

Bulldog High School Academic Tournament 2020 (XXIX): scary vibes

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Packet 9 Tossups

1. **The members of one genus in this clade, *Ephedra*, produce a similarly-named substance which is used in traditional Chinese medicine but is illegal in dietary supplements in the U.S.. Extinct taxa of this clade include pteridosperms, or seed-producing trees with fern-like morphology. This clade contains a genus with only one remaining extant species, (*) *Biloba*, which is considered a living fossil and known for its fan-shaped leaves. Ginkgos, cycads and conifers fall under this group of plants which have needle-like leaves and produce “naked seeds.”** For 10 points, name these kinds of non-flowering plants which are contrasted with angiosperms.

ANSWER: **gymnosperms** <HK>

2. **The last Mughal Emperor, Bahadur Shah II, was exiled to this country after his defeat in the Sepoy Mutiny. The Konbaung family led this country’s final ruling dynasty. In this country, the Pyu city-states were overtaken by the Pagan Kingdom. Students in this country organized the 8888 Uprising against the dictator Ne Win. This country lost control of the (*) Irrawaddy Delta and Mandalay after its third war against Britain. This country’s State Counsellor, Aung San Suu Kyi, has largely ignored the persecution of its Rohingya Muslims.** For 10 points, name this Southeast Asian country that was formerly called Burma.

ANSWER: **Myanmar** [accept “Burma” before read] <VS>

3. **This architect designed a controversial structure in the shape of a stark white box with square windows, the L’Esprit Nouveau Pavillon, for an international exposition in Paris. This architect designed an office complex featuring the 39-story Secretariat Building with Oskar Niemeyer; that complex is the U.N. Headquarters. This architect, who used the (*) golden ratio to develop his Modulor system, employed reinforced concrete pilotis in a modernist house in Poissy, which exemplified his theory of the “five points of architecture.”** For 10 points, name this pioneer of the International Style, a 20th-century Swiss architect who designed the Villa Savoye.

ANSWER: Le **Corbusier** [accept Charles-Edouard **Jeanneret**] <SL>

4. **To prove that idols were inanimate, this man chopped to pieces all the idols in a temple except the largest, on which he hung his axe. As a result, Nimrod ordered this man to be thrown into a fire, from which he escaped unscathed. This man’s wife ran seven times between the hills of Marwa and Safa in an attempt to find water. This husband of (*) Hajar built the Kaaba. The holiday of Eid al-Adha commemorates a decision made by this man, who is the namesake of a group of monotheistic religions that includes Judaism and Christianity.** For 10 points, name this man who was ordered to sacrifice his son, a boy identified by Muslims as Isma’il and by Christians as Isaac.

ANSWER: **Ibrahim** [or **Abraham**] <HK>

5. The death of the “Red Fox” in one work by this author was inspired by the real-life Appin murder. In that novel by this author, the protagonist is taken aboard the *Covenant* on the orders of his uncle Ebenezer. In another work by this author, lawyer Gabriel John Utterson believes that his friend is being blackmailed by a mysterious criminal, only to discover that his friend and the criminal are (*) the same person. In a novel by this author, Jim Hawkins hides in an apple barrel and overhears a mutiny plot led by the ship’s cook, Long John Silver. *Kidnapped* and *Dr. Jekyll and Mr. Hyde* were written by—for 10 points—what author of *Treasure Island*?

ANSWER: Robert Louis Stevenson <BCE>

6. This man often worked on the grounds of Château Noir, from which he painted his most famous subject in his characteristic palette of blue, green, and ochre. This painter of *Pyramid of Skulls* included himself next to a red table watching a black servant uncover a nude woman in *A (*) Modern Olympia*. This artist, who often depicted Jas de Bouffan, misaligned the edges of a table on either side of a cloth in *Still Life with Apples*. He arranged nude figures and trees to construct a large triangular shape in his *The Bathers*. For 10 points, name this Post-Impressionist painter who drew on his native Aix-en-Provence to create paintings of Mont Sainte-Victoire.

