules to interfere in a double-slit setup have been primarily composed of this element. One substance made up of this element exhibits conductivity values equal to four over the von Klitzing constant times the Landau level plus one-half in an anomalous quantum Hall effect. Another group of compounds containing this element can have spherical "buds" attached to them, and have armchair and zigzag varieties. Konstantin (*) Novoselov and Andre Geim won the 2010 Physics Nobel for their work with one compound containing this element, which they isolated using scotch tape. That compound of this element takes the form of a hexagonal array, and is the first one-atom-thick crystal to be isolated. For 10 points, identify this element whose allotropes include buckminsterfullerene, graphene, and diamond.

ANSWER: carbon

8. In one work, this character's on-stage death is preceded by a choral funeral march in C-sharp minor, "*Dieux de l'oubli*". In that opera, this character, who bids farewell to her proud home in "*Je vais mourir*", participates in a pantomime featuring a chorus of nymphs and satyrs, the "Royal Hunt and Storm". In another opera, the chorus sings "With drooping wings ye Cupids come" to mourn the death of this character, who often sings with her sister and handmaid, (*) Belinda. In that opera, her final song features a chromatically descending five-bar ground bass in G minor, and ends with the plea "Remember me, but ah! forget my fate". That namesake lament sung by her is "When I am laid in earth". For 10 points, name this female protagonist of the last three acts of Berlioz's *Les Troyens*, who is one of two title characters in the most famous opera of Henry Purcell.

ANSWER: Dido [or Didon]

9. According to Widukind of Corvey, these people, who were defeated at Tettenhall, were converted to Christianity after a cleric named Poppo carried a heavy heated iron without being burned for one of their kings. Thynghowe was an important meeting place in a region named for these people that was centered on five boroughs. One king of these people converted to Christianity under the terms of the Treaty of (*) Wedmore, and a major history of these people's "deeds" was written by Saxo Grammaticus. One of these people, the princess Gunhilde, was killed during a massacre of them on St. Brice's day, and a leader of these people was defeated at the Battle of Edington. The tract of territory colonized by these people in eastern England was known as their "law." For 10 points, name this North Germanic ethnicity, whose rulers included Harald Bluetooth and Cnut the Great.

ANSWER: Danes [or Danish people; or Danskere; or Dani; or Daner; prompt on "Vikings" or "Norsemen" or "Scandinavians" or similar more general terms]

10. One passage in this work describes how the sun, in its splendor, is followed by the moon and concealed by the night, before describing the fate of a people who hamstrung an animal. This work describes those who do not take refuge in God as being like spiders who make their homes in webs and details the War of the Confederates in a section that details who the "people of the cloak" are. The beginning of this work, translated as "the Exordium" or (*) "the Opening", asks for guidance along the "straight path". A famous passage from this work describes God as seized by neither slumber nor sleep and unburdened by the care of the heavens and earth. That passage is part of a chapter that takes its name from the sacrifice of a cow by the Israelites, and is known as the "Throne Verse". For 10 points, name this holy text composed of suras.

ANSWER: The Qur'an [or variants like Koran; accept Surah ash-Shams or the Sun Surah if some awesome person buzzes before "spiders"; do not accept any other suras before that and anti-prompt on specific suras after that]

11. This man posited that the title social institution developed through "Consanguine," "Punaluan," and "Pairing" stages that marked the increasing centrality of inherited property and the consequent importance of preserving the legitimate male bloodline. That work by this author drew on Lewis Morgan's *Ancient Society* in its argument that primitive societies were matrilineal. This man also observed an increase in the child mortality rate in (*) Carlisle following the introduction of factory labor there, which he said had driven down wages and working conditions more generally by subjecting the title group to the direct supervision of factory owners. For 10 points, name this author of *The Origin of the Family, Private Property, and the State* and *The Condition of the Working Class in England*, which presages the arguments this man put forward with Karl Marx in *Capital*.

ANSWER: Friedrich Engels

12. One use of this technique is an efficient algorithm for computing Levenshtein distances, a fact which is used in the Smith-Waterman algorithm for optimal local sequence alignments. This technique can also be used to generate a pseudo-polynomial time solution to the 0-1 knapsack problem that runs in time proportional to the product of the number of items and the size of the knapsack. Other applications include the (*) CYK algorithm for bottom-up parsing of context free grammars. Problems which are amenable to this technique have both optimal substructure and overlapping subproblems, which distinguishes it from "divide and conquer" and allows the use of memoization. For 10 points, name this algorithm design technique in which the optimal solutions to increasingly large subproblems are recorded in a table.

