Tossups

1. In a novel, an inscription made by this character prompts the narrator to imagine himself "walking on the same spot where the coevals ("co-EE-vuls") of the first man had walked." While creeping toward this man's 12,000-book library, the narrator hears him exclaim in a dark salon: "God almighty! Enough! Enough!" This "archangel of hatred," whose motto is "*mobilis in mobili*," saves the dog Top from a dugong and provides medicine to treat Harbert's malaria. This man reveals to Cyrus Smith that he is actually the Indian Prince Dakkar in the novel *The Mysterious Island*. In an earlier novel, this man and his crew, which includes Ned Land and Pierre Aronnax, narrowly escape the Maelstrom. For 10 points, name this captain of the *Nautilus* in Jules Verne's novel *Twenty Thousand Leagues Under the Sea*.
ANSWER: Captain **Nemo** [or Prince **Dakkar** until read]
<European Literature>

2. When modified by this word, the variational method applies the Ritz ansatz and amounts to setting the secular determinant to zero. Projection operators build "symmetry-adapted" objects named for this adjective that transform with a point group's irreps ("ear-reps"). This adjective names the only class of molecules whose degeneracies cannot be broken by the Jahn–Teller ("YAHN TELL-er") effect. This adjective is the first letter in a four-letter acronym for objects that have Slater-type or Gaussian components in the Hartree–Fock method. Molecules with this geometry have D-infinity-h or C-infinity-v point groups, and might have a central atom with three lone pairs and two bonds. Molecular orbitals are formed from this type of "combination" of atomic orbitals. For 10 points, name this geometry of carbon dioxide, which has a 180-degree bond angle.
ANSWER: **linear** [accept **linear** variational method or symmetry-adapted **linear** combinations or **linear** combination of atomic orbitals or **linear** geometry; prompt on SALC or LCAO]
<Chemistry>

3. An investigation into this organization that occurred after the 1978 murder of security guard Antonio Castro was part of Operation Countryman. One of this organization's reformers claimed that they "are the public and the public are" them. This organization fought two Latvian revolutionaries during the Siege of Sidney Street. The Macpherson report, issued after the brutal 1993 murder of Stephen Lawrence, uncovered institutional racism in this organization. This organization replaced a group founded by Henry Fielding known as the Bow Street Runners. Members of this organization were nicknamed due to this organization's reform by Robert Peel in the 1820s. For 10 points, name this crime-preventing organization that is headquartered at Scotland Yard.
ANSWER: **Metropolitan Police** Service [or the **Met**; or **London**'s **police** or equivalents; accept Scotland **Yard** until read; accept **bobbies** or **peeler**s until "Peel" is read, but prompt after; prompt on British police]
<Other History>

4. In a film, a man played by this actor thinks up the lines "I was born when she kissed me. I died when she left me. I lived a few weeks while she loved me" while under investigation for the murder of a hatcheck girl. In a film's opening scene, a man played by this actor meets with a wheelchair-bound general in a stifling greenhouse. In another film, Mary Astor's character enters an elevator cage that looks like a jail cell as this man's character calls the title object "the stuff that dreams are made of." This star of *In a Lonely Place* declares "the problems of three little people don't amount to a hill of beans in this crazy world" in a monologue in which his character tells Ilsa

Lund: "here's looking at you, kid." For 10 points, name this star of *The Big Sleep*, *The Maltese Falcon*, and *Casablanca*.
ANSWER: Humphrey **Bogart** [prompt on Bogie]
<Other Arts (Visual)>

5. Conceptions of this process in a field named after it include a multidirectional form theorized by Michael Rothberg and a "post-" variety coined by Marianne Hirsch. Ferron et al. described the editing of Wikipedia pages as creating a form of this process central to group identity formation theorized by Maurice Halbwachs. The potent symbolism of a clock stuck at 10:25 may explain a collective failure in this process in Bologna. Interpreters display less articulatory suppression of this process than most people, for whom irrelevant speech strongly interferes with it. Words like "smash" can influence this process, as described by Elizabeth Loftus. A form of this faculty is governed by the magic number seven plus-or-minus two. For 10 points, name this ability to recall past events.
ANSWER: **memory** [or **memories**; accept specific answers like multidirectional **memory**, post**memory**, **memory** studies, collective **memory**, individual **memory**, or working **memory**]
<Social Science>

