

Tossups

- The time-integrated radiative forcing from the instantaneous release of one of these substances is known as GWP and measures their impact normalized to a common one of these substances. Sulfur hexafluoride is sometimes said to be the most potent of these substances, likely because it is inert. Because its dipole moment is unaffected by radiation from 4 to 30 microns, (*) N_2 is not among these substances on Earth, but N_2 does play this role on Titan alongside CH_4 and H_2 , which parallel the two most common of these gases on Earth. The decreasing carbon-13 to carbon-12 ratio is evidence for the anthropogenic contribution to these substances. For 10 points, what atmospheric gases absorb longwave infrared radiation in their namesake effect?**

ANSWER: greenhouse gases [prompt on “GHG”]
- In one of these texts, a beggar asks to eat some food consecrated to the breath of life because the breath of life flows through him, too. Max Mueller created an important translation of these texts for his advisor, Friedrich Schelling. In another passage from these texts, Svetaketu learns a lesson by dropping a lump of salt into water and drinking the water the next morning. They contain the four “great sayings,” including (*) “Brahman is Prajna” and “Thou art that.” There are 108 of these texts, but ten “principal” ones, including the “prashna” and “Chandogya.” Arthur Schopenhauer’s reading of these texts helped inspire *The World as Will and Representation*. For 10 points, name this set of commentaries on the Vedas.**

ANSWER: the Upanishads
- In one of this author’s works, the narrator wonders whether the mute cook Maggie was really black, after a childhood friend calls her a bigot for kicking that cook. In another of this author’s works, a woman overhears the schoolteacher talk about “characteristics” and asks an ailing widow what that word means. State wards Roberta and Twyla switch beds every night while living at a shelter, and meet repeatedly throughout their lives in (*) “Recitatif,” this author’s only short story. In a novel by this author, a spirit comes back to haunt 124 Bluestone Road after her mother kills her in Baby Suggs’s backyard and nurses Denver with milk and her sister’s blood. For 10 points, name this author who wrote about the escaped slave Sethe protecting her children by killing them in the novel *Beloved*.**

ANSWER: Toni Morrison [or Chloe Ardelia Wofford]
- This city’s railway works built the *Jenny Lind*, a vehicle so popular that it became the first mass-produced locomotive. William Porden designed Steine House in this city to be the residence of his king’s mistress, Maria Fitzherbert. In the 20th century, Patrick Magee used the pseudonym “Roy Walsh” for an operation in this city that required a device made from an egg timer and a video recorder. This city’s Mughal-influenced (*) Royal Pavilion was a common retreat for George IV, whose favor for this city helped it grow from a small town. During a 1984 Conservative Party conference, the IRA tried to assassinate Margaret Thatcher by bombing a hotel in this city. For 10 points, name this popular resort town on the south coast of England.**

ANSWER: Brighton
- In the late 19th century, this composer’s works were collected in a 105-volume edition mostly produced by Friedrich Chrysander. A movement in 3/2 time from one of this composer’s suites begins with an ascending melody of A, D, E in half notes, a quarter note F-sharp, and a descending half note D. Two violins and a cello form the concertino of 12 Concerto Grossi that form his Opus 6, two of which quote his (*) *Ode for St. Cecilia’s Day*. One of this composer’s works called for 24 oboes in its score and includes the movements *La Paix* and *La Réjouissance*. This composer included an “Alla Hornpipe” in a series of suites composed for King George I’s barge trip down the Thames. For 10 points, name this composer of the *Music for the Royal Fireworks* and *Water Music*.**

ANSWER: George Frideric Handel [or Georg Friedrich Handel]

6. This thinker countered Vladimir Propp's approach to treating whole myths as the units of analysis by instead analyzing myths as bundles of minimal units. This thinker claimed that concepts derive their meaning only by being one half of a "binary contrast", and that this oppositional way of thinking is universal to humans across cultures. This inventor of the "mytheme" also coined a term for someone who solves new social problems by (*) re-assembling existing materials, rather than creating new materials. This creator of Alliance Theory contrasted the idea of the *bricoleur* with the engineer. For 10 points, name this author of *Elementary Structures of Kinship* and *The Savage Mind*, a French Structuralist anthropologist.

