

TOSSUPS

1. Heinrich Mann's essay "Geist und Tat" begins with the assertion that this thinker has had "the greatest, most palpable success" out of everyone who ever wrote. Two of his major works were translated into English by Maurice Cranston, whose three-volume biography of this man concludes with *The Solitary Self*. Paul de Man's *Allegories of Reading* concludes with an essay called "Excuses" analyzing an episode from this philosopher's autobiography in which he wrongly implicates the servant girl Marion (mah-ree-"OWN") in the theft of a ribbon. Voltaire uncharacteristically admired a controversial anti-religious polemic appearing in the fourth book of this thinker's educational treatise framed as a Bildungsroman. This author of the "Profession of Faith of a Savoyard Vicar" wrote a book on political theory proposing individual submission to the "general will." For 10 points, name this Swiss-French philosopher who wrote *Emile*, *Confessions*, and *The Social Contract*.

ANSWER: Jean-Jacques **Rousseau**

2. When this character is told "there is no such thing as abstract morality," he decides to live his life "with due regard to the policeman round the corner." This character receives a small Persian rug purported to explain the meaning of life. This admirer of Watts and Burne-Jones annoys Clutton and his friends from Amitrano's when he proclaims his preference for Ruskin. He loses most of his fortune in a bad investment with the Scottish Macalister and is forced to design clothes for the fashion company Lynn and Sedley. He is taken hop-picking by a man obsessed with El Greco and Spain named Thorpe Athelney, whose daughter Sally this character marries and takes to live at Doctor South's practice. This art student-turned-medical student, who grows up with the Vicar of Blackstable, is unable to curtail his passion for the waitress-turned-prostitute Mildred Rogers. For 10 points, name this club-footed protagonist of W. Somerset Maugham's *Of Human Bondage*.

ANSWER: **Philip** Carey [prompt on Carey]

3. Reissner's fiber is an aggregation that forms when SCO-spondin is secreted into this substance. Increased Ig-G levels in this substance appear as distinctive oligo-clonal bands on an electro-phoretic gel. Beta-2 transferrin is found exclusively in this substance. Solutions that are less dense than this substance are termed hypobaric. Proteins in this substance are detected with Pandy's test. Its flow is restricted by the Dandy-Walker malformation, in which the fourth ventricle is partially enlarged. The ependymal cells of the choroid plexus produce this substance, whose flow is directed by arachnoid villi. This substance is collected during a lumbar puncture. For 10 points, name this clear, colorless liquid that surrounds the brain and spinal cord.

ANSWER: **CSF** [or **cerebrospinal fluid**]

4. In a painting by this artist, a bare-breasted Medea balances a sword while posing for a painter in baggy pants and an unbuttoned plaid shirt. Romantic history painting influenced early works by this artist like *The Sinking of the Titanic*, but he moved to a flattened style seen in works like *Self-Portrait with Trumpet* and *Self-Portrait with Saxophone*. Candles and stockings allude to *The Rake's Progress* in a violently angular painting by this artist of a hanging, rape, and child abduction in an attic. This artist's *Perseus* and *Argonauts* form an allegorical set with his most famous work, which shows the Fisher King standing in a boat next to a group symbolizing the Holy Family. *The Castle*, *The Homecoming*, and *The Staircase* are the individual portions of a triptych by this artist that he painted as a response after being fired by the Frankfurt Art Academy. For 10 points, name this German Expressionist artist of *The Night* and the triptych *Departure*.

ANSWER: Max **Beckmann**

5. A novel from this country concludes with the protagonist in a mental asylum imagining himself on Mars where inhabitants only speak the word “kah-ray-kuh-kuh-ko-kex.” In that novel from this country, Dr. Science springs the title femicidal descendant of the last King of Hungary from a psychiatric ward. In another novel from this country, “How Should a Boy Behave?” is the only course taught at the Benjamenta Institute, whose headmaster falls in love with the title boy. A psychopath named “death by vagina” titles the novel *Moravagine* (“MORE”-ah-vah-ZHEEN) from this country, another of whose writers composed *The Robber* in a personal microscopic pencil script. An author who spent most of his life in this country wrote a novel about an artist who sculpts the *Urmutter* (OOR-muh-tah) after leaving a medieval monastery, and another novel about a boy who dreams of a sparrow hawk after learning about the god Abraxas. For 10 points, name this European country home to Blaise Cendrars, Robert Walser, and Hermann Hesse.
ANSWER: **Switzerland** [or the **Swiss** Confederation; or die **Schweizerische** Eidgenossenschaft; or Confédération **Suisse**]