ANSWER: dynamic programming

13. One character in this novel is tricked into feeding poisoned meat to an old dog with sea-green pus in its eyes. Another character in this novel is beaten for "playing nasty" after trying to help a friend through her first menstruation. During his great aunt's funeral banquet, one character in this work cavorts in the grass with Darlene, but is forced by two men with shotguns to have sex with her while they watch. That character from this novel marries a woman with a deformed (*) foot, named Pauline, and has a daughter who visits the celibate pedophile Soaphead Church. This novel's chapter titles are derived from a "Dick and Jane" story. In this novel, Claudia MacTeer narrates the tale of a girl who was raped by her own father, Cholly. For 10 points, name this work in which Pecola Breedlove desires the title symbol of white girls' beauty, the first novel by Toni Morrison.

ANSWER: *The Bluest Eye*

14. In one painting in this series, a blond-haired doll lies on the floor next to a man in gray pants and suspenders, who holds a newspaper and a pair of reading glasses in his hand. The words “Each According to the Dictates of His Own Conscience” appear at the top of one painting in this series. In one painting in this series, two men in suits and ties look up at a man wearing a blue-plaid shirt and a dirty brown jacket. One painting in this series depicts a woman (*) tucking her two red-headed children into bed, while another show a lone dissenter at a town council meeting, standing to raise an objection. The most iconic painting in this series shows a woman in a white apron bringing a large roast turkey to the table at Thanksgiving. For 10 points, name this set of four paintings produced for the Saturday Evening Post by Norman Rockwell, which were inspired by the namesake speech by FDR.

ANSWER: *The Four Freedoms*

15. In a book on an earlier philosopher, this man discussed a representation of reality that can adequately account for all other true representations, claiming that while such an absolute conception exists for scientific inquiry, it does not for moral philosophy. This thinker used the story of Gauguin leaving his family to become a painter as an example of where rational and moral justifications clash. In one book, he argues that philosophers inevitably fail in trying to create an impartial ethical system that (*) transcends all cultures and individuals, and particularly attacks obligation-based morality's focus on “ethical purity.” In an essay, this thinker wrote that morality's claim as an overriding value implies chance events can determine whether our decisions are right or wrong. An essay by Thomas Nagel further developed his concept of “moral luck.” For 10 points, name this author of *Ethics and the Limits of Philosophy*.

ANSWER: (Sir) Bernard (Arthur Owen) Williams

16. WARNING: FIRST AND LAST NAME REQUIRED

One man with this name rose to power thanks to his family's centrality in a marriage network according to a sociological analysis of political transformation by Padgett and Ansell, and although those authors show his faction was as patrician as its opponents, that man was known as the “hero of the new men.” Another man of this name contributed ten galleys to the Holy League at the Battle of Lepanto and married Eleanor of Toledo, the Duke of (*) Alba's sister, as part of the consolidation of the Hapsburg interest in Italy. The first man of this name was exiled following the failure of a campaign against Lucca, but he triumphed over the Albizzi and Strozzi and returned in 1434. For 10 points, give this name shared by two Florentine rulers, the latter named Grand Duke of Tuscany and the former the grandfather of Lorenzo the Magnificent.

ANSWER: Cosimo de Medici

17. An SLC26 anion transporter involved in this process acts as a non-enzymatic motor, uses charged residues as voltage sensors and can generate nonlinear capacitance. A protocadherin mutation causes defects in this process in Ames waltzer mice, while shaker-1 mice exhibit disorganized cell bundles that impede this process due to a mutation in unconventional myosin VIIa. The formation of an extracellular matrix of alpha- and beta-tectorin is critical for this process, which is amplified by prestin in the (*) OHCs. This process occurs via a “gating spring” mechanism when tip links detect changes in the distance between apical projections containing stretch-gated channels that take in potassium from the endolymph. Like balance, this process employs hair cells. For 10 points, name this form of signal transduction mediated by the kinocilia and stereocilia of the Organ of Corti in the cochlea.