ANSWER: Claude Lévi-Strauss

7. This is the number of lines on the Orgel diagram for species with one d-electron. Pyridine undergoes substitution on this numbered position in the Chichibabin reaction. At standard temperature, a gas comprising molecules that contain this number of atoms has internal energy roughly equal to five-halves nRT . This is the number of chlorine atoms bonded to the metal in Grubbs's catalyst. In diborane, this many electrons are formally shared between three centers. This is the number of possible optical isomers of a molecule with (*) one chiral center. There are $4n$ plus this many pi electrons in a ring molecule that is aromatic due to following Huckel's rule. There are this many carbon atoms in ethylene. For 10 points, identify this number of hydrogen atoms in a water molecule.

ANSWER: two

8. During this event, one participant made an unwise "April Fool's Day" suggestion to go to war with Canada. Another participant in this event had been James Polk's initial choice to negotiate an end to the Mexican-American War. This event was resolved by a meeting with Richard Lyons, shortly after Christmas Day. Charles Sumner helped conclude this event by reading the cabinet important letters from Richard (*) Cobden and John Bright. It occurred after the USS *San Jacinto*, captained by Charles Wilkes, pulled over a British ship carrying James Murray Mason and John Slidell. For 10 points, name this international dispute between the United States and England, over a ship carrying Confederate emissaries.

ANSWER: Trent Affair

9. In this story, a character supplies her brother with letters of introduction for all of her former acquaintances at the location he is visiting. The main character of this short story awkwardly tries to inform an old lady of all his sicknesses because he believes that strangers "are hungry for the least detail of one's ailments and infirmities." At the end of this story, a man and his sons (*) arrive on the purported third anniversary of the date they went missing. The narrator of this story states "romance at short notice" is a certain 15-year-old girl's specialty. Framton Nuttel visits a house occupied by Vera and her grandmother Mrs. Sappleton, in this story. For 10 points, name this story in which Mrs. Sappleton waits for her husband and three sons to arrive home through the title portal, written by Saki.

ANSWER: "The Open Window"

10. While a group of druids brew a potion, a youth sneaks a peek at them through a window and leaking fumes infuse one of these objects belonging to him, granting it the power to kill. That deadly example of these objects ultimately causes the death of a king whose epithet refers to his silver hand. Four men are required to veil and unveil one of these objects which, when attacked by Lugh with a sling, kills Balor. In order to placate Skadi, these possessions of Thiazi are turned into (*) stars. Two children of Izanagi are born from the washing of these objects. Drinking from the Well of Mimir requires Odin to sacrifice one of them, and Odysseus's men use a stake to pierce this body part of Polyphemus. For 10 points, name this organ, of which cyclopes possess only one.

ANSWER: eyes [or eyeballs; or obvious equivalents]