6. Greenwood et al. found that freewheel running prevents this phenomenon in rats by attenuating the activity of serotonin neurons in the dorsal raphe nucleus during stressful situations. The Wortman-Brehm model uses the subject’s expectation and the importance of the outcome to predict whether reactance or this phenomenon will occur. According to Dweck et al., girls exhibit this effect more than boys in achievement situations with adult evaluators. An experiment in which subjects solved anagrams after being exposed to an irritating noise showed that this effect exists in humans. This behavior, which was reversed by forcibly ragging subjects to the other side of a shuttle-box, was demonstrated in a seminal experiment in which only one dog in each pair could press a lever to stop electric shocks. For 10 points, name this behavior studied by Martin Seligman, in which the subject gives up after experiencing inescapable harm.
ANSWER: **learned helplessness**

7. This quantity is the coefficient of the first Rivlin-Ericksen tensor in a retarded motion expansion. One form of this quantity is proportional to the square of the product of grid size and the Smagorinsky constant at scales smaller than the width of an LES cutoff filter. That form of this quantity is defined as the ratio of two additional transport variables in the k-omega model. Because another form of this quantity has units of length squared over time, raising it to the three-fourths power and dividing by the fourth root of the energy dissipation rate per unit mass gives the Kolmogorov length scale of a turbulent flow. In the Navier-Stokes equations, the Laplacian of fluid velocity is multiplied by that “kinematic” form of this quantity, whose ratio to thermal diffusivity equals the Prandtl number. For 10 points, name this quantity that is constant for Newtonian fluids and zero for superfluids.
ANSWER: **viscosity** [accept eddy **viscosity** or turbulent **viscosity** or kinematic **viscosity** or **momentum diffusivity**]

8. This leader lost power after setting aside 23 percent of his country’s land for utopian farming communities run by the Maharishi Heaven on Earth Development Company. This leader defeated an insurgency led by a man he refused to promote to chief game ranger, Adamson Mushala. This man cemented his dictatorial rule by banning the Committee of Fourteen led by his cabinet minister Sylvester Chisembele (chee-sem-bay-lay). Despite this leader’s call for peaceful protests, his party organized the violent Cha-cha-cha campaign against British rule. To reduce dependence on countries ruled by white minority governments, this leader negotiated a Chinese-funded railway that provided access to the port of Dar es Salaam. This leader’s vice president chaired the Chona Commission, which established this man’s UNIP as the sole legal party. In the Mulungushi reforms, this leader nationalized his country’s crucial copper mining industry. For 10 points, name this leader who was defeated in 1991 by Frederick Chiluba, the first president of Zambia.
ANSWER: Kenneth David **Kaunda**

9. Senators belonging to this party led the opposition to the “3 for 3 Law”, which would have required all government officials to disclose their taxes, assets, and conflicts of interest. A movement opposing this party was sparked by a YouTube video in which students stated their name and ID number to prove that they attended a certain university. A current head of state belonging to this party was elected governor after signing 608 promises in front of a notary. In 2013, a member of this party who opposes gay marriage and adoption became the first openly gay mayor in his country. This party, which was opposed by the “I Am 132” movement, had a finance minister resign after proposing a widely criticized meeting between his head of state and then-candidate Donald Trump. This ruling party has been lambasted for its handling of the kidnapping of 43 students in Iguala and is a rival of the PRD and PAN. For 10 points, name this party of Enrique Peña Nieto, a centrist party that currently holds power in Mexico.

ANSWER: **PRI** [or Partido **Revolucionario Institucional**; or **Institutional Revolutionary** Party]

10. In a battle fought in this state, a regiment of 44 men under Richard Dowling fended off a gunboat attack and successfully captured one; that battle took place at a fort recently renamed Fort Griffin. Two bombardments were conducted by the Union on Fort Sabine, which was located in this state. A battle fought in this state may have been caused by one commander claiming he wanted “a little battlefield glory before the war ended altogether.” That man, Colonel Theodore Barrett, ordered Lieutenant David Branson to conduct raids on encampments led by Colonel John “Rip” Ford. The CSS *Alabama* sunk the USS *Hatteras* off the coast of this state. This state was the site of the final battle of the American Civil War, the Battle of Palmito Ranch. For 10 points, name this state, whose secession from the Union and entry into the Confederacy resulted in the ouster of governor Sam Houston.