ANSWER: hearing [accept equivalents; accept balance or coordination or sense of equilibrium or vestibular system before “balance”; prompt on “mechanoreception” or “mechanoreception”; prompt on signal “transduction” or “signaling” before mentioned; prompt on any answers about sensory physiology or sensory reception or equivalents]

18. One of these works by this composer, in B-flat minor, has the pianist play a near-perpetual tremolo in the center of the keyboard while spinning the melody and bass-line on either side of it; that work depicts the falling snow. In another of these works by this composer, the pinky of the pianist's right hand hits a rapid high D-sharp in between each note of the melody played by the thumb of the right hand. Parallel thirds in D minor are passed between the hands to depict the (*) galloping of a horse in one of these works. These works include "Harmonies du soir" and "Chasse-neige". A work in G-sharp minor using a theme from another composer's second violin concerto, "La campanella", is one of six of these works inspired by the music of Paganini. For 10 points, "Feux Follets" and "Mazeppa" are "Transcendental" examples of what technical exercises by the composer of the *Hungarian Rhapsodies*?

ANSWER: Franz Liszt's etudes [accept "studies" instead of "etudes"; be generous, and accept Transcendental Etudes or Études d'exécution transcendante or Grand Paganini Etudes or Grandes études de Paganini, even though not all of the etudes clued are from the same collection]

19. The *bandeirantes* were groups that crossed the eastern border of this polity, in which the Ordinance of Manufacturers was passed in 1664 and the Battle of Jaquijahuana was fought. The history of the people of a predecessor to this polity was chronicled by one of its residents, Pedro Sarmiento de Gamboa. A revolt in opposition to the administration of Blasco Núñez Vela arose in this polity, within which *reducciones* were divided into 614 *curaca*-headed *repartimientos*, one seventh of whose male population could be conscripted for labor. Many landowners revolted against the (*) New Laws in this polity, in which Francisco Álvarez de Toledo implemented a series of reforms. This polity, in which the *mita* system was codified, was dissolved following the Battle of Ayacucho, which secured independence for a country named after this polity. For 10 points, name this polity which, following the conquests of Francisco Pizarro, was governed from Lima.

ANSWER: Viceroyalty of Peru [or Virreinato del Perú; accept anything indicating knowledge that we're talking about pre-independence Peru; prompt on "Peru;" prompt on "Spain," "Spanish Empire," "Habsburg Empire," or similar things referring to the mother state; do not accept or prompt on "New Spain"]

20. In a story by this author, a Cretan descendant of Pasiphae is almost circumcised after he says, "*Allah illah allah*" to a Circassian prostitute in Constantinople during a trip around the world. In a novel by this author, a chicken dinner sparks a debate between an Egyptian and an Indian over worshipping bulls and fish. Characters debate a law against eating griffin and maintain that only women can catch basilisks in that novel, whose protagonist is saved from execution when a parrot carries a peach stuck to a writing tablet to King (*) Moabdar. In another novel by this author, Virgil is deemed superior to Homer by the Venetian senator Pococurante. In that novel by this author, the protagonist meets an elderly daughter of Pope Urban X before fleeing to Jesuit-controlled Paraguay with Cacambo and meeting the Manichaean Martin, whom this author based on Pierre Bayle. For 10 points, name this author of *Zadig* and *Candide*.

ANSWER: Voltaire [or François-Marie Arouet]

BONUSES

1. This man described an early seven-caste incarnation of the caste system in his *Indica*. For 10 points each:

[10] Name this ambassador sent by Seleucus I Nicator to the Mauryan empire along with Deimakos.

ANSWER: **Megasthenes**

[10] Megasthenes served as an ambassador to this founder of the Mauryan empire, known to the Greeks as Sandrakottos. This ruler gave 500 war elephants to Seleucus Nicator as part of a peace treaty.

ANSWER: **Chandragupta** Maurya

[10] Chandragupta Maurya allied with a Himalayan ruler to defeat this Nanda ruler. This ruler employed the prime minister Shaktar and was described as addicted to hoarding treasure.

ANSWER: **Dhana** Nanda [or **Agrammes**]

2. The bonding of these complexes resembles that described by the Chatt-Dewar-Duncanson model for ethylene, but they do not contain double bonds. For 10 points each:

[10] Name these complexes that catalyze organometallic oxidative addition reactions through side-on, L-shaped bonds created by weak backbonding. Those that add via C-H bonds operate through agostic interactions.