11. A statue of this deity with its left leg exposed, and a no-longer-surviving acroterion at the Temple of Zeus that it was once next to, was sculpted by Paionios. Frank Lloyd Wright used a sculpture of this deity as a design element in several buildings, including the Robie House. In a Canova sculpture, this deity sits on a sphere in the right hand of Napoleon. A sculpture of this deity, discovered in 1863 by Charles Champoiseau, is located in the Daru Stairway at the Louvre. A temple to this deity includes a relief showing a goddess adjusting her (*) sandal. Umberto Boccioni's *Unique Forms of Continuity in Space* has a pose resembling her best-known depiction, in which she stands on the prow of a ship and lacks arms and a head. For 10 points, name this Greek goddess who is winged in a sculpture discovered at Samothrace.
ANSWER: Nike [or Victory; or Athena Nike; prompt on "Athena"]
12. Eike von Repgow compiled a "mirror" for these people that became the most important customary law code in medieval Central Europe. Their pagan religion centered on enigmatic tree-trunk pillars called Irminsul. In the 8th century, their mythical hero Widukind led their resistance to Charlemagne, who nonetheless forcibly converted them. The Ottonian dynasty controlled the Holy Roman Empire as dukes of this people's (*) namesake territory. Henry the Lion ruled the duchy of these people, which corresponds to a modern German state with capital at Dresden. For 10 points, name these Germanic tribesmen who settled modern England along with the Angles.
ANSWER: Saxons [do NOT accept "Anglo-Saxons"]
13. In some organisms, maturases help stabilize the three-dimensional interactions between molecules during this process. It doesn't involve changes in single nucleotides, but abnormalities in this process may lead to beta-thalassemia. A protein involved in this process has one subunit bind to a pyrimidine rich sequence while the other part binds to an AG sequence. In this process, ESE sites are bound by (*) SR proteins, which ensure that both the adenine branch point and the GU sequence are properly positioned. In this process, U1, U2, U4, U5 and U6, small nuclear ribonucleic particles, help cause two transesterifications which lead to the formation of a lariat loop. SnRNPs (snurps) help organize a namesake "some" (soam) in this process. For 10 points, identify this process of removing the introns from mRNA.
ANSWER: splicing [prompt on "intron removal" or other descriptive answers until "introns" is read]
14. In one episode of this show, an eel in a moat sings "Danny Boy" with one of the main characters, seconds before attacking him. In another episode of this show, the protagonist changes a lightbulb at the core of the dying sun. An antagonist on this show speaks in rhyming couplets, ending each stanza with the word "naughty." This show's protagonist is often assisted by a sarcastic British (*) computer who calls him a twit. In an episode of this show, the barber Freaky Fred delights in shearing everyone bald. Its protagonist often says "the things I do for love" and is teased by a man who puts on a mask and yells "booga-booga-booga!". For 10 points, name this show set on the Nowhere, Kansas farm of Eustace and Muriel Bagge, a twisted, supposed kid's cartoon about a terrified pink canine.
ANSWER: Courage the Cowardly Dog
15. At the end of one poem, this author addressed the poem itself to say: "Song, if you had as much beauty as you wished, / you could boldly / leave this wood, and go among people". The speaker of another of his poems describes reason and art being drowned by the waves, after declaring "My ship sails on, packed with forgetfulness". He described being wounded by his beloved's (*) eyes on a day when the sun's rays had no color. His popularity in England was spread by the translations of Henry Howard, Earl of Surrey and Thomas Wyatt. A collection by him begins: "You who hear the sound, in scattered rhymes / of those sighs on which I fed my heart". For 10 points, name this Italian poet whose *Canzoniere* features poems addressed to Laura, written in his namesake sonnet form.
ANSWER: Petrarch [or Francesco Petrarca]

16. An artifact from this empire is a seated copper nude male torso placed atop a round pedestal. This empire experienced a brief tetrarchy led by Imi, Igigi, Nanum, and Ilulu. A ruler of this empire stomps on the king of Lullubi at the peak of a mountain in a victory stele that he commissioned. The collapse of this empire led to a power vacuum filled by the marauding Gutians from the Zagros Mountains. The earliest-known poet in world history was a priestess from this empire whose father got his start as the (*) cup-bearer to the king of Kish before establishing this empire. It was ruled by Naram-Sin and was established by the father of Enheduanna, who conquered Uruk, and then the rest of the Sumerian city-states. For 10 points, name this ancient Mesopotamian empire established by Sargon.
ANSWER: Akkadian Empire
17. At the deathbed of one character in this novel, the narrator notes that the smell of death in the room has been replaced by the smell of roasting. When another character in this novel is discovered reading a romance novel in his study, he passes it off as a way to improve his command of English. The narrator of this novel is asked to give “the sex talk” to his employer’s godson. This novel’s narrator does not react to the news of his father’s (*) death because it takes place during a meeting between the Prime Minister and von Ribbentrop hosted by his employer, who is accused of having Nazi sympathies. Its narrator journeys to Little Compton in order to meet with the former housekeeper Mrs. Kenton. For 10 points, name this novel about the butler Stevens, written by Kazuo Ishiguro.
ANSWER: The Remains of the Day
18. An artist who used this medium worked *en plein air* in the town of Cospeda, underneath heavy snowfall, in order to leverage the visual effects of ice crystals. That artist, who hid from the Nazis several paintings in this medium that he called *Unpainted Pictures*, was Emil Nolde. A much earlier painting in this medium is a very detailed depiction of dandelion and yarrow plants, among other grasses. The vast majority of Audubon’s *Birds of America* were made in this medium. A more (*) opaque version of it is termed gouache. It was used by Durer for his *Young Hare* and by John Constable in his *Stonehenge*. Artists using this medium often employ flat washes to cover large areas, and work on damp canvases using the “wet on wet” technique. For 10 points, name this medium which utilizes soluble pigments.
ANSWER: watercolor painting [or watercolors; or aquarelle; or gouache until it is read]
19. This thinker argued that rights should be awarded not based on the ability to reason, but based on the ability to suffer, which is known as his “insuperable line”. This thinker used the variables “extent”, “duration”, and “propinquity” to determine the moral statuses of actions. In sections such as “whether it hurts population” and “whether it robs women”, a work by this thinker dismantles various historical arguments for the criminalization of (*) homosexual sex. This author of *Offences Against Oneself* developed a “hedonistic calculus” that determines how much pleasure an action produces. For 10 points, name philosopher whose *The Principles of Morals and Legislation* describes the greatest happiness principle, making him the founder of Utilitarianism.
ANSWER: Jeremy Bentham
20. The most precise “direct test” of this concept, by Rainville *et al.*, studied gamma rays emitted by neutron capture in sulfur and silicon. The first experimental verification of this relation occurred in 1932 and was performed using a multistage diode/capacitor voltage multiplier – generally also considered the first real particle accelerator – invented by Cockcroft and Walton. A relativistic variant of this relation is squared and has an additional factor of momentum squared times speed of (*) light squared on its right-hand side. It is used to derive the binding energy of the atom because summing the individual particles of an atom leaves a “defect” in another property. For 10 points, name this concept summarized by the famous equation $E = mc^2$.
ANSWER: mass-energy equivalence [or obvious equivalents, such as E equals m c squared until they are read]