ANSWER: Paul Cézanne <JW>

7. This show’s antagonistic organization uses the “1-877-Kars-4-Kids” jingle as its official song. In one episode of this show, a character nearly has a panic attack after seeing the “Time-Knife” in the IHOP. The first episode of this show begins with the protagonist waking up on a couch and seeing the words (*) “Welcome! Everything is fine!” Characters in this show include Jason Mendoza, who pretends to be a silent monk, and Chidi, a professor of ethics and moral philosophy. Kristen Bell stars as Eleanor Shellstrop in—for 10 points—what NBC sitcom about a fictionalized version of heaven?

ANSWER: *The Good Place* <BY>

8. This man advocated for a “logical-relationist” theory in his 1921 *Treatise on Probability*. This man argued that the long-term economy was driven by irrational human drives he termed “animal spirits.” Hicks and Hansen created and expanded a model based on this man’s macroeconomic theory, the (*) IS-LM model. He is also known for his *Tract on Monetary Reform*, where he declared “In the long run, we are all dead.” His most famous work advocates for countercyclical government spending and deficits. For 10 points, name this economist who wrote *The General Theory of Employment, Interest, and Money*.

ANSWER: John Maynard Keynes <BY>

9. One character in this novel causes trouble in heaven by abandoning his position as “Keeper of Horses.” Another character in this novel wears a necklace made of skulls and is condemned to live in a river and terrorize passersby after accidentally breaking a crystal goblet. Weapons in this novel include a (*) nine-toothed iron rake and a staff that can change size; the latter is wielded by a shape-shifting character whose main form gives the name of Arthur Waley’s translation of this novel, *Monkey*. For 10 points, name this classic Chinese novel in which Sandy, Pigsy, and the monkey king Sun Wukong accompany Tripitaka on a pilgrimage to India.

ANSWER: Journey to the West [accept Xi You Ji; accept Monkey until mention] <SL>

10. A president of this country apparently approved the kidnapping of a journalist in the “Cassette Scandal.” In 2019, this country’s president called a snap election during his inauguration ceremony; that president of this country is an ex-comedian. A war is being fought in this country’s Donbass region. This country protested a corrupt 2004 election with the (*) Orange Revolution. Collectivization of agriculture caused this country’s Holodomor famine, in which Joseph Stalin was likely complicit. A 1986 nuclear accident occurred at Chernobyl in this country. Russia annexed Crimea from—for 10 points—what Eastern European country?

ANSWER: Ukraine [or Ukrayina] <MK>

11. **The Perito Moreno Glacier, located in this country, is one of the only glaciers in the world that is currently expanding instead of shrinking. Rawson is the capital of this country's Chubut province, which is notable for its large population of Welsh speakers. This country's city of Rosario is on the Paraná River, which forms part of its natural boundary with (*) Paraguay. This country's Mendoza Province contains the tallest mountain in the western hemisphere, Aconcagua. Uruguay, Brazil, and this country all contain low-lying grasslands known as the Pampas. For 10 points, Buenos Aires is the capital of which South American country?**
ANSWER: **Argentina** [or **Argentine** Republic] <JC>

12. **The denominator of the probability mass function for the Poisson distribution is equal to this function of the number of occurrences. For large values, the natural log of this function of n is roughly equal to $n \ln n - n$ [n times the natural log of n, minus n], according to an approximation named for Stirling. The sum of this function's reciprocal over the natural numbers converges to (*) Euler's constant. This function is extended to complex numbers by the gamma function. The number of ways to order n distinct objects is equal to this function of n . For 10 points, name this function whose n th value is equal to the product of all natural numbers up to n , which is denoted by an exclamation point.**
ANSWER: **factorial** <BY>

13. **In this country duels between sound systems led producers like Lee "Scratch" Perry and King Tubby to add reverb and other effects, in tracks that have often been called the first remixes. In several genres from this country, the rhythm guitar plays staccato chords on every eighth-note offbeat. The early development of hip-hop is often linked to "toasting" by deejays from this country. (*) Dub music originated in this country, whose more recent popular styles include dancehall. In this country, "rude boys" developed the genre of rocksteady from the earlier style of ska. For 10 points, name this Caribbean nation home to reggae singers like Bob Marley.**
ANSWER: **Jamaica** <JR>