ANSWER: **sigma** complexes

[10] Many sigma complexes contain this molecule as a ligand. This simplest diatomic molecule reduces alkenes to alkanes using a palladium-carbon catalyst and reacts with oxygen to form water in namesake fuel cells.

ANSWER: molecular di**hydrogen** gas [or **H2**]

[10] Hydrogenation is a major part of this molecule's synthetic mechanism, which Gerhard Ertl characterized using adsorption energies. Schrock prepared an as-yet-impractical molybdenum catalyst in order to mimic its natural synthesis.

ANSWER: **ammonia** [or **NH3**; accept **azane**; accept tri**hydrogen nitride**; accept **Nitro-Sil**]

3. Prove that you understand some Hegelian concepts, for 10 points each.

[10] Though it is debated whether he advocated this model, Hegel's dialectical triad is usually divided into the three stages of thesis, antithesis, and this stage, in which the best parts of the thesis and antithesis combine into one entity.

ANSWER: **synthesis** [or **sublation**; or **aufhebung**; or **aufheben**]

[10] In *Elements of the Philosophy of Right*, Hegel contrasts the individualistic moral concept of "Abstract Right", with this system of social customs that regulates moral behavior within civilization.

ANSWER: **ethical life** [or **ethical substance**; or **ethical order**; or **Sittlichkeit**]

[10] The "Objective Logic" section of Hegel's *The Science of Logic* is divided into books concerning "being" and this concept, which is defined as "being" that mediates with itself through negativity.

ANSWER: **essence** [or **wesen**]

4. The main character of this poem tosses a gold coin at a leper as he embarks on his quest to find the Holy Grail. For 10 points each:

[10] Name this poem in which the title character eventually gives the leper an image of Christ and shares his bread with him and witnesses him becoming "the Gate whereby men can / Enter the temple of God in Man."

ANSWER: "The **Vision of Sir Launfal**"

[10] "The Vision of Sir Launfal" is a poem by this writer of *The Biglow Papers* who satirized his contemporaries in *A Fable for Critics*.

ANSWER: James Russell **Lowell**

[10] Lowell is associated with this group of poets which includes Longfellow, Bryant, Whittier, and Holmes, Sr. The name of this group comes from the fact that their poetry was popular for recitation in homes.

ANSWER: **Fireside** poets

5. Michael Tippett wrote a *Fantasia Concertante* on a theme by this composer. For 10 points each:

[10] Name this Italian Baroque composer, whose *Twelve Concerti Grossi* include his *Christmas Concerto*.

ANSWER: Arcangelo **Corelli**

[10] Corelli is the namesake of a dissonant form of these progressions that occur at the ends of phrases. An “authentic” one of these progressions moves from the dominant to the tonic, with both chords in root position.

ANSWER: **cadence**

[10] Tippett’s *Fantasia Concertante on a Theme by Corelli* was popularized by a recording by this conductor, who founded the Academy of St. Martin in the Fields in 1958, and served as their music director until 2011.

ANSWER: Sir Neville **Marriner**

6. In 2007, Hoekstra and Coyne criticized the evo-devo hypothesis that the modularity allowed by these regions is the major driver of evolutionary novelty by attacking the classic example of *yellow*, which is involved in the patterning of *Drosophila* wing spots. For 10 points each:

[10] Name these non-coding sequences of the control region that bind transcription factors in order to regulate gene expression. The transposon-based ZED vector is used to detect these sequences in zebrafish.

ANSWER: **CREs** [or **cis-regulatory elements**; accept **cis-elements** or **CEs**; accept **cis-regulatory modules** or **CRMs** accept **cis-acting elements**; accept **enhancers** or **silencers**; prompt on “promoters”]

[10] Transcription factors encoded by *Hox* genes bind to CREs in order to pattern these divisions of the A-P axis after their polarity is established. These repeated sections divide the bodies of chordates, arthropods and annelids.

ANSWER: body **segments** [accept **somites**]

[10] Many of the genes involved in segmentation underwent duplication events, producing multiple copies related by this form of homology. These genes often evolve divergent functions despite their common ancestry.