6. Historians have been perplexed by this empire's signing of the "Elmina Note," which allowed it to collect two ounces of gold per month from the Dutch. Charles MacCarthy refused to surrender to this empire in 1824 and killed himself, leading to his skull being used as a drinking cup by this empire's rulers. At the Battle of Feyiase ("fay-AH-say"), this empire ended the local dominance of the Denkyira ("DEN-chee-rah") Kingdom, and it later fought a war with the neighboring Fante Confederacy. After this empire offended colonial officer Frederick Mitchell Hodgson, it was annexed in 1900. Queen Yaa resisted the British invasion of this empire, whose rulers sat on a sacred object in its capital of Kumasi. For 10 points, Osei Tutu founded what kingdom in present-day Ghana, which was symbolized by its Golden Stool?
ANSWER: **Ashanti** Empire [or **Asante** Empire; or **Ashanti** Confederacy; or **Asanteman**]
<World History>

7. Water attacks a 6-carbon beta ketoacid intermediate following one of these reactions to yield two molecules of 3-phospho-glycerate. Calcium ions are chelated ("KEE-lated") with high affinity by a domain named for containing a glutamic acid residue that has undergone this reaction. Drugs that inhibit VKOR ("V-core") prevent reductive recycling of a cofactor used to perform this reaction. A gamma-glutamyl enzyme catalyzes this reaction coupled to vitamin K epoxidation on a cascade of clotting factors. One tetrameric enzyme involved in gluconeogenesis performs this reaction using its biotin "swinging arm" to convert pyruvate to oxaloacetate ("oxalo-acetate"). One reaction of this kind is also the first reaction of the Calvin cycle. RuBisCo catalyzes, for 10 points, what kind of reaction that adds carbon dioxide to another molecule?
ANSWER: **carboxylation** (The first clue refers to the carbon fixation reaction catalyzed by RuBisCo.)
<Biology>

8. This action is elicited in the Kambo ceremony of Panoan-speaking peoples in South America. The Kuba creator deity Mbombo performs this action to free the sun and moon. It's not hallucinating or singing, but this action often occurs during healing *ayahuasca* ("ah-ya-WAH-ska") ceremonies in the Amazon. The name of passages for crowds to exit Roman amphitheaters contributed to the myth of rooms dedicated to this action. In some stories, Ukemochi produces rice, fish, and game by facing the land and sea and performing this action, causing Tsukuyomi to kill her in disgust. With Gaia's aid, Zeus elicits this action that results first in the appearance of a stone. For 10 points, Kronos performed what action to free his previously swallowed children?
ANSWER: **vomit**ing [or **throw**ing **up** or **puking** or **emesis** or synonyms; accept **diarrhea** or **defecation** until "Kuba" is read; accept **spit**ting after "Ukemochi" is read] (The Roman amphitheater clue refers to vomitoria.)
<Mythology>

9. 18th-century admirers of this philosophy included Christian Wolff, who was exiled from Prussia after lecturing on its ethics, and François Quesnay ("ken-AY"), who was nicknamed for it. The lengthy "four-seven debate" in this philosophy concerned the cosmological question of how the "living horse of vital force" can be ridden by a "dead" rational principle. The originator of this philosophy cryptically referred to the "single thread" that runs through his thought, which his followers interpreted as regard for rites tempered by empathetic understanding. The ideal "gentleman" or "superior person" is central to this philosophy, which postulates the "five relationships" and doctrines like "filial piety." *Li* and *ren* are virtues in, for 10 points, what philosophy laid out in the *Analects* of its Chinese namesake?
ANSWER: **Confucian**ism [or Neo-**Confucian**ism; or word forms; or anything mentioning **Confucius**, **Kongzi**, or Master **Kong**; accept "**Confucius** of Europe"]
<Philosophy>

10. While watching a play by this author, a character fixates on the line "Do I nourish in my breast a serpent, a demon?" and compares a "doll-like" character onstage to his father-in-law's young mistress. The title character claims to have learned about military strategy by watching a shrike attack a clam in a play by this author, in which a man performs a Caesarean section with his sword to remove a prince from a dead empress's womb. A young man nicknamed "Hard Luck" fulfills his promise to ransom the courtesan Azuma in this author's play *The Uprooted Pine*. In a play by this author, the lovers Tokubei and Ohatsu agree to die together in the "Wood of Tenjin." For 10 points, name this Japanese author of the *bunraku* plays *The Battles of Coxinga* and *The Love Suicides at Sonezaki*.
ANSWER: **Chikamatsu** Monzaemon [or **Sugimori** Nobumori] (The first clue is from *Some Prefer Nettles*.)
<World/Other Literature>

11. *Composer and type of piece required.* The finale of the last one of these works by this composer starts with the descending melody "A, G, long E" then "G, F-sharp, long D" over a drone. In the first movement of one of these pieces, a solo oboe plays a repeated dotted motif representing the title farm animal. A set of six of these pieces are named for being first performed in Paris. That group of these pieces includes ones named for *The Hen*, *The Queen*, and *In Nomine Domini* ("in NO-min-ay DOH-mee-nee"). In the second movement of one of these pieces, a *pianissimo* eight-bar repeat with pizzicato in the lower strings is interrupted by a fortissimo G major chord. For 10 points, name these musical works that include the *Drumroll* and the *Surprise*, written for full orchestra by a classical-period Austrian composer.
ANSWER: **symphonies** by Franz Joseph **Haydn** [prompt on partial answer]
<Classical Music>