14. **When prefixed with "quasi-," this word describes slow thermodynamic processes in which a system is always in equilibrium. An astronomical object with enough mass to form itself into a round ball has achieved a different equilibrium described by the prefix "hydro-" and this word. The (*) triboelectric effect describes how another phenomenon known by this word arises from physical contact. As a suffix, this word describes a branch of physics concerned with electric charges at rest, in contrast to electrodynamics. Clingy clothes from the dryer and a shock when touching a door knob are potential effects of—for 10 points—what type of stationary "electricity"?**
ANSWER: **static** [accept **quasistatic**; accept **hydrostatic** equilibrium; accept **static** electricity; accept **electrostatics**] <SE>

15. **In one work, a character with this profession delivers a monologue that begins by listing such animals as "lions, eagles, quails, [and] horned stags." In one novel, after a character with this profession commits suicide, her brother tracks down a man that she had called "Prince Charming." A woman with this profession is given the title animal by Konstantin Treplev in Anton Chekhov's *The Seagull*; in the same play, (*) Irina Arkadina is a former member of this profession. A woman with this profession is the protagonist's primary love interest in Oscar Wilde's *The Picture of Dorian Gray*. For 10 points, identify this profession held by Sybil Vane, who performs in *Romeo and Juliet*.**
ANSWER: **actor** [accept **actress**] <SL>

16. In the *Kalevala*, the “old and wicked witch” Lovatar has this condition. In the *Mahabharata*, Dhritarashtra has this condition, which his wife Gandhari simulates in solidarity with him. In Greek mythology, the king of Chios, Oenopion, inflicted this condition on a hero after he raped (*) Merope. Athena granted the gift of prophecy to a man as an apology for inflicting this condition upon him when he saw her bathing. In a play by Sophocles, a character inflicts this condition upon himself with a pin after learning he has married his mother, Jocasta. For 10 points, name this shared characteristic of Tiresias and Oedipus.

ANSWER: blindness [accept equivalents, including descriptive elements like not being able to see] <AY>

17. William Sancroft was one of the “nonjuring” members of this institution. The death of Hugh Latimer, a member of this institution, is recalled in a book by John Foxe. William Laud held the highest position in this institution, which is governed by the Thirty-Nine Articles. Pope Paul III (*) excommunicated the founder of this institution. “Bloody Mary” killed many members of this institution, which Puritans sought to cleanse. This institution follows the Book of Common Prayer and commissioned the King James Bible. For 10 points, name this church that Henry VIII formed upon breaking with Rome.

ANSWER: Church of England [or Anglican Church] <MK>

18. A scene from this play, often cut from performances, shows Mrs. Johnson joking that “this time next month” a family will have been bombed out of their new home. A character in this play nicknames a woman “Alaiyo.” This play’s protagonist and his dimwitted friend Bobo are ripped off by their acquaintance Willy Harris. In this play’s last act, Karl (*) Lindner’s offer to buy the central family’s house is rejected. A grandmother in this play, affectionately called “Mama,” gives her son most of a life insurance payout to jump-start a liquor store. A line from a Langston Hughes poem titles—for 10 points—what play about the Younger family by Lorraine Hansberry?

ANSWER: A Raisin in the Sun <MGS>

19. An oxyanion hole stabilizes a tetrahedral one of these during the action of chymotrypsin. The Eyring–Polanyi equation is derived from a theory named for these entities. First-order saddle points on a potential energy surface represent these species. These entities are more similar to the species whose free energy is closer to theirs by the (*) Hammond postulate. Catalysts reduce the energy necessary to reach these entities, which are denoted by double daggers. These entities occupy the local maxima on reaction coordinate diagrams. For 10 points, name these intermediate species which form at the point of a reaction’s highest energy.

ANSWER: transition states [prompt on activated complex] <HK>

20. An attempt to impeach this man led to a brawl within his state legislature on “Bloody Monday.” This man imagined his potential presidency, including his cabinet nominees, in the book *My First Days in the White House*. This man attempted to unseat Judge Benjamin Pavy through gerrymandering, leading Pavy’s son-in-law, Dr. (*) Carl Weiss, to assassinate him. This man planned to redistribute wealth by limiting annual income to \$1 million in a scheme that would make “every man a king,” the “Share Our Wealth” program. For 10 points, name this Louisiana politician who was nicknamed “the Kingfish.”