Bonuses

1. The ping-pong and ternary-complex mechanisms are unusual models of the interactions of these proteins. For 10 points each:
[10] Name these proteins that bind to substrates and catalyze biological reactions.
ANSWER: **enzymes**
[10] Reversible enzyme inhibition occurs in roughly three types: two that are kinda confusing and easily mistakable for one another, and this kind, in which the substrate can't bind to the enzyme when the inhibitor is bound.
ANSWER: **competitive** inhibition [the other types being uncompetitive and non-competitive inhibition]
[10] In this kind of irreversible inhibition, an enzyme binds to an intended substrate like normal, but then the fiendish substrate forms a stable covalent bond with the enzyme, knocking it out of commission! Vigabatrin for GABA-T and aspirin for COX 1 and 2 are two examples of this kind of inhibitor.
ANSWER: **suicide** inhibitor
2. This author's three-year correspondence with Paul Auster was anthologized in the volume *Here and Now*. For 10 points each:
[10] Name this South African author, who won the Man Booker prize twice, for *Disgrace* and *Life & Times of Michael K*.
ANSWER: J.M. **Coetzee** [or John Maxwell **Coetzee**]
[10] The only Nigerian winner of the Man Booker Prize is this author, who won for his novel about the spirit-child Azaro, *The Famished Road*.
ANSWER: Ben **Okri**
[10] This Indian author won the Booker for her novel *Heat and Dust*, though she is better known as a screenwriter for Merchant Ivory Productions, for whom she adapted *The Golden Bowl* and *Howards End*.
ANSWER: Ruth Praver **Jhabvala**
3. This man collaborated with Milt Jackson and Thelonious Monk on recordings of "Bags' Groove" and "Swing Spring". For 10 points each:
[10] Name this trumpeter who popularized modal jazz with his album *Kind of Blue*, which became the best-selling jazz album of all time.
ANSWER: Miles **Davis** [or Miles Dewey **Davis** III]
[10] *Kind of Blue* opens with an introduction played by Paul Chambers and this pianist. Scott LaFaro and Paul Motian were part of his namesake trio, and he wrote the song "Waltz for Debby".
ANSWER: Bill **Evans** [or William John **Evans**; do NOT accept "Gil Evans"]
[10] Bill Evans is not related to Gil Evans, with whom Miles collaborated on this jazz-classical-fusion album, which includes adaptations of Joaquin Rodrigo's *Concierto de Aranjuez* and Manuel da Falla's "Will o' the Wisp".
ANSWER: **Sketches of Spain**
4. This agency was created by a 1970 executive order of Richard Nixon. For 10 points each:
[10] Name this federal agency responsible for monitoring air and water quality.
ANSWER: **EPA** [or **Environmental Protection Agency**]
[10] This man was appointed the first head of the EPA by Richard Nixon. He and Elliot Richardson resigned rather than fire special prosecutor Archibald Cox during the Saturday Night Massacre.
ANSWER: William Doyle **Ruckelshaus**
[10] William Ruckelshaus received the Republican nomination for Senate in this state in 1968, but lost to long-time Senator Birch Bayh. Birch's son Evan was also a long-time Senator from this state.
ANSWER: **Indiana**