ANSWER: **paralogs** [accept word forms]

7. This man replaced Louis Brandeis on the Supreme Court and went on to serve the longest term there of anyone, remaining after a debilitating stroke so he would not give Gerald Ford the opportunity to nominate his successor. For 10 points each:

[10] Name this civil libertarian, who wrote the majority opinion in *Griswold v. Connecticut* and did end up resigning in 1976.

ANSWER: William O(rville) **Douglas**

[10] This other Roosevelt appointee joined Douglas’ decision in *Terminiello v. Chicago*, which overturned a fine the city assessed on a priest for a virulently anti-Semitic speech. In reference to the First Amendment, this Alabamian often said “No law means no law.”

ANSWER: Hugo (Lafayette) **Black**

[10] This third FDR appointee feuded with Black, and though he supported *Brown v. Board of Education*, his law clerk William Rehnquist wrote a memo for him advocating for Separate but Equal.

ANSWER: Robert H(ughwout) **Jackson**

8. This character points out that there is no mention of Jesus ever laughing, and that laughter’s rationality is not proof of its licitness, as speech, which is also rational, may be used to blaspheme. For 10 points each:

[10] Name this character who sets a trap in the *finis Africae*, and who dies after starting a fire and eating the pages of a certain book.

ANSWER: **Jorge** of Burgos

[10] Jorge of Burgos appears in this Umberto Eco novel narrated by Adso of Melk, which tells of his and William of Baskerville’s time in a murderous abbey.

ANSWER: *The* **Name of the Rose** [accept **Il nome della rosa**]

[10] This other work of Italian historical fiction is partly set in plague-ridden Milan. In this novel, Fra Cristoforo works to aid Renzo and Lucia after thugs sent by Don Rodrigo to threaten Don Abbondio foil their plans.

ANSWER: *The* **Betrothed** [accept **I promessi sposi**]

9. Among Inuit peoples, these figures are known as *angakkuut* and are often called upon to defeat tupilaqs created through malevolent witchcraft. For 10 points each:

[10] Name these figures who enter trances or ingest entheogens in order to undergo mental journeys through alternate realms and solve problems affecting their communities. They are very common in circumpolar cultures.

ANSWER: shamans [prompt on “medicine men” or “medicine women” or “witch doctors”]

[10] South American shamans often sing during these events, which in Vodoun are presided over by Erzulie Mapiangue. During these events, one participant is welcomed with honey in the Hindu Jatakarma ceremony.

ANSWER: childbirths [accept word forms; accept labor; accept parturition; accept child delivery; accept midwifery; antiprompt on “C-section” or “Caesarean section”; prompt on “healing” “curing” or “medicine” or related answers]

[10] In this Oglala Sioux ritual, a shaman breaks out of the ropes binding him after leading healing prayers to Wakan Tanka in a sweat lodge. This ritual also entails a pledge remaining awake in the “vision pit” on a hill for one day.

ANSWER: Yuwipi [prompt on “night sings” or “sings”]

10. M.C. Auld and Paul Grootendorst showed that under the rational choice model of this condition, evidence suggests it explains consumption of oranges and milk. For 10 points each:

[10] Name this condition of being compelled physically or mentally into continuing initially pleasurable but ultimately destructive behavior, such as alcoholism.

ANSWER: addiction

[10] This Bruce Alexander-led experiment seemed to show drugs themselves are not responsible for addiction. Subjects would seek morphine laced water if kept in cramped cages, but avoided it if they lived in the happy title habitat.

ANSWER: Rat Park

[10] This biostatistician, who died at his Stanford desk in 1963, proposed the disease model of alcoholism and co-founded the Center of Alcohol Studies, which is now at Rutgers, when he was at Yale.

ANSWER: E(lvin) M(orton) “Bunky” Jellinek

11. This man photographed Marcel Duchamp’s *Fountain* using a Marsden Hartley painting as a background. For 10 points each:

[10] Name this husband of Georgia O’Keefe, who photographed working-class passengers boarding a ship in *The Steerage*

ANSWER: Alfred Stieglitz

[10] Like Stieglitz, this photographer photographed the Flatiron Building, but produced a blue background in his photograph using a gum bichromate solution. He curated the first *Family of Man* exhibit at the MoMA.