ANSWER: Huey Pierce Long Jr. <JS>

Tiebreaker

A tycoon in this industry established the world's oldest, currently-used social housing complex; that complex is in Augsburg. The Pazzi conspiracy targeted a leading family in this industry, which was also the primary focus of the family of "Jakob the Rich." Involvement in copper mines and in this industry gave the (*) Fugger [foog-er] family its wealth. In Florence, this industry was dominated by the family of Pope Clement VII, the Medicis. In medieval Europe, so-called "Court Jews" led this industry due to Christian prohibitions on usury. In the 19th century, the Rothschild family controlled—for 10 points—what industry in which loans are obtained?
ANSWER: **banking** [or **finance**; or money-**lending** before "loans" is read] <MK>

Bonuses

1. In addition to directing and starring in his films, this filmmaker also composed the majority of the musical scores for his movies. For 10 points each:

[10] Name this filmmaker and comic actor active during the silent film era. Among this man's most famous films are *City Lights* and the political satire *The Great Dictator*.

ANSWER: Charlie **Chaplin**

[10] This Chaplin persona donned a small bowler hat, wore baggy pants, and carried a cane. This character's voice was first heard in a gibberish song in *Modern Times*, and he appeared as the Lone Prospector in *The Gold Rush*.

ANSWER: The **Tramp** [accept The Little **Tramp**; prompt on the **Factory Worker**]

[10] There is debate over the relationship between the Tramp and this protagonist of *The Great Dictator*. Chaplin played both this unnamed Jewish character, who is known by his profession, and the dictator Adenoid Hynkel.

ANSWER: The **Barber** <JW>

2. On his deathbed, unable to speak, this author passed his wife a note reading "LSD, 100 µg [micrograms], intramuscular." She obliged. For 10 points each:

[10] Name this author who wrote about mescaline in *The Doors of Perception*. This author of *Chrome Yellow* was presumably inspired by his own experiences to create the drug *soma* in another novel.

ANSWER: Aldous **Huxley**

[10] This German thinker documented his drug experiences in "On Hashish." He is more famous for his works of aesthetic theory, including "The Work of Art in the Age of Mechanical Reproduction."

ANSWER: Walter **Benjamin**

[10] This French poet described his own experiences with hashish, as well as opium, in *Artificial Paradises*. This Symbolist poet also called his reader a "hypocrite" in the foreword to *The Flowers of Evil*.

ANSWER: Charles **Baudelaire** <JW>

3. Name some cities connected to the Twelve Apostles, for 10 points each:

[10] This city in modern-day Turkey was visited by Paul several times during his journeys. This city, where the term "Christian" was first used, lies near what is now the Syrian border. Either the ancient or modern name is fine.

ANSWER: **Antioch** [or **Antakya**]

[10] According to tradition, Peter was the first Bishop of this city. He was also martyred in this city, crucified by its Emperor Nero.

ANSWER: **Rome**

[10] Thomas, meanwhile, went somewhat further afield, traveling to the Chola Empire in modern-day India. He apparently died in this modern-day city, the capital of Tamil Nadu, which was formerly known as Madras.

ANSWER: **Chennai** <JW>

4. Answer some questions about notable "salt roads" across world history, for 10 points each:

[10] The European "Old Salt Route" linked Lüneburg and this city in modern-day Germany. This city was called the "Queen of the Hansa" due to its prominence in the Hanseatic League.

ANSWER: **Lübeck**

[10] This empire struggled with Morocco's Saadi dynasty to control an important African salt road originating at Taghaza. Ultimately, Moroccan forces defeated this empire's Askia dynasty at the Battle of Tondibi.

ANSWER: **Songhai** Empire

[10] In the 20th century, a major Himalayan salt road connected this region and Nepal. This region's spiritual leader is the Dalai Lama.

ANSWER: **Tibet** <MK>

5. The man who discovered these particles refused to call them by their currently-accepted name, calling them “corpuscles” even in his Nobel Acceptance Speech. For 10 points each:

[10] Name these particles. Their discoverer, J.J. Thomson, names an uncommonly-used unit for mass-to-charge ratio.

ANSWER: **electrons** [prompt on cathode rays]

[10] Although Thomson names the unit for mass-to-charge ratio, this University of Chicago professor first determined the electron’s mass-to-charge ratio in his namesake oil drop experiment.

ANSWER: Robert Andrews **Millikan**

[10] This experiment fired a beam of electrons at a nickel crystal and observed a diffraction pattern, confirming the de Broglie [duh-BROY] hypothesis regarding matter’s wave-like properties.