12. Recently, Max Lemcke directed a documentary about one of this leader's most notorious henchmen, who was given the moniker "Billy the Kid" due to his habit of twirling pistols. This leader, who banned the celebration of *Aberri Eguna*, also forced local schools known as *ikastola* to go underground. This leader organized the Political-Social Brigade to enforce his rule. The Dodge Dart of one of this leader's admirals was blown up way into the air as part of an assassination termed Operation Ogre. This leader organized show trials in Burgos to execute sixteen members of the ETA. At this leader's behest, the Nazis' Condor Legion carried out the 1937 brutal bombing of Guernica. For 10 points, what dictator carried out a suppression of Basque culture during his 40-year rule?
ANSWER: Francisco **Franco**
<European History>

13. This quantity is specified to a maximal degree in Wannier functions designed by Nicola Marzari and David Vanderbilt. For the coherent state labeled by the complex parameter "alpha," this quantity is proportional to the real part of alpha. For the quantum harmonic oscillator, this quantity equals a scaling constant times "*a*-dagger plus *a*." Eigenstates with a fixed value for this quantity are pure sine waves in reciprocal space, and Dirac delta functions in real space. A canonical value of *i* times *h*-bar is assigned to this quantity's commutator with momentum. As a result,

this quantity and momentum cannot both be known to arbitrary precision, according to the Heisenberg uncertainty principle. For 10 points, name this physical quantity that is typically denoted *x*.
ANSWER: **position** [accept average **position** or expected **position**; accept **displacement**; prompt on amplitude]
<Physics>

14. A poem comparing this concept to an insect declares "Bait it with the balsam, seek it with the knife." A poem describes this concept in "toads and men… earl and midge," while another compares the "distance / on the look of [this concept]" to the departure of "a certain slant of light." The narrator does this action in a poem where a "blue, uncertain, stumbling" sound is "between the light and me" before "I could not see to see." In a poem named for this concept, the narrator passes a "school where children played" and "a house that seemed / a swelling of the ground" while in a carriage that held "just Ourselves – and immortality." For 10 points, the buzzing of a fly signals what event in a poem by Emily Dickinson, who also said she "could not stop for" this concept in another poem?
ANSWER: **death** [or word forms like **dying**; accept "Because I could not stop for **death**" or "I heard a fly buzz – when I **died**"]
<American Literature>

15. A man in this TV show puts his hand to his heart and whispers "Piglet" after claiming that he cannot read a *Winnie-the-Pooh* quote without crying. On this show, a woman delivers an impassioned monologue about the wonders of menopause after winning a "Women in Business" award, which is actually a nude sculpture that this show's protagonist repeatedly steals. This show's protagonist runs a guinea-pig-themed café that she started with her best friend Boo. On this show, the protagonist's sister Claire is played by Sian ("shawn") Clifford, and her passive-aggressive godmother is played by Olivia Colman. This show's title character falls in love with the Andrew Scott-played "Hot Priest." For 10 points, name this comedy set in London, written by and starring Phoebe Waller-Bridge.
ANSWER: *Fleabag*
<CE/Geo/Other/Pop Culture>

16. This man praised "the most humble scientist in the Department of Agriculture" over "the most useful member of Congress" while supporting research funding. This man proposed the death penalty for selling tainted food to the military and later banned artichokes. On "Talk to the People," this man asked, "Say children, what does it all mean?" while reading comics during a newspaper strike. This politician smashed a pinball machine with a sledgehammer, and he campaigned with Adam Clayton Powell, who clashed with him over a segregated housing project run by Robert Moses. With George Norris, this man banned yellow-dog contracts, and he ran on a Fusion ticket to end rule by Tammany Hall. For 10 points, name this 1934 to 1945 mayor of New York City, who lends his name to one of its airports.
ANSWER: Fiorello **LaGuardia**
<American History>

17. A play by this author ends with dancing characters emerging from a giant zodiac. Lucetta seduces a man but drops him down a trapdoor once he has undressed in a play by this author, in which a man tells a nunnery-bound woman that "there's no sinner like a young saint." Men disguise themselves as aliens to convince Dr. Baliardo to allow their marriages in a play by this author. Virginia Woolf wrote that "all women… ought to let flowers fall upon" the tomb of this author, who described the romance of Hellena and Willmore in a play subtitled *The Banish'd Cavaliers*. This author of *The Emperor of the Moon* may have gathered material for a novel about a slave revolt while serving as a spy in Surinam. For 10 points, name this author of *The Rover* and *Oronooko*, a female Restoration dramatist.
ANSWER: Aphra **Behn** [prompt on *The Incomparable Astrea*]
<British Literature>