5. This book introduced the phrase “till death do us part” in its marriage liturgy and “earth to earth, ashes to ashes, dust to dust” in its funeral service. For 10 points each:
[10] Name this standardized religious book compiled by Thomas Cranmer.
ANSWER: the ***Book of Common Prayer***
[10] The *Book of Common Prayer* is used by this Christian denomination encompassing the Church of England and churches that follow similar practices. This denomination originated with the reforms of Henry VIII.
ANSWER: **Anglicanism**
[10] This term designates theologians and writers who have had especially large influences on Anglicanism. Examples include Thomas Cranmer, Richard Hooker, and William Laud.
ANSWER: **divines**
6. A member of this movement named each volume of his four-volume novel *The Peasants* after one of the seasons. For 10 points each:
[10] Name this turn-of-the-century Nationalist literary and artistic movement, which included Wladyslaw Reymont and the author of the *Homo Sapiens* trilogy, Stanislaw Przybyszewski.
ANSWER: **Young Poland** [or ***Młoda Polska***]
[10] This contemporary Polish poet of *That's Why We're Alive* concluded her poem “Love at First Sight” with the lines: “Every beginning / is but a continuation / and the books of events / is never more than half open”.
ANSWER: Wislawa **Szymborska** [or Mary Wislawa Anna **Szymborska**]
[10] The Polish novel *Quo Vadis*, by Henryk Sienkiewicz, is set during the reign of this Roman emperor and perpetuates the myth that he started the Great Fire of Rome.
ANSWER: **Nero** Claudius Caesar Augustus Germanicus
7. New York City has expanded its offerings of this kind of education through the CTE program, which opened The Harbor School in 2003. For 10 points each:
[10] Give this term for technical education designed to prepare students for specific trades, such as plumbing or electrical work. In the United States, this form of education is often provided through community colleges.
ANSWER: **vocational** education
[10] This country's vocational education system is cited as a reason for it having one of the lowest youth unemployment rates in Europe. This country's Free Democrats failed to win enough seats to secure national representation in its most recent parliamentary election.
ANSWER: Federal Republic of **Germany** [or Bundesrepublik **Deutschland**]
[10] German vocational education frequently pairs apprentices with one of these mid-sized German enterprises, which are typically export-oriented and occupy niche markets, usually in the machine or chemical industry.
ANSWER: **Mittelstand**
8. This book's subject stated in court that he was following Kant's categorical imperative and did not recognize the “golden rule” as implicit in it. For 10 points each:
[10] Name this book that discusses a man who believed he was merely doing his job in executing the Final Solution, as an example of the “banality of evil.”
ANSWER: ***Eichmann in Jerusalem: A Report on the Banality of Evil***
[10] Hannah Arendt analyzed Nazism and Stalinism in a work on *The Origins of* this ideology. This ideology, which includes fascism, refers to an attempt by the state to control all aspects of life.
ANSWER: **totalitarianism**
[10] This fascist philosopher ghostwrote *A Doctrine of Fascism* for Benito Mussolini. This philosopher suggested that nobody could leave the bounds of their own thought, as part of his philosophy of Actual Idealism.
ANSWER: Giovanni **Gentile**