ANSWER: **Davisson–Germer** experiment <MP/HK>

6. In one work, Bhishma tells Yudhishtira to relieve himself of his sorrow by reciting the “thousand names” of this figure. For 10 points each:

[10] Name this deity. In one form, this deity states “I am become death, the destroyer of worlds” while serving as a charioteer.

ANSWER: **Vishnu** [prompt on Krishna]

[10] Vishnu appears as a charioteer in the *Bhagavad Gita*, a section of the epic *Mahabharata*. The *Mahabharata* elsewhere relates the story of this king of the birds, who becomes Vishnu’s mount after asking for immortality.

ANSWER: **Garuda**

[10] Garuda’s brother, Aruna, served as the charioteer of Surya, the deity of this celestial object. In Incan mythology, Inti, the god of this object, was married to Mama Quilla, the goddess of the moon.

ANSWER: **sun** <AY>

7. In the case *Lassiter v. Northampton County Board of Elections*, the Supreme Court ruled that tests of this skill were constitutional when they were applied equally to all voters. For 10 points each:

[10] Name this skill that consists of the ability to read and write. Tests of this skill were commonly used to disenfranchise black voters in the South.

ANSWER: **literacy**

[10] To ensure that literacy tests would not discourage uneducated whites from voting, Southern states enacted these provisions, which gave test exemptions to those whose ancestors had previously held the right to vote.

ANSWERS: **grandfather** clauses [accept **grandfathering**]

[10] Literacy tests were specifically outlawed in the Voting Rights Act of 1965, a bill that formed part of this set of social reforms. This set of reforms also established Medicaid and Medicare.

ANSWER: **Great Society** <MGS>

8. This poem concludes by stating that “each slow dusk” shall be “a drawing-down of blinds” for the title figures. For 10 points each:

[10] Name this anti-war poem that begins by asking “what passing bells for those who die as cattle?”—a question which it answers “only the monstrous anger of the guns.”

ANSWER: **“Anthem for Doomed Youth”**

[10] “Anthem for Doomed Youth” goes on to ask which of these objects “may be held to speed them all.” In her poem “First Fig,” Edna St. Vincent Millay wrote about one of these objects that “burns at both ends.”

ANSWER: **candle**

[10] “Anthem for Doomed Youth” was written to protest World War I by this poet, who wrote about an “old Lie” told to “children ardent for some desperate glory” in “Dulce et Decorum Est.”

ANSWER: Wilfred **Owen** <JW>

9. These events often present as a severe, throbbing pain in one side of the head. For 10 points each:

[10] Name these intense and sometimes debilitating headaches that can be preceded by an “aura” involving visual disturbances. They often involve sensitivity to light and they can be treated with valproic acid or beta-blockers.

ANSWER: **migraines**

[10] Valproic acid is more commonly prescribed to manage this *condition*. This condition causes phenomena described as tonic-clonic, atonic, myoclonic, or absence, often in response to sleep deprivation or flashing lights.

ANSWER: **epilepsy** [accept **epileptic** seizures; prompt on seizures or seizure disorders]

[10] Physicians rarely suggest surgically severing *this* tract of nerves connecting the hemispheres of the brain to control severe epilepsy. That procedure can result in split-brain syndrome, as the halves are unable to communicate.

ANSWER: **corpus callosum** <HK>

10. N. K. Jemisin’s *Broken Earth* trilogy made her the first person to win three consecutive Hugo Awards, which are the highest honors awarded to authors in either of these two genres. For 10 points each:

[10] Name *either* of these two related genres, which encompass *The Lord of the Rings* and the *Foundation* trilogies.

ANSWER: **fantasy** OR **science fiction**

[10] Another Hugo winner, Ursula K. Le Guin, wrote a novel entitled *The Left Hand of Darkness*, whose protagonist travels to a planet where individuals lack this attribute. On Earth, this attribute has long been constructed as a binary.

ANSWER: **sex** [or **gender**]

[10] The 2019 Hugo Award for Best Related Work was awarded to this free source containing over 4.7 million fanworks. This website originated in 2009 as a way to keep fanworks free in response to attempts to commodify fanfiction.