18. In 1977, Robert Hill showed that one form of this substance has no bound excited states, making its bound–free absorption a powerful driver of opacity. An ionized form of this substance is abundant within Strömgren spheres. Photon decoupling was driven by the production of a form of this substance during the recombination epoch of the early universe. Quasar light passing through this substance is suppressed within a spectral region called the Gunn–Peterson trough. Features of its spectrum include its spin-flip-driven 21-centimeter line and the Lyman-alpha transition between its n-equals-2 and n-equals-1 states. Though rarely found in isolation on Earth, it accounts for 75 percent of the universe's baryonic matter. For 10 points, name this simplest and most abundant element in the universe.

ANSWER: atomic **hydrogen** [accept ionized **hydrogen** or **hydrogen** gas; accept **H** or **H I** ("H one"); prompt on H II ("H two"), but do not accept or prompt on "molecular hydrogen" or "hydrogen molecule"; prompt on cosmic gas or interstellar medium or intergalactic medium or ISM or IGM by asking "what does that medium primarily consist of?"]

<Other Science (Astronomy)>

19. A rose of this color names a Russian symbolist movement led by Pavel Kuznetsov. Eleven identical, differently priced canvases of this color inspired white *Achromes* by Piero Manzoni. A heron and ibis appear in the bottom left as a standing nude grasps the title bird of this color in a painting from multiple perspectives by Jean Metzinger ("met-san-ZHAY"). In another work, a patch of this color appears on the side of a cow that possibly represents the artist's wife. "Living Brushes" applied this color to paper with their naked bodies in *Anthropometries* using an "international" shade of it mixed by Yves Klein ("eev clan"). One artist found this color "astringent and spiritual," and often painted horses of this color. For 10 points, Franz Marc and Wassily Kandinsky founded a movement named for what color of Rider?

ANSWER: **blue** [accept **Blue** Rose, **Golubaya** roza, International Klein **Blue**, *The **Blue** Bird*, *L'Oiseau **bleu***, **Blue** Rider, or Der **Blaue** Reiter] (Piero Manzoni saw Yves Klein's *Proposte monocrome, epoca Blu*; Franz Marc included a patch of blue in *Yellow Cow*.)

<Painting/Sculpture>

20. A critically-reviled collection of Bengali folk songs from this figure's perspective calls a hero "stone-hearted" and refers to this figure as being "born to suffer." In a Tamil telling, a lover cruelly compares this figure's birth to that of "a worm from the soil." A later retelling by Tulsidas ("tul-see-DOSS") softens that episode using the motif of an "illusional" double of this character, whose name means "furrow." This figure calls on the earth to swallow her to re-prove her innocence after delivering her sons to her husband. Previously, she passed a trial by fire to prove her chastity. A golden deer distracted this woman's husband, leading to her abduction. Hanuman's monkey army helps the husband of this avatar of Lakshmi free her from Ravana. For 10 points, name this ideal Hindu woman and wife of Rama.

ANSWER: **Sita** ("SEE-ta" or "SHEE-tha") [or **Janaki**; or **Maithili**; or **Vaidehi**] (The first clue refers to Chandrabati's Bengali *Ramayana*. The second clue refers to what Rama tells Sita after he rescues her from Lanka in Kamban's Tamil *Ramayana*.)

<Religion>

Bonuses

1. Answer the following about Finland's military relationship with Germany, for 10 points each.
[10e] Finland's bitter feelings about losing this conflict to the Soviet Union led it to gravitate towards Germany. The deadly sniper "the White Death" was active during this 1939 to 1940 conflict.
ANSWER: **Winter** War [or *Talvi*sota or *Vinter*kriget or *Zimnyaya* voyna or 1939–40 Russo–Finnish War]
[10m] Hitler controversially came to Finland to celebrate this general's birthday, as secretly recorded by Thor Damen. This general names a defensive fortification along the Karelian Isthmus during the Winter War.
ANSWER: Carl Gustaf Emil **Mannerheim** [accept **Mannerheim** Line]
[10h] Earlier, Germany had supported these Finnish units to fight against the Russians during World War I. Their training in guerrilla warfare was camouflaged as "Boy Scout" training by Wilhelm II.
ANSWER: **Jääkärit** ("YAK-eh-rit") [or Finnish **Jaegers**]
<European History>