9. These expressions can converge in one of three ways: for x equals c , for all x , or for x minus c strictly less than the radius of convergence. For 10 points each:
[10] Name these expressions typified by an infinite sum, for n , of a -sub- n times the n th power of the quantity x minus c , where c is its center.
ANSWER: **power series** [prompt on “(infinite) series”]
[10] These numbers were introduced by Kurt Hensel as a number theoretic analog of power series in complex analysis. They are a completion of the rationals with respect to a non-Euclidean norm, unlike the reals.
ANSWER: **p-adic** numbers
[10] Any nontrivial example of this function on the field of the rationals is equal to either the real or p-adic one according to Ostrowski’s theorem. This function is denoted by a vertical bar on either side of the quantity to which it is applied.
ANSWER: **absolute value** [or **modulus**]
10. Hungary was referred to as “the happiest barrack” during this leader’s tenure, since it was considered the best Eastern Bloc country to live in. For 10 points each:
[10] Name this General Secretary of the Hungarian Socialist Workers’s Party, who presided over his country from 1956 until his retirement in 1988.
ANSWER: János **Kádár**
[10] This term, named after a Hungarian dish, refers to the variety of Communism predominant in Hungary during Kádár’s tenure, which was notable for its strong human rights record and economic liberalism.
ANSWER: **Goulash** Communism
[10] Kádár’s tenure ended during the tenure of this Soviet leader, who initiated *glasnost* and *perestroika*, and tore down the Berlin Wall at Reagan’s request.
ANSWER: Mikhail Sergeyevich **Gorbachev**
11. A variant of these representations, known as a Frost circle, can be used to easily determine if a cyclic compound is aromatic. For 10 points each:
[10] Name these representations consisting of dotted lines from the left and right sides converging towards horizontal bars in the middle; typically, the bottom few, lowest energy of those bars are then filled with electrons.
ANSWER: **molecular orbital** diagrams [or **MO** diagrams]
[10] Interacting atomic orbitals in MO diagrams can be described by two German words depending on whether or not they retain their properties after an inversion about the center. Name either.
ANSWER: **gerade** or **ungerade**
[10] Only two electrons, represented by arrows in opposite directions, can occupy an orbital at the same time, according to this principle.
ANSWER: **Pauli** exclusion principle
12. This man was legally adopted by the Fonteii family in order to renounce his patrician status and become eligible for the office of tribune of the plebeians. For 10 points each:
[10] Name this *populares* leader who was murdered by a number of gladiators. His followers made him a makeshift funeral pyre, but that accidentally caused the Curia Hostilia to burn to the ground.
ANSWER: Publius **Clodius** Pulcher
[10] Though this goddess’s cult excluded men, Clodius attempted to intrude on her cult’s mysteries and seduce Caesar’s wife while disguised as a woman, leading to a scandal.
ANSWER: **Bona Dea**
[10] This orator argued that his friend Milo justifiably murdered Clodius in self-defense. This man condemned Marc Antony in the *Philippics* and exposed the conspiracy of Catiline in the Senate.
ANSWER: Marcus Tullius **Cicero** [or **Kikeron**; or **Tully**]

13. Identify these light-hearted painters from 18th century France, for 10 points each.
[10] This commissioner of a tapestry suite depicting the life of Cupid and Psyche painted many portraits of his patroness Madame de Pompadour. He depicted putti helping the goddess of love dress in his most famous painting.
ANSWER: Francois **Boucher**
[10] This man specialized in genre scenes, such as *The Drunken Cobbler* and a painting in which a poor father enthusiastically hands his daughter's dowry to his new son-in-law, titled *The Village Bride*.
ANSWER: Jean-Baptiste **Greuze**
[10] This major Rococo painter traced a courtship in his series *The Progress of Love*, and included a man gazing lustily at an upskirt in his canvas *The Swing*.
ANSWER: Jean-Honore **Fragonard**
14. In this novel, a French-born assistant professor named Delphine Roux accuses one of her colleagues of misogyny for having an affair with an illiterate janitor named Faunia Farley. For 10 points each:
[10] Name this novel, in which a classics professor refers to two absent students as "spooks", which gets misinterpreted as a racial epithet and ruins his career.
ANSWER: *The **Human Stain***
[10] This American-Jewish author of *The Human Stain* and *Exit Ghost* wrote of a sexually-frustrated boy venting at his therapist, Dr. Spielvogel, in *Portnoy's Complaint*.
ANSWER: Philip **Roth** [or Philip Milton **Roth**]
[10] Much of *The Human Stain* is narrated by this character, a fictional novelist who hears about the anti-Vietnam bombing antics of his friend's daughter Merry Levov in *American Pastoral*.
ANSWER: **Nathan Zuckerman** [accept either]
15. The title character of this suite is represented by an undulating theme for solo violin. For 10 points each:
[10] Name this four-movement suite that ends with a movement depicting a "Festival in Baghdad" and a shipwreck.
ANSWER: **Scheherazade**
[10] *Scheherazade* is by this member of the Mighty Handful, whose opera *The Tale of Tsar Saltan* includes his "Flight of the Bumblebee".
ANSWER: Nikolai **Rimsky-Korsakov** [or Nikolai Andreyevich **Rimsky-Korsakov**]
[10] Rimsky-Korsakov's most long-lived music educational work is a treatise on this subject. Richard Strauss edited a popular edition of Berlioz's treatise on this same subject.
ANSWER: **orchestration** [or **instrumentation**; or word forms, such as **orchestrating**]
16. Los Horcones in Mexico is a commune based on the cultural engineering ideas this dude proposed in his utopian novel *Walden Two*. For 10 points each:
[10] Name this behavioral psychologist whose namesake box is an operant conditioning chamber based on the work of Edward Thorndike.
ANSWER: B.F. **Skinner** [or Burrhus Frederic **Skinner**]
[10] Skinner waded into the field of linguistics with this work, which analyzes utterances as one of six basic operants, likethe "echoic" and the "tact". Noam Chomsky panned this book in an influential 1959 review.
ANSWER: **Verbal Behavior**
[10] In Skinner's behavioral linguistics, this term refers to a verbal behavior that is reinforced by what the speaker wants from the listener, such as saying "please, pass the salt", so that the listener passes you the salt.
ANSWER: **mand** relation