ANSWER: Edward (Jean) Steichen

[10] This man used a special camera that shot ninety degrees off from the opposite direction in which it was pointed to take candid photographs such as one of a beggar holding a sign saying “Blind”. His photograph *Wall Street* shows people dwarfed by the dark rectangular niches of the J.P. Morgan building.

ANSWER: Paul Strand

12. These regions are made of flood basalts produced by extinct volcanoes, and a novel explanation for their uneven distribution is a second impact that differentially thickened the crust on one side of the moon. For 10 points each:

[10] Name these low-albedo regions on the surface of the moon.

ANSWER: lunar maria [or seas]

[10] This geochemical component, whose name is an acronym for its constituent elements, is specific to the moon and is thought to be the signature of the giant impact object from which it formed. The basalts that form the lunar maria are rich in it.

ANSWER: KREEP

[10] The Procellarum KREEP Terrane is demarcated by an abundance of this element, which remains in the melt when magma crystallizes. Aluminum, uranium, and this element are major sources of radioactive heating in terrestrial bodies.

ANSWER: Thorium [or Th]

13. This country's archaeological site of Dougga contains temples to Juno Caelestis and Caracalla's victory in Germany. For 10 points each:

[10] Name this modern-day country whose Roman colony of Thysdrus was home to the third-largest Roman amphitheatre. Another archaeological site in this country contains the Antonine baths.

ANSWER: **Tunisian Republic** [or al-Jumhūriyyah at-**Tūnisīyyah**]

[10] Tunisia's city of Sbeitla contains one of these monuments built to honor the Tetrarchy. Domitian built one of them after the death of Titus, while the Senate commissioned one after Constantine won at Milvian Bridge.

ANSWER: Roman triumphal **arches** [or anything with **arcus**; accept specific examples]

[10] The Arch of Augustus was built to commemorate victory over the Salassi in the alpine city of Aosta, whose forum contains one of these vaulted passageways. Nero built one to connect the Palatine Hill to the Domus Aurea.

ANSWER: **cryptoporticus** [accept **cryptoportico**]

14. The John Lennon fan Eiji Miyake leaves the orange-growing island of Yakushima to search the Tokyo underworld for his father in this shockingly non-Haruki Murakami author's novel *number9dream*. For 10 points each:

[10] Name this author who also wrote a novel which includes Luisa Rey's investigation of the unsafe Swanekke reactor and Sonmi-451's rebellion of fabricants in dystopian Korea among its six connected stories.

ANSWER: David (Stephen) **Mitchell**

[10] This David Mitchell novel follows a year in the life of the British teenager Jason, who describes his stuttering as a battle with "Hangman" and writes poetry for the parish magazine using the pseudonym Eliot Bolivar.

ANSWER: **Black Swan Green**

[10] In *Black Swan Green*, many are outraged by plans to build a permanent settlement for people of this ethnic group. Characters of this ethnic group include Heathcliff and Esméralda from *The Hunchback of Notre Dame*.

ANSWER: **Gypsies** [or **Romas**; or **Romanichals**; accept **Sinti**, **Kale**, **Bovash**, **Kalderash**, **Machbava**, **Ursari**, **Richinara**, **Manouche**, **Tsiganes**, **Lovari**, **Cascarots**, **Erromintxela** or other subgroups of Romani]

15. During this time period, all blood ties will be ignored: brothers will kill brothers and sleep with their sisters. For 10 points each:

[10] Identify this three-year period, during which the weather will never be warm and almost all of humanity will be wiped out. Immediately after it, the sun and moon will be swallowed by a pair of wolves.

ANSWER: **Fimbulwinter** [or **Fimbulvetr**]

[10] Fimbulwinter presages this devastating series of events in Norse mythology, which culminates with a battle during which most major gods die, including Odin, Loki, and Thor.

ANSWER: **Ragnarok**

[10] Surt is able to slay a certain god during Ragnarok because that god lacks this weapon. It was given away by Skirnir to secure the hand of Gerd in marriage, and its previous owner thenceforth used an antler in its place.

ANSWER: the **sword** of **Freyr** [if they just say "sword", prompt that they need the god's name too]

16. In the background of this painting, the sun rises over the horizon of a seascape, and in this painting's foreground, two men load an orange chest onto a boat. For 10 point each:

[10] Two Corinthian columns stand in the left foreground of this painting that shows two Biblical figures bidding farewell as they stand on the steps of a Classically-inspired building.