2. The second movement of this composer's Piano Trio in A minor is titled "Pantoum" ("pahn-TOOM") after an expressive Malaysian poetic form. For 10 points each:
[10m] Name this composer, who wrote that piano trio with a first movement in uneven 8/8 time. He also wrote the violin showpiece *Tzigane* ("tsee-GAHN") and a piano piece that aimed to surpass *Islamey* in difficulty.
ANSWER: Maurice **Ravel**
[10h] This piano trio ensemble, active from 1955 to 2008, recorded trios by Ravel and many other composers. This group included pianist Menahem Pressler, and was named after a style of architecture.
ANSWER: **Beaux Arts** Trio
[10e] The Beaux Arts Trio also recorded this composer's fourth piano trio, subtitled "Dumky" for the Slavic musical form that inspired it. This composer's Ninth Symphony is subtitled "From the New World."
ANSWER: Antonín **Dvořák** ("DVOR-jock")
<Classical Music>

3. In a novel, a shopkeeper named Abdulla who lost his leg during this historical event is one of four characters whose lives intersect in the town of Ilmorog. For 10 points each:
[10h] Name this historical event. In another novel by the same author, a man who is guilt-stricken over his traitorous actions during this event finally confesses at a speech given by General R., which is meant to precede an execution.
ANSWER: **Mau Mau** Uprising [or **Mau Mau** Rebellion; or **Mau Mau** Revolt; accept, but DO NOT REVEAL, the Kenya **Emergency**]
[10e] Ngũgĩ wa Thiong'o, an author from this country, used the aftermath of its Mau Mau Uprising as the backdrop for several of his novels, including *Weep Not, Child and Petals of Blood*.
ANSWER: **Kenya** [or Republic of **Kenya**]
[10m] In *Weep Not, Child*, Ngotho works at one of these places owned by the white man Mr. Howlands. A dead body shows up in one of these places owned by the white man Mehring in Nadine Gordimer's *The Conservationist*.
ANSWER: **farm** [accept plantation]
<World/Other Literature>

4. Answer the following about the algebraic properties of the integers, for 10 points each.
[10m] Up to isomorphism, the integers under addition form the unique infinite group with this property, meaning that the group is generated by a single element.
ANSWER: **cyclic**
[10e] The smallest field containing the ring of integers is this set under addition and multiplication. This set, symbolized Q, consists of all quotients of integers with nonzero denominators.
ANSWER: **rational** numbers

[10h] The set of these algebraic objects defined over the ring of integers is precisely the set of abelian groups. These objects are analogous to vector spaces, but with coefficients defined over a ring, not a field.
ANSWER: **module**
<Other Science (Math)>

5. This concept is a form of lifestyle decolonization carried out through such practices as wearing dreadlocks and dressing in red, green, black, and gold. For 10 points each:
[10h] Name this religiously-prescribed lifestyle that also includes "natural" practices like a saltless Ital ("EYE-tall") diet and cannabis-aided meditation.
ANSWER: **livity**
[10e] Livity is a central concept in this religion and social movement, whose sacred texts include the *Holy Piby* and *Kebra Nagast*. This Jamaican religion considers the emperor Haile Selassie ("HIGH-lee seh-LASS-ee") to be a messianic figure.
ANSWER: **Rasta**fari [or **Rasta**farianism or **Rasta**farians]
[10m] The Rastafari movement is divided into groups known by this name, including the Bobo Ashanti and Nyahbinghi ("ny-uh-BING-ee").
ANSWER: **Mansion**s of Rastafari
<Religion>

6. The rotation of a viscous fluid between two of these shapes is known as Taylor–Couette flow. For 10 points each:
[10m] Name this three-dimensional shape. The fact that it is impossible to have creeping flow around an infinitely long one of these shapes is known as Stokes's paradox.
ANSWER: infinite **cylinder** [prompt on pipe; prompt on disk or circle or ring by asking "what is the equivalent shape in three dimensions?"]
[10e] Stokes's paradox is based on the false assumption that viscous forces dominate far away from the cylinder when this number is small. In most scenarios, a small value for this number corresponds to laminar flow.
ANSWER: **Reynolds** number [prompt on Re]
[10h] This Swedish physicist's namesake equations resolve the paradox with a modified "*v*-dot-grad-*v*" inertial term. This man and Ewald ("AY-vald") name an "extinction theorem" that explains scattering in dielectric materials.
ANSWER: Carl Wilhelm **Oseen** [accept **Oseen** equations or **Oseen** approximation or **Oseen** flow or Ewald–**Oseen** extinction theorem]
<Physics>