ANSWER: **Texas**

11. This thinker wrote that the Baining were “unstudiable” and failed to “exhibit much activity beyond the mundane routines of daily work.” This thinker distinguished five levels of learning and defined Learning II as the “change in the process of Learning I.” This coiner of deutero-learning stated that “successive genotypic innovations make multiplicative demands upon the soma”, one of his seven propositions on the “economics of flexibility.” This thinker identified two attitudinal turning points in his lifetime—one demoralized Western civilization while the other provides “the means of achieving a new and perhaps more human outlook.” This author of “From Versailles to Cybernetics” argued that Balinese society exhibits stasis rather than schismogenesis, which he coined while studying the Iatmul’s *naven* ritual. For 10 points, name this British-born anthropologist, the author of *Steps to an Ecology of Mind* and the third husband of Margaret Mead.

ANSWER: Gregory **Bateson**

12. It’s not a noble gas, but the stable nuclide with the highest thermal neutron capture cross-section belongs to this set of elements. One of these elements is bound to three fod [“fahd”] or dpm [“d-p-m”] ligands in a reagent used to improve the resolution of NMR spectra by deshielding every proton; that reagent is called a chemical shift reagent. The cyclen derivative DOTA chelates one of these elements in a notable example of a GBCA. Two of these elements name “anomalies” in which their concentrations in minerals are disproportionately high or low compared to their counterparts. Because these elements are highly paramagnetic, MRI contrast agents typically contain a compound centered on one of them. Because scandium and yttrium behave similarly to these elements, they are grouped together in the rare earth metals. . For 10 points, the poor shielding of 4f orbitals results in decreased atomic radii in what group of elements found above the actinides?

ANSWER: **lanthanides** [or **rare earth metals** until “rare”]

13. During this event, Albert Leo Schlageter was shot by firing squad for blowing up train tracks and was venerated as a right-wing martyr. A player in this crisis demanded “productive guarantees” and took action after an announcement was made by REPKO. Right-wing organs in the press riled up fears of the “black shame” during this event, in which West African troops were accused of raping white women. In response to this action, the Cuno government called for a “passive resistance” campaign of industrial strikes by ten percent of the workforce, which it paid for with money-printing that turned into runaway inflation. At the end of this action, which was initiated by Raymond Poincaré to seize coke and coal deposits, France agreed to the Dawes Plan. For 10 points, name this action in 1923 in which French and Belgian soldiers occupied a German industrial valley to forcibly collect reparations.

ANSWER: **occupation** of the **Ruhr** valley [or the **Ruhr** crisis; prompt on occupation of the **Rhineland**]

14. The initial discovery of this phenomenon remained unknown for seven years because computers analyzing TOMS data dismissed it as a measurement error. The recent negative trend in the magnitude of this phenomenon is the subject of a 2016 paper by Susan Solomon et al. that compares “chem-dyn-vol,” “vol-clean,” and “chem-only” simulations, as well as observations from sources like the S·B·U·V satellite and the Syowa station. In 1985, Farman, Gardiner, and Shanklin published the first evidence of this phenomenon, which intensifies at temperatures below negative 78 degrees Celsius due to the formation of nacreous clouds that sequester nitric acid and produce chlorine monoxide. For 10 points, name this phenomenon occurring during the austral spring, whose extent is defined as the area of Earth’s surface over which the total column amount of a certain compound is less than 220 Dobson units.
ANSWER: the Antarctic **ozone hole** [or the **hole** in the **ozone** layer; accept answers that describe **depletion** of the **ozone** layer over **Antarctica** / the **South Pole**; prompt on “ozone depletion” or equivalents that do not mention the word “hole” or a geographic location]

15. Theodor Adorno was wounded by Walter Benjamin’s negative opinion of his fragmentary musical composition in this genre that was inspired by *The Adventures of Tom Sawyer*. A series of influential early works in this genre were collaborations between Christian Felix Weisse and the pedagogue Johann Adam Hiller. The elder Johann André wrote prolifically in this genre, including a work that inspired one based on the same text by Wolfgang Amadeus Mozart; that Mozart composition in this genre features a role tailored for Caterina Cavalieri including the aria “Martern aller Arten” (MAR-tahn all-uh ART-un). Another Mozart composition in this genre features the arias “O zittre nicht, mein lieber Sohn” (oh TSIT-ruh NISHT, “mine” LEE-bah “ZONE”) and “Der Hölle Rache” (dair HOO-luh RAH-kuh) and was based on a libretto by Emanuel Schikaneder, who played the bird-catcher Papageno (“papa”-GAY-noh) at its premiere. For 10 points, name this genre of German comic opera exemplified by *The Abduction from the Seraglio* and *The Magic Flute*.
ANSWER: **Singspiel** (ZING-shpeel) [or **Lustspiel mit Gesang**; or **Schauspiel mit Gesang**; or **Komödie mit Musik**; prompt on German **opera**; prompt on comic **opera**]