ANSWER: *Seaport with the* **Embarkation of the Queen of Sheba**

[10] *Seaport with the Embarkation of the Queen of Sheba* is by this 17th-century French landscape painter whose other Biblical scenes include *The Marriage of Isaac and Rebekah*.

ANSWER: **Claude Lorrain**

[10] Claude Lorrain was called "the most perfect landscape painter the world ever saw" by this painter of *Dedham Vale* and *The Hay Wain*.

ANSWER: John **Constable**

17. The left-hand side of the time-independent form of this equation is just E times ψ . For 10 points each:
[10] Name this differential equation, which describes a system's wavefunction. Its namesake also came up with a thought experiment involving a cat in a box.

ANSWER: Schrödinger Equation

[10] Because the electron-electron interaction adds a term to the Hamiltonian in this system, its Schrödinger equation has no closed-form solution. This is the smallest neutrally-charged system for which the Bohr model fails.

ANSWER: helium atom

[10] Harold Jeffreys is sometimes also credited in this approximation to solve linear PDEs, such as the time-independent Schrödinger equation. It sets the function equal to the exponential of an asymptotic series denoted ϕ .

ANSWER: JWKB approximation [or Wentzel-Kramers-Brillouin-Jeffreys approximation]

18. Keynes wrote that this country was “an economic impossibility with no industry but Jew-baiting” in *The Economic Consequences of the Peace*. For 10 points each:

[10] Name this country, whose democratic politics were interrupted by a 1926 coup by the “Sanacja” or “healing” movement. The general who seized power was the hero of a border war with this country's eastern neighbor at its birth.

ANSWER: Poland [accept “Inter-war Poland,” “Versailles Poland,” or the Second Polish Republic]

[10] This was the general who orchestrated the 1926 coup and served as head of state until his death in 1935. He had led Polish units on Austria's behalf in the First World War.

ANSWER: Joseph Pilsudski

[10] Inter-war Poland nominally had access to this free city under League of Nations protection, which was 95% ethnically German at the time and where the Nazi Party took power in 1933. The takeover of the Polish post office in this city kicked off World War Two, as described by Oscar Matzerath.

ANSWER: Danzig or Gdansk

19. This NYU professor developed the “social intuitionist” model of moral reasoning, propounded in his article “The Emotional Dog and His Rational Tail.” For 10 points each:

[10] Name this man, who argues that moral judgments are based on intuition, with rational ethical positions adopted post-hoc. He is the author of *The Righteous Mind*.

ANSWER: Jonathan (David) Haidt [“Height” is the correct pronunciation, but be generous]

[10] Haidt was criticized by this leading New Atheist and author of *The End of Faith* for observing the higher satisfaction and generosity of religious people, which Haidt intends as a retort to this man's argument that the Bible and Koran are immoral for advocating doing harm.

ANSWER: (Samuel B.) “Sam” Harris

[10] Haidt cites this Harvard myrmecologist and founder of sociobiology as a critic of rational morality. This man proposed the idea of the “Evolutionary Epic,” science's response to the human need for a larger narrative previously filled by religious epics.

ANSWER: E(dward) O(sborne) Wilson

20. This work repeatedly describes flies buzzing Handel's “Hallelujah” Chorus. For 10 points each:

[10] Name this Dambudzo Marechera collection that includes the story of a man who slits his wrists after failing to scrub himself white in “Black Skin What Mask.” In the title novella, the narrator is haunted by visions of stitches.

ANSWER: *The* House of Hunger

[10] For alleged schizophrenia, Marechera was expelled from this university, where Chacko studies with a Rhodes Scholarship in *The God of Small Things*. Shelley was expelled from here for writing *The Necessity of Atheism*.

ANSWER: University of Oxford [antiprompt on New College or University College]

[10] Marechera was from this country. In a novel from this country, the death of Tambu's brother Nhamo allows her to study at a mission run by her uncle Babamukuru, who stages a second wedding for her parents to cure their family drama.

ANSWER: Republic of Zimbabwe [prompt on Southern Rhodesia since both *The House of Hunger* and *Nervous Conditions* are about the colonial period]