7. During the Siege of Fort Pitt, Lord Jeffrey Amherst recommended using blankets to distribute this biological weapon to the Native American army. For 10 points each:
[10e] Name this disease that killed millions of Native Americans, which was eventually eradicated after the development of a vaccine by Edward Jenner.
ANSWER: **smallpox** [or **variola**]
[10m] The Siege of Fort Pitt occurred during this 1763 conflict, a rebellion that was started by an Ottawa chief in the Great Lakes region after the French and Indian War.
ANSWER: **Pontiac**'s War [or **Pontiac**'s Rebellion; or **Pontiac**'s Conspiracy]
[10h] The first smallpox inoculation in the US was performed by a man from this prominent family, which names a street in Boston. That surgeon from this family, Zabdiel, learned about inoculation from Cotton Mather and Onesimus.
ANSWER: **Boylston** [accept Zabdiel **Boylston** or Ward Nicholas **Boylston** or **Boylston** Street]
<American History>

8. *Description acceptable.* William McGonagall and Julia Moore wrote many of these works, one of which includes the line "For the stronger we our houses do build, / The less chance we have of being killed." For 10 points each:

[10h] Name this type of work compiled by Wyndham Lewis and Charles Lee in *The Stuffed Owl*. Vogons present Arthur Dent with these works in *The Hitchhiker's Guide to the Galaxy*.
ANSWER: **bad poetry** [or word forms; or **poetry** that is **not good** or **mediocre** or any synonym for **bad**; or **poetastery** ("poh-it-ASS-ter-ee"); prompt on outsider poetry; prompt on poetry or word forms by asking "what kind of poetry?"; prompt on literature that is bad or synonyms by asking "what kind of bad literature?"]
[10m] William McGonagall wrote about one of these objects breaking in "1879, / which will be remember'd for a very long time." A better poem about one of these objects includes a "proem" and the section "Cape Hatteras."
ANSWER: **bridge** [accept "The Tay **Bridge** Disaster" or "The **Bridge**" or "Proem: To Brooklyn **Bridge**"]
[10e] This author appreciated the many violent deaths in the poems of Julia Moore, whom he parodied as the morbid Emmeline Grangerford in *The Adventures of Huckleberry Finn*.
ANSWER: Mark **Twain** [or Samuel **Clemens**]
<British Literature>

9. The prevalence of samovars in one of these places, which is known for serving smoked omul fish, is described in a work titled for a "Great Bazaar" of these places. For 10 points each:
[10h] Name these places, the settings of many Paul Theroux ("thuh-ROO") travelogues. *The Ghan* ("gan") is one of these structures named for camel-drivers in Australia.
ANSWER: **train**s [or **rail**ways; accept *The Great **Rail**way Bazaar;* accept, but DO NOT REVEAL, Trans-Siberian **Rail**way]
[10e] *The Great Railway Bazaar* ends on this remote railway, which splits at Ulan-Ude on Lake Baikal and connects Moscow to Vladivostok.
ANSWER: **Trans-Siberian** Railway [or **TSR** or **Transsibirskaya** Magistral]
[10m] A Theroux travelogue describes taking *La Trochita*, a railway line that ends in this country. This country also contains a "Train to the End of the World," which ends in Ushuaia ("oo-SWY-uh").
ANSWER: **Argentina** (The Theroux travelogue is *The Old Patagonian Express*.)
<CE/Geo/Other/Pop Culture>

10. A wealthy Chinese couple donated an enormous 3D light projection to recreate a statue of one of these figures, called Solsol by locals. For 10 points each:
[10m] Name these figures, two of which were carved into a cliffside in an Afghan valley. Odilon Redon painted one of these figures *Walking Among the Flowers*.
ANSWER: **Buddha**s [accept Bamiyan **Buddha**s or **Buddha**s of Bamiyan or ***Buddha** Walking Among the Flowers*; anti-prompt (ask "can you be less specific?") on Siddhartha or Gautama]
[10e] The world's oldest works done with this type of paint are in caves behind the Bamiyan Buddhas. Paintings in tempera and this [emphasize] *other* type of paint, often made from linseed, are most susceptible to developing cracks as they age.
ANSWER: **oil** paint
[10h] The art of Bamiyan Valley is emblematic of this style, credited with anthropomorphizing depictions of the Buddha. A statue of the Buddha with Heracles and Tyche ("TYKE-ee") at Hadda reflects this style's Greco-Buddhist influences.
ANSWER: **Gandhara** art
<Painting/Sculpture>

11. The q-line meets the 45-degree line at the feed value for this quantity on a McCabe–Thiele ("TEE-luh") diagram, whose axes are two of these quantities. For 10 points each:
[10m] Name this quantity, often denoted chi ("kye") or X, that gives the percent of molecules in a mixture that are of a particular type.
ANSWER: **mole fraction** [or **mole percent**age or **molar fraction** or **molecular fraction** or **amount fraction** or **number fraction**; prompt on amount or composition]