16. In *Cultural Capital*, John Guillory related this poem’s “refunctioning of the commonplace book” to its subsequent linguistic capital as a means of inculcating literacy in schools. William Empson objected to the “complacency” of this poem’s “bourgeois ideology,” arguing that the “universality and impersonality” of its truisms “claim as if by comparison that we ought to accept the injustice of society.” Assessing this poem, Samuel Johnson famously wrote, “Had [he] written often thus, it had been vain to blame, and useless to praise him,” concluding his “Life” of its author. In this poem, the speaker imagines himself being described as “drooping, woeful wan, like one forlorn, or crazed with care, or crossed in hopeless love.” This poem asks, “Can Honour’s voice provoke the silent dust?” and praises the “rude forefathers of the hamlet” whose “sober wishes never learned to stray” as they dwell “far from the madding crowd’s ignoble strife.” For 10 points, name this influential elegy, the magnum opus of Thomas Gray.
ANSWER: “**Elegy Written in a Country Churchyard**”

17. A regent of this dynasty who took the throne after suppressing the Dardanians was nicknamed “He who will give” because of his deferred promise to give up power. Another member of this family sexually pursued the youth Damocles, who jumped into boiling water to escape him, and ran a sex dungeon out of the Parthenon, where he was housed after ousting Demetrius of Phaleron. The astronomical poet Aratus wrote at the court of another ruler from this dynasty, who broke a naval blockade in the Chremonidean (krem-oh-NID-ee-an) War. Anti-ship siege weapons and the Helepolis tower were innovations of a capricious king from this dynasty called “Besieger of Cities.” An early member of this dynasty had himself crowned king with a diadem after defeating Ptolemy at the Battle of Salamis, but lost his empire to an alliance of Lysimachus and Seleucus at the Battle of Ipsus. For 10 points, name this ruling house of Macedonia between 306 and 168 B.C., which descended from a Diadoch (“die”-ah-doke) with one eye.
ANSWER: **Antigonid** Dynasty

18. A man criticized this school of thought as being like a “sorceress's thread” since depending on how the thread is pulled, it appears either “yellow or reddish.” This line of thinking was codified in a 12th-century text known as *The Guidance* by Burhan al-Marghinani (al-marg-hin-AHN-ee), whose translation into English by Charles Hamilton formed the basis of British policy in India. This school's founder supported the Zaydi Revolt and was supposedly poisoned in Kufa, leaving his disciples Abu Yusuf and al-Shaybani to continue to spread its ideas. The founder of this school is credited with being the first to use *qiyas*, a form of analogic reasoning that applies *nass* to new cases. This school of thought is sometimes known as “People of Opinion” in contrast to the “People of Hadith,” a term which encompasses the competing Hanbali, Maliki and Shafi schools. For 10 points, name this most-widespread school of *fiqh* (feek).

ANSWER: **Hanafi** School [prompt on *fiqh*]

19. A man in this work says his ancestors thought “Life was a dying. Being born was starting to die. Death was being born,” remembering how he was haunted by a white meeting-house that he calls a “temple of death.” In this work, two consecutive acts end with a mother addressing increasingly frantic monologues to her daughter, who stares at her in silence. Many characters in this work are described as having faces that resemble life-like masks in repose, which a carpenter identifies as the family look. In this work, a woman screams when she sees a medicine box placed on her husband's displayed corpse, after which the son of the Canuck nurse girl Marie Brantome is murdered aboard his docked clipper, the “Flying Trades.” In this work, Captain Adam Brant conspires with Christine to murder her husband, the homecoming Civil War general Ezra Mannon. For 10 points, name this trilogy of plays, a reimagining of the *Oresteia* by Eugene O'Neill.

ANSWER: ***Mourning Becomes Electra*** [prompt on *The Homecoming*; prompt on *The Hunted*; prompt on *The Haunted*]

20. The third movement *Larghetto* of Chopin's first piano sonata is the only piece he wrote in this time signature. Ludwig Minkus used this time signature to indicate the exotic setting of the “Dance of the Golden Idol” from *La Bayadère* (lah “bye”-ah-“DARE”). The first movement of Villa-Lobos's *Bachianas Brasileiras* No. 5 begins with eight cellos playing pizzicato in this time signature. A piece in this time signature begins with the bassoons and horns playing a motif of rising fifths separated by falling semitones while the strings repeat a *col legno* ostinato. The Promenade from *Pictures at an Exhibition* alternates between this time signature and 6/4 time. In the second movement of Tchaikovsky's “Pathétique” Symphony, a waltz is unusually written in this time signature. A stirring march in this time signature opens Gustav Holst's movement “Mars, the Bringer of War.” For 10 points, name this unusual time signature popularized by the Dave Brubeck Quartet piece “Take Five.”