17. This man and his brother were suckled by a she-wolf as children. For 10 points each:
[10] Name this man who killed his brother Remus and gave his name to city founded in the plain of Latium.
ANSWER: **Romulus**
[10] Romulus and Remus disputed the right to choose the location of Rome based on who saw more of these animals first. Romulus saw twelve of them, but Remus saw six earlier.
ANSWER: **vultures** [or obvious equivalents; prompt on less specific answers, such as “birds” or “Aves”]
[10] In Ovid’s *Fasti*, this man – and not Romulus – kills Remus with a shovel after Remus insultingly jumps over Romulus’ walls, for whose construction this man served as foreman.
ANSWER: **Celer**
18. The Royalist Army in this battle was commanded by Melchor Aymerich, and it took place on the slopes of a stratovolcano. For 10 points each:
[10] Name this battle in which Royalist forces were routed, freeing Quito and other regions of modern Ecuador from Spanish rule.
ANSWER: Battle of **Pichincha**
[10] The South American rebel forces at Pichincha were commanded by this man. He was a friend of Simon de Bolivar, who defeated the forces of the Jose de la Serna at the Battle of Ayacucho.
ANSWER: Antonio Jose de **Sucre**
[10] Simon de Bolivar was the first President of this polity, which essentially corresponded to the Viceroyalty of New Granada under Spanish rule. Venezuela, Ecuador, and a namesake country were carved from this polity.
ANSWER: **Gran Colombia** [do NOT accept “Colombia”]
19. Systems with Poincaré recurrence are day one shit compared to those with this property, so said recurrence is usually introduced and proven right before it in textbooks. For 10 points each:
[10] Name this term applied to dynamical systems in which one can replace time averages of a function over some period T, in the limit of T going to infinity, with a phase space average.
ANSWER: **ergodicity**
[10] Way down the subset hierarchy of ergodic dynamical systems are “shifts” named for this Swissman that are isomorphic if they have the same entropy, according to an “extremely deep” theorem of Donald Ornstein. This guy’s namesake process is a sequence of trials that only have two outcomes, like flipping a coin.
ANSWER: Jacob **Bernoulli**
[10] The Bernoulli process can be used to model a very simple random walk. Einstein used a random walk to model this random motion of particles in a fluid, which was first observed in suspended pollen grains.
ANSWER: **Brownian** motion [or **pedesis**]
20. Twentieth-century English novelists were fond of writing travel memoirs during their journeys abroad. For 10 points each:
[10] This author chronicled some of his travels with his wife Frieda in the collections *Twilight in Italy* and *Sea and Sardinia*. He attracted controversy for the sexual explicitness of his novel *Lady Chatterley’s Lover*.
ANSWER: D.H. **Lawrence** [or David Herbert **Lawrence**]
[10] This author described his three years living in Cyprus in the memoir *Bitter Lemons*. His time living in Egypt inspired his *Alexandria Quartet*.
ANSWER: Lawrence **Durrell** [or Lawrence George **Durrell**]
[10] This book by Rebecca West is an account of the history of Yugoslavia, and her own six-week journey through the country. Its publication coincided with the country’s invasion by the Nazis.
ANSWER: **Black Lamb and Grey Falcon: A Journey Through Yugoslavia**