[10e] The McCabe–Thiele diagram helps to compute the number of theoretical plates needed to purify to a given mole fraction in this lab technique, which separates the components of a liquid mixture by boiling it.
ANSWER: **distillation** [or word forms like **distill**ing; accept fractional **distillation** or binary **distillation**]
[10h] On a Txy ("T-X-Y") diagram, the mole fraction compositions of the liquid and vapor phases at a given temperature are indicated by these two points, which are connected by a horizontal tie line. Name either.
ANSWER: **bubble** point OR **dew** point [accept either]
<Chemistry>

12. In this story, one man wordlessly urges another man to "strike out for the deep water" in a Greenwich Village nightclub while "the world waited outside, as hungry as a tiger." For 10 points each:
[10h] Name this story that ends by describing a scotch and milk that "glowed and shook" like "the very cup of trembling," in a reference to the Book of Isaiah.
ANSWER: "**Sonny's Blues**"
[10m] This essay collection by the author of "Sonny's Blues" includes a "letter to my nephew" and a "letter from a region in my mind," which describes finding religion as a "gimmick" to escape racism.
ANSWER: The ***Fire Next Time***
[10e] This author of "Sonny's Blues" and *The Fire Next Time* wrote about the preacher's son John Grimes in *Go Tell It on the Mountain*.
ANSWER: James **Baldwin**
<American Literature>

13. Schafik Handal, a member of this country's Palestinian minority, was defeated in this country's 2004 presidential election by another politician of Palestinian descent. For 10 points each:
[10m] Name this country whose politics since the end of its Civil War were dominated through the 1990s and 2000s by the former guerrilla group FMLN and the right-wing ARENA.
ANSWER: **El Salvador**
[10e] The FMLN agreed to a ceasefire as part of a 1992 agreement signed in this city. In 1968, students protesting the PRI in this city's Tlatelolco ("tla-teh-LOL-ko") district were attacked by police.
ANSWER: **Mexico City** [or **Ciudad de México**]
[10h] *Original language name required.* The FMLN takes its name from Farabundo Marti, who protested against this 1932 massacre of indigenous farmers in El Salvador. This massacre was carried out by then-president Maximilliano Martinez.
ANSWER: La **Matanza**
<World History>

14. Answer the following about anaphora ("uh-NAFF-uh-ruh"), the linguistic phenomenon in which the meaning of a word depends on an earlier or later expression, for 10 points each.
[10e] Anaphoric ("ANN-uh-FOR-ick") dependence has been an issue for approaches to natural language in this subfield, such as Montague ("MON-tuh-gyoo") grammar. This linguistic subfield is the study of meaning.
ANSWER: **semantic**s
[10m] Anaphors that fall outside the scope of the main quantifier appear in a tricky class of sentences named after this animal. One of these animals starves to death in a paradox named for Jean Buridan.
ANSWER: **donkey**s [accept Buridan's **ass**]
[10h] Irene Heim has compared the task of tracking anaphoras in these situations to "file-keeping." H. P. Grice's cooperative principle is used in these situations, which name the other class of implicatures besides conventional.
ANSWER: **conversation**s [accept **conversational** implicature; prompt on related terms like talks, discussions, dialogs, or discourses] (Heim's analogy appears in "File Change Semantics and the Familiarity Theory of Definiteness.")
<Philosophy>

15. This text conjectures that the judgment of Paris actually represented a Triple Goddess granting the shepherd an apple. For 10 points each:
[10h] Name this book dedicated to the title tripartite lunar deity, whom it claims Socrates rejected along with poetic myths. This book advocates for poetic education beginning with the Celtic *Song of Amergin*.
ANSWER: The *__White Goddess__* (by Robert Graves)
[10m] Alcamenes originated a depiction of this deity with three bodies for the entrance to the Acropolis of Athens. This goddess in triple form faces Clytius on the Pergamon Altar.
ANSWER: __Hecate__ ("HECK-uh-tee")
[10e] The Triple Goddess is worshipped alongside her consort, the Horned God, by practitioners of this Neo-Pagan religion promoted by Doreen Valiente and Gerald Gardner. This religion is strongly associated with witchcraft.
ANSWER: __Wicca__ [prompt on witchcraft until read]
<Mythology>

16. One work in this genre has a cutout providing a glimpse of a Jackson Pollock painting behind it, dwarfed by words including "Free Jazz: a Collective Improvisation" in large text. For 10 points each:
[10e] Name these visual artworks that accompany music releases. Reid Miles designed several of these works for Blue Note Records, such as one featuring a sailboat for Herbie Hancock's *Maiden Voyage*.
ANSWER: album __cover__s [or __cover__ art; or __album art__; or record __sleeve__ art; or equivalents]
[10m] On this jazz album, the top half of the album cover is yellow while the bottom half is mostly red. This "third stream" album includes tracks titled "Saeta" ("sa-EH-ta") and "Solea."
ANSWER: *__Sketches of Spain__*
[10h] This Japanese-American artist painted abstract cover art for several Columbia Records jazz releases, such as the Dave Brubeck Quartet's *Time Out*. He also designed covers for books such as *In Cold Blood* and *The Godfather*.
ANSWER: S. Neil __Fujita__ [or Sadamitsu Neil __Fujita__]
<Other Arts (Auditory)>