ANSWER: **5/4** time (“five-four”)

TB. This writer criticized the settings of another writer's poems as the products of “a cook's boy helping the gloomier dwarfs boil toads and snails” in a series of lectures that begins by asking listeners to “imagine a man on an island” who finds a box containing all of W. H. Auden's works. The speaker of one of his poems recalls “the factory that manufactures, after so long, Vicks VapoRub Ointment” and “a dinosaur and pterodactyl with... Papier-mâché smiles,” references to this poet's childhood in Hollywood. The speaker of another of his poems discusses “this print of mine, that has kept its color” and “this serviceable body that no sunlight dyes” before lamenting “the world goes by my cage and never sees me.” That poem describes “wild beasts, sparrows pecking the llamas' grain” at the title location. Another of his speakers “fell into the State” until his “wet fur froze,” and recalls that “they washed me out of the turret with a hose.” For 10 points, name this American poet of “The Lost World,” “The Woman at the Washington Zoo,” and “The Death of the Ball Turret Gunner.”

ANSWER: Randall **Jarrell**

1. These demonstrations began six years after a similar action called Operation Gandhi, and inspired songs by folk singers like Ewan MacColl. For 10 points each:

[10] Name these annual demonstrations on Easter weekend starting in 1958. Participants in these marches, organized by the Campaign for Nuclear Disarmament, trekked fifty-two miles from London to Berkshire.

ANSWER: **Aldermaston** Marches

[10] The semaphore symbols for “N” and “D” were used by Gerald Holtom to design this symbol for the CND. It consists of a circle surrounding a vertical line with two downward-sloping lines breaking off from it.

ANSWER: **peace** sign

[10] This prominent historian supported the CND. A biographer of William Morris and William Blake, this leftist wrote a work of history that sought to rescue its subjects from the “enormous condescension of posterity.”

ANSWER: Edward Palmer **Thompson**

2. In one instance, this word describes a box-like object with a red interior that was created in 1972. For 10 points each:

[10] Name this word that describes several installations of “specific objects” in which modular boxes are stacked vertically or horizontally along a wall. They are often referred to with this word and their year of completion.

ANSWER: **untitled**

[10] Donald Judd, the creator of those installations, is commonly grouped with the minimalist movement, like this New Yorker whose geometric paintings include a series of striped *Black Paintings*.

ANSWER: Frank **Stella**

[10] Judd created a contemporary art museum to house large-scale installations called the Chinati Foundation in Marfa in this US state. This state also contains the Rothko Chapel and Robert Smithson’s Amarillo Ramp.

ANSWER: **Texas**

3. The earliest attempt at this task was made by Albert Bigelow Paine, who published two volumes in 1924. For 10 points each:

[10] Name this task that was most recently attempted by Harriet Elinor Smith and Benjamin Griffin, who published three volumes including a 400-page rant known as the “Ashcroft-Lyon manuscript.”

ANSWER: compiling and **editing** Mark **Twain’s Autobiography** [or obvious equivalents]

[10] Twain’s non-posthumous autobiographical work includes this travelogue, the second he published, recounting his adventures in the Wild West during the 1860s.

ANSWER: **Roughing It**

[10] Twain’s other memoirs include a couple describing “Old Times” and “Life” on this river also featured in *Adventures of Huckleberry Finn*.

ANSWER: the **Mississippi** River

4. This compound can be synthesized from two molecules of acetone through a magnesium-catalyzed homo-coupling. For 10 points each:

[10] Name this diol that names a reaction which begins when one of hydroxyl groups leaves, leading to the formation of a carbocation (car-bo-CAT-ion) that rearranges via a methyl shift, ultimately resulting in a ketone.

ANSWER: **pinacol** [or **pinacol** rearrangement; or **pinacol** coupling]

[10] Another method of synthesizing diols uses a hydroxide anion to attack one of these functional groups, which contain a strained, three-membered, cyclic ether. mCPBA (“m-C-P-B-A”) is used to make these molecules from alkenes.

ANSWER: **epoxides**

[10] In both the Woodward cis-hydroxylation and Prevost reaction, this element is added to the alkene in order to create a highly strained three membered ring, which is opened up using a benzoate or acetate anion.

ANSWER: **iodine** [or **periodic** (per-“eye”-oh-dik) acid]

5. In the most famous work described by this term, the title character Mr. Goole exposes the upper-class Birlings' responsibility for the suicide of Eva Smith. For 10 points each:

[10] Give this informal name for a group of works by J. B. Priestley including *Dangerous Corner* and *An Inspector Calls*, so-named for their unusual treatment of a certain concept.