ANSWER: **Archive of Our Own** [or **AO3**] <HK>

11. Romantic composers loved the key of E minor. Answer the following about pieces they wrote in it, for 10 points each:

[10] This E-minor symphony’s first movement opens with the violins playing a chain of falling thirds in a repeating “quarter, dotted half” rhythm. It was the last symphony by the composer of the *Academic Festival Overture*.

ANSWER: **Brahms**’s Symphony No. **4** [accept any answer indicating Johannes **Brahms**’s **fourth** symphony; prompt on partial answer]

[10] Unusually, the soloist of this other E-minor work enters almost immediately. Equally unusually, its first movement’s cadenza was written out by the composer, and its three movements are played without pause.

ANSWER: Felix **Mendelssohn**’s **Violin Concerto** [prompt on partial answer]

[10] Antonín Dvořák’s [dúh-VOR-zhahk] E-minor Ninth Symphony was composed in *this* country, and is thus nicknamed “From the New World.” This country’s native son William Grant Still drew on the blues and spirituals in his first symphony.

ANSWER: **United States** of **America** [accept either underlined part; or **U.S.A**] <JW>

12. This essay discusses various men's repeated attempts to educate the female author about her own scholarship. For 10 points each:

[10] Name this 2008 essay by Rebecca Solnit which is credited with coining the term "mansplaining," despite not actually using that word verbatim. It also titles the essay collection in which it appears.

ANSWER: "**Men Explain Things to Me**"

[10] Rebecca Solnit's writing represents the "third wave" of this movement which advocates for equality of the sexes, whose other famous proponents include Simone de Beauvoir and Betty Friedan.

ANSWER: **feminism**

[10] This term, coined by Kimberlé Crenshaw, has become one of the guideposts for third-wave feminism. This term describes the way a person's identities, including gender, sexual orientation, and race, interact to affect them.

ANSWER: **intersectionality** [accept word forms like **intersectional** feminism] <HK>

13. This man employed Copreus as his herald after purifying him of murder. For 10 points each:

[10] Name this king of Mycenae and Tiryns. After Heracles was driven mad and killed his wife and children, the Delphic oracle decreed that he should serve this man, performing the twelve labors that he demanded.

ANSWER: **Eurystheus**

[10] For his first labor, Eurystheus tasked Heracles with killing this creature, which was invulnerable to weapons. Heracles therefore strangled this creature, skinned it, and wore its pelt as a cloak.

ANSWER: **Nemean lion** [or the **lion of Nemea**]

[10] For his eleventh labor, Eurystheus sent Heracles to fetch the Apples of the Hesperides. Heracles ultimately obtained the apples by tricking this Titan, who held the sky on his shoulders, into fetching them for him.

ANSWER: **Atlas** <MK>

14. Answer the following about time-travel literature, for 10 points each:

[10] H.G. Wells' genre-defining novel *The Time Machine* was published six years *after* this man's novel *A Connecticut Yankee in King Arthur's Court*, considered by many to be the first true time travel work.

ANSWER: Mark **Twain** [accept Samuel **Clemens**]

[10] This science fiction author experimented with time travel in his short story "A Sound of Thunder." His stories, like those in *The Illustrated Man*, often depict the theme of technology outpacing morality.

ANSWER: Ray **Bradbury**

[10] The protagonist of this novel time travels in moments of crisis and encounters the Tralfamadorians, who can see all past and future events. This novel by Kurt Vonnegut centers on Billy Pilgrim.

ANSWER: **Slaughterhouse-Five** <MGS>

15. This ruler placed her lover Stanislaw Poniatowski [STAH-nee-swoff poh-nyah-TOV-skee] on the Polish throne. For 10 points each:

[10] Name this "enlightened despot," a Russian empress who came to power after murdering her husband, Peter III, with the help of Grigory Orlov.

ANSWER: **Catherine the Great** [or **Catherine II**; prompt on "Catherine"]

[10] This Cossack leader pretended to be the murdered Peter III while leading a revolt against Catherine. This man briefly took Kazan but was executed soon after losing the Battle of Tsaritsyn.

ANSWER: Yemelyan **Pugachev**

[10] This man supposedly set up fake villages along the Dnieper River to impress Catherine as she toured Crimea. Because they were served maggoty meat, soldiers mutinied on a ship named for this man in 1905, firing on Odessa.