17. An iconic photograph of a periodically broken X-shape, Photo 51, depicts this molecule. For 10 points each:
[10e] Name this molecule with a characteristic double-helical structure. Using X-ray crystallography, Rosalind Franklin determined that this molecule's phosphate backbone must be on its outside.
ANSWER: __DNA__ [or __deoxyribonucleic acid__]
[10m] Franklin did not win the Nobel Prize with Watson, Crick, and Wilkins, but this contemporary of hers won for solving the structures of vitamin B12 and penicillin. She also elucidated insulin's structure after 35 years of work.
ANSWER: Dorothy Mary Crowfoot __Hodgkin__ [or Dorothy Mary __Crowfoot__ Hodgkin]
[10h] *Description acceptable.* The only woman besides Hodgkin to win a Nobel Prize for crystallography, Ada Yonath, pioneered a technique to increase crystallographic resolution by doing this action to crystals before X-raying them.
ANSWER: super__cooling__ [accept __cryocrystallography__ or __cryo-biocrystallography__; accept flash-__cooling__; accept specific procedures like __plunging__ into __liquid nitrogen__ or __exposing__ them to __cryogenic gas__ streams or __cold streams__; prompt on vitrification by asking "how do you vitrify the crystals?"; do not accept or prompt on "freezing crystals," as that's exactly what you're trying to avoid]
<Biology>

18. During a leaders' debate, this man thrice declared "you had an option, Sir" when John Turner claimed to have had no choice but to let a series of appointments stand. For 10 points each:
[10m] Name this Canadian prime minister. During his premiership, the constitutional amendments of the Charlottetown Accord failed in a public referendum.
ANSWER: Brian __Mulroney__

[10h] Mulroney also spearheaded the Meech Lake Accord, which would have recognized Quebec's unique status in Canada by inserting a clause into the Constitution Act that referred to the province by this phrase.
ANSWER: **distinct society** clause [or *la **société distincte***]
[10e] In 1992, Mulroney signed this free trade agreement together with George H. W. Bush and Carlos Salinas. This agreement was recently superseded by the USMCA.
ANSWER: **NAFTA** [or **North American Free Trade Agreement**]
<Other History>

19. Mindy Fullilove argues that these initiatives following from the Housing Act of 1949 are related to health disparities like the HIV epidemic in Black communities. For 10 points each:
[10m] Name these projects opposed by Jane Jacobs that clear out city slums for redevelopment. These kinds of projects removed minorities from their homes and resulted in highways being built through minority neighborhoods.
ANSWER: **urban renewal** [or **urban regeneration** or **urban revitalization**; prompt on answers involving tearing down parts of cities; prompt on land redevelopment; prompt on Federal Aid Highways Act by asking "what broader projects did the act help states accomplish?"; do not accept or prompt on "gentrification"]
[10h] Urban renewal projects control use of public space in a manner similar to the installation of architecture described by this term, which includes "anti-homeless spikes."
ANSWER: **hostile** architecture [accept **defensive** architecture; or **unpleasant design**; or **exclusionary** design]
[10e] Urban renewal projects often tout their installation of these green urban areas, but renewed places of this sort tend to be full of architecture like divided benches that discourage public use.
ANSWER: **park**s
<Social Science>

20. In a novel, the narrator frequently notes that Wertheimer mockingly claimed to enter the "human sciences" after failing to achieve greatness in this discipline. For 10 points each:
[10h] Name this discipline studied by the main characters of the novel *The Loser*. In another novel, this discipline is practiced by the masochistic, sexually-repressed title character, who stabs herself in the shoulder at the novel's end.
ANSWER: playing **piano** [accept *The **Piano** Teacher* or *Die **Klavier**spielerin*; accept teaching **piano**; prompt on playing classical music; prompt on teaching by asking "teaching what activity?"]
[10e] The authors of both of those novels, Elfriede Jelinek ("el-FREED-uh YELL-ih-nek") and Thomas Bernhard, were from this country. Peter Shaffer's play *Amadeus*, which depicts Mozart, is set in this country.
ANSWER: **Austria**
[10m] A passage in this other Austrian novel describes how its protagonist, the mathematician Ulrich, despises the sight of his friend's open piano. This unfinished three-volume novel is the magnum opus of Robert Musil ("MOO-zill").
ANSWER: *The **Man Without Qualities*** [or *Der **Mann ohne Eigenschaften***]
<European Literature>