ANSWER: **time plays**

[10] This other informal term was borrowed by critic Irving Wardle from a play by David Campton and used to describe plays like Harold Pinter's *The Dumb Waiter* and *The Birthday Party*.

ANSWER: **comedy of menace**

[10] This four-word phrase was coined by Martin Esslin, who titled a book after it, using it to describe the works of Jean Genet, Eugene Ionesco, and Samuel Beckett.

ANSWER: **Theatre of the Absurd**

6. This book identifies four "Assumptions Underlying Persistent Optimism," which it calls the "biological," "psychological," "epistemological," and "ontological" assumptions and proceeds to deconstruct. For 10 points each:

[10] Name this work of philosophy first published in 1972, which argues that the mind operates based on unconscious background "attitudes" rather than, as Herbert Simon held, as an information processing unit manipulating symbols.

ANSWER: **What Computers Can't Do** [or **What Computers Still Can't Do**]

[10] The author of *What Computers Can't Do*, Hubert Dreyfus, drew on this continental philosophical tradition concerned with conscious experience. It was established by Edmund Husserl.

ANSWER: **phenomenology**

[10] This teacher of Edmund Husserl argued that objects have "immanent objectivity" in the mind, which is directed towards them, thus reviving the concept of "intentionality" in *Psychology from an Empirical Standpoint*.

ANSWER: Franz **Brentano**

7. Answer the following about creative ways the Russian state has killed its political enemies, for 10 points each.

[10] This Bolshevik and proponent of "permanent revolution" got on Stalin's bad side, for which he was rewarded with an ice axe in his skull in Mexico City.

ANSWER: Leon **Trotsky**

[10] Bohdan Stashynsky used a gun that shot gas from cyanide capsules to assassinate this Hitler-collaborating Ukrainian nationalist leader, who was proclaimed a "Hero of Ukraine" by Victor Yushchenko in 2010.

ANSWER: Stepan **Bandera**

[10] Alexander Litvinenko was poisoned with radioactive polonium-210 placed in his tea in retaliation for him writing this book in which he accused the FSB of masterminding criminal activities and false-flag operations. Its name is a reference to a metonym for the KGB.

ANSWER: **Lubyanka Criminal Group**

8. For 10 points each, answer the following about Indo-European sound changes.

[10] This sound change retracted "s" in satem languages following semi-vowels, velar consonants, and "r." It's named after either that unusual triggering environment or the Danish linguist who proposed it.

ANSWER: **ruki** sound law [or **ruki** rule; or **Pedersen's** law; accept **iurk** for ruki]

[10] In Grassmann's law, Ancient Greek and Sanskrit stops lost this feature when followed by another stop with this feature in the next syllable. This feature is found only on voiced stops in most reconstructions of Proto-Indo-European.

ANSWER: **aspiration** [or **aspirated**]

[10] This chain shift eliminated PIE voiced aspirated stops and created a new series of voiceless fricatives in Germanic languages. Its discovery was one of the first great achievements of historical linguistics.

ANSWER: **Grimm's** law [or **First Germanic** Sound Shift; or **Rask's** rule]

9. A set with a total order that satisfies this criterion is a well-ordered set. For 10 points each:

[10] Name this condition of a partially ordered set. It states that any sequence that is strictly getting smaller will eventually terminate.

ANSWER: **descending chain** condition

[10] Ideal in rings with this property satisfy the descending chain condition. A ring has this property if for any two elements a and b in a ring, the ring operation for a and b yields the same value when the operation is applied for b and a .

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

[10] This mathematician's namesake rings satisfy the descending chain condition on ideals. He also names modules that satisfy the descending chain condition on its submodules.

ANSWER: Emil **Artin** [or **Artinian**]

10. The *Orgelbüchlein* (OR-gel-BOOSH-"line") collected 46 pieces in this genre, mostly written during their composer's time in Weimar (VYE-mar). For 10 points each:

[10] Name this genre of pieces perfected by Johann Sebastian Bach. These pieces take the tune of a Lutheran hymn as the basis for a short organ piece in four parts.

ANSWER: **chorale preludes**

[10] In addition to his chorale preludes, Bach's organ output includes a famous D minor toccata paired with one of these contrapuntal pieces, which he paired with preludes in his keyboard collection *The Well-Tempered Clavier*.

ANSWER: **fugues**

[10] Bach's chorale harmonizations are written for this type of four-part vocal ensemble with an acronymic name derived from the four vocal ranges.

ANSWER: **SATB** choir

11. In the first step of many decarboxylase reactions, the thiazole ring of this cofactor forms a carbanion ylide (ILL-id) which attacks a carbonyl on the substrate. For 10 points each.

[10] Name this vitamin coenzyme, which usually occurs as its pyrophosphate derivative and is utilized in decarboxylation reactions like the conversions of pyruvate into acetyl-CoA or acetaldehyde.

ANSWER: **thiamine** pyrophosphate [or **thiamine** diphosphate; or **TPP**]

[10] A molecule of glucose is cleaved into two molecules of pyruvate in this anaerobic pathway that generates two net ATP molecules.

ANSWER: **glycolysis**

[10] Phosphoenolpyruvate, or PEP, the penultimate intermediate of glycolysis, can also be used to make this other biochemical intermediate used in the synthesis of amino acids like phenylalanine, tryptophan and tyrosine. In the shikimate (shee-kee-"mate") pathway, this molecule's mutase catalyzes a Claisen rearrangement to form prephenate.

ANSWER: **chorismate**

12. The protagonist of this novel kills a pimp whose name means "The Stretch." For 10 points each:

[10] Name this novel in which the title character muses on his relatives from his prison cell. This novel's protagonist murders his overbearing mother, and his wife Lola suffers a miscarriage in a horse-riding incident.

ANSWER: *The* **Family of Pascual Duarte** [or *La* **Familia de Pascual Duarte**]

[10] In *The Family of Pascual Duarte*, Camilo José Cela exemplified this literary style typified by grotesque imagery and sordid realism. Cela adapted this style from Jean-Paul Sartre's existentialism.

ANSWER: **tremendismo**

[10] Cela was a member of the Generation of '36, a literary movement in this country whose Generation of '27 included the poet Federico García Lorca.

ANSWER: **Spain** [or **España**]

13. In Hindu mythology, if a demon is granted a boon that he can only be killed in one way, it is guaranteed that he will be killed in precisely that way. For 10 points each:

[10] This ten-headed *rakshasa* arrogantly left out men in the list of beings against whom he requested invincibility, which ultimately led to his death at the hands of Rama. This ruler of Lanka is the main antagonist of the *Ramayana*.

ANSWER: **Ravana**

[10] The *asura* Taraka could only be killed by this type of being. The *devas* sent Kama to aid in the creation of this type of being, which resulted in a certain deity incinerating Kama and spreading Kama's essence throughout the cosmos.

ANSWER: a **son of Shiva** [accept **child of Shiva** or equivalents; anti-prompt on **Kartikeya** or **Skanda** or **Murugan**]

[10] This *asura* outdid Llew Llaw Gyffes (THEU THOU GUFF-ess) in the number of conditions that had to be fulfilled simultaneously in order for him to be vulnerable to attack, so naturally Narasimha came along and met all of them. This brother of Holika unsuccessfully tried to murder his son Prahlada.

ANSWER: **Hiranyakashipu** [do not accept "Hiranyaksha"]

14. In a song about this man, he died while face down in a puddle two inches deep; more likely, he simply died of exposure made worse by intoxication. For 10 points each:

[10] Name this Pima Indian who was one of the six flag-raisers on Mount Suribachi, captured in a photograph by Joe Rosenthal.

ANSWER: Ira **Hayes**

[10] The flag-raising on Mount Suribachi took place during this furious and bloody Pacific Theater battle, which lasted over a month while Marines flushed out over 25,000 Japanese troops from an elaborate system of underground defenses.

ANSWER: Battle of **Iwo Jima**

[10] Hayes and two other flag-raisers were the public face of this massive 1945 effort to finance the enormously expensive war effort, ultimately raising over \$25 billion.

ANSWER: **7th War Bond** Drive

15. Bak, Tang, and Wiesenfeld created a cellular automaton called the Abelian sandpile model in order to illustrate this property, which exists in diverse phenomena ranging from forest fires to the Barkhausen effect. For 10 points each:

[10] Name this type of scale invariance characteristic of a dynamical system that has a critical point as an attractor.

ANSWER: **self-organized criticality** [or **SOC**]

[10] The purpose of the BTW paper was to describe pink noise, which has an inverse power-law dependence on this quantity. Bandpass filters attenuate electronic signals whose values of this quantity are outside of the desired range.

ANSWER: **frequency** [prompt on "f"]

[10] Another connection between statistical mechanics and circuits is the derivation of Johnson-Nyquist noise from this theorem, which relates two namesake phenomena in terms of a power spectrum and a linear response function.

ANSWER: **fluctuation-dissipation** theorem [or **f-d** theorem; or **FDT**; or "relation" in place of "theorem"; or **FDR**]

16. This empire's power was broken after its forces, convinced that a British cavalry escort for an ammunition resupply was a flanking maneuver, retreated at the Battle of Ferozeshah (feh-roh-zay-shah). For 10 points each:

[10] Name this major power in the Punjab in the early 19th century, which clashed with forces of the British East India Company in two namesake wars in the 1840s. This highly militaristic empire was founded by Ranjit.

ANSWER: **Sikh** Empire

[10] The Sikh Empire was formed from these petty, feuding autonomous territories in the Punjab, each of which fielded private armies. Unlike *jathas*, these subdivisions numbered in the thousands and controlled significant amounts of land.

ANSWER: **misl**s

[10] Many Sikhs were later employed by British India as soldiers, including during this massive rebellion against Company rule in India, commonly named for native Indian soldiers.

ANSWER: **Sepoy** Mutiny [or Indian Rebellion of **1857**; accept anything including **sepoys** or **1857**; prompt on **India's First War of Independence**; prompt on **Great Indian Revolt**]

17. This woman and her brothers visit the city of Shechem where, according to traditional interpretations of Genesis 34, she is raped by a man also named Shechem. For 10 points each:

[10] Name this woman, whose brothers, Simeon and Levi, retaliate by slaughtering all of the men of Shechem.

ANSWER: **Dinah**

[10] This other brother of Dinah does not participate in the slaughter of the men of Shechem, but earns his father's disapproval a mere chapter later by sleeping with Bilhah.

ANSWER: **Reuben**

[10] Dinah and Reuben were children of this woman, who became Jacob's wife as a result of a devious switcheroo with her sister Rachel.

ANSWER: **Leah**

18. This region contains many caves such as Pol an Ionain and Aillwee (al-ih-wee) Cave, which were formed after the most recent Ice Age. For 10 points each:

[10] Name this region of western Ireland, which also names a national park in counties Clare and Galway. It is comprised of plenty of karst topography, containing limestone marked with clints and grikes.

ANSWER: The **Burren**

[10] The Burren is located near these famous cliffs in County Clare, which rise up over the Atlantic Ocean and provide a view of the Aran Islands. An observation site located here is O'Brien's Tower.

ANSWER: Cliffs of **Moher**

[10] Another highly recognizable geographic feature in Ireland is this grouping of basalt columns in County Antrim in Northern Ireland. Mythology states that Finn MacCool was responsible for creating this site, which he made to reach an opponent in Scotland he wished to duel.

ANSWER: **Giant's Causeway** [accept **Clochán an Aifir** or **Clochán na bhFomhórach**]

19. The founding of this location was driven by an exhibition judged by Robert Henri and William Merritt Chase, and its manager was influenced early on by a group of English artists known as The Linked Ring. For 10 points each:

[10] Name this location on Fifth Avenue that showcased the work of Gertrude Käsebier (KAY-zeh-beer) and Clarence H. White.

ANSWER: Gallery **291** [or **291 Gallery**; or **Little Galleries of the Photo Secession**]

[10] Gallery 291 was managed by this Photo-Secessionist photographer and husband of Georgia O'Keeffe who depicted passengers on the lower deck of a steamer bound for Germany in *The Steerage*.

ANSWER: Alfred **Stieglitz**

[10] Use of this photographic process greatly improved the ability of early 20th century pictorialists like Edward Steichen and Robert Demachy to create a "painterly" effect. In this process, the namesake pigment was smeared onto a surface, with variations in amount contributing to shading, and then hardened by using UV light.

ANSWER: **gum bichromate** process [or **gum dichromate** process; prompt on **gum arabic**]

20. Established in 1993 by Rhoda Koenig and Auberon Waugh, this award was most recently won by Morrissey's *List of the Lost*, whose description of breasts doing "barrel-rolls" triumphed over George Pelecanos' *The Martini Shot*. For 10 points each:

[10] Name this annual award given out by the *Literary Review*. A passage that employed the phrase "slither slither slither slither" to evoke exploration of "oto-rhino-laryngo-logical caverns" won this award for Tom Wolfe's *I am Charlotte Simmons*.

ANSWER: the **Bad Sex** in Fiction Award

[10] In 2008, *Literary Review* honored this author of *The Witches of Eastwick* and *Rabbit, Run* with a "lifetime achievement" Bad Sex in Fiction Award.

ANSWER: John **Updike** [or John Hoyer **Updike**]

[10] This author's novel *Charlotte Gray* took home the award in 1998. This team captain for BBC's literature quizbowl series *The Write Stuff* is best known for his historical novel about World War I, *Birdsong*.

ANSWER: Sebastian **Faulks**