ANSWER: Grigory **Potemkin** <MK>

16. Argentinian artist Nicolás Uriburu used a NASA-developed, ecologically-harmless dye to turn Venice's Grand Canal this color. For 10 points each:

[10] Name this color, which Uriburu also used to dye the Seine and East Rivers. It is associated with environmentalism and is thus appropriate for Uriburu as an ecological artist.

ANSWER: **green**

[10] This artist created a *Broken Circle* earthwork to accompany a *Spiral Hill*, echoing an earthwork of mud, salt, and basalt he designed at the Great Salt Lake, *Spiral Jetty*.

ANSWER: Robert **Smithson**

[10] Smithson and this environmental artist couple have been criticized for damaging the landscape with their stunts. Name *both* of these artists, who wrapped the Reichstag and islands in Biscayne Bay with synthetic fabric.

ANSWER: **Christo** Vladimirov Javacheff AND **Jeanne-Claude** Denate de Guillebon <AY>

17. Coiled circuit elements that produce a voltage drop in response to a changing electric current are based on this law. For 10 points each:

[10] Name this law of electromagnetism, which predicts that current will flow around a circuit when the magnetic field running through the circuit changes.

ANSWER: **Faraday's** law of induction

[10] Faraday's law states that the negative time derivative of magnetic flux equals this electrical impulse produced by induction. It is not a voltage, strictly speaking, but it is measured in volts and denoted with a script letter *E*.

ANSWER: **electromotive force** [or **EMF**]

[10] The induced current is equal to the EMF divided by the internal resistance of the circuit according to this law whose usual form simply states "*V* equals *I* times *R*."

ANSWER: **Ohm's** law <SE>

18. Answer some questions about historical events that appear in the works of the Roman historian Tacitus, for 10 points each:

[10] According to Tacitus, this ruler of the Iceni revolted against Roman rule after the death of Prasutagus. Suetonius Paulinus ultimately defeated this ruler near Paulerspury.

ANSWER: **Boudicca** [or **Boudica**; accept **Boadicea**; accept **Boudicea**; accept **Buddug**]

[10] In the *Annals*, Tacitus describes the rebellion of this ethnic group, whose defeat caused the destruction of the Second Temple in Jerusalem.

ANSWER: **Jews** [accept **Hebrews**; accept **Judaeans**]

[10] Tacitus begins his *Histories* in 69 A.D., in which this number of emperors ruled. Diocletian established a system of government in which this number of emperors ruled simultaneously.

ANSWER: **four** [accept Year of the **Four** Emperors] <MK>

19. Answer some questions about card games that are popular at parties, for 10 points each:

[10] This politically incorrect card game has players complete statements on black question cards with white answer cards. It has been compared to Apples to Apples for mature audiences.

ANSWER: **Cards Against Humanity**

[10] This other card game holds the record for the most backers in Kickstarter history. The goal of this game is to avoid drawing its namesake card until only 1 player remains.

ANSWER: **Exploding Kittens**

[10] The objective of this other party game is to describe the word on your card to your teammates without using any of the other words on the card.

ANSWER: **Taboo** <BY>

20. The theory of these objects was first studied by Leonhard Euler in a 1736 paper that proved that the “Seven Bridges of Königsberg” problem was unsolvable. For 10 points each:

[10] Name these mathematical objects, which consist of any number of vertices or nodes connected by edges. These objects come in “directed” and “undirected” varieties.

ANSWER: **graphs**

[10] A graph that can be written on a flat page without any crossing lines is designated by this term. For these graphs, the term “face” denotes a region bounded by edges; all polygons can be thought of as this kind of graph.

ANSWER: **planar** graph

[10] Euler proved that, for a planar graph, [read slowly] the number of vertices minus the number of edges plus the number of faces equals 2. If a planar graph has 4 vertices and 5 edges, how many faces does it have? You have 10 seconds.

ANSWER: **3** <JW>

Tiebreaker

Lord Tennyson wrote the poem “Tears, Idle Tears” while visiting this place. For 10 points each:

[10] Name this place on the River Wye, which causes a poet to feel “a sense sublime / of something far more deeply interfused,” as he revisits this place after “five summers, with the length / of five long winters.”

ANSWER: **Tintern Abbey**

[10] This Romantic poet included “Lines Written a Few Miles above Tintern Abbey” in the collection *Lyrical Ballads*, which he co-authored with Samuel Taylor Coleridge. He also wrote “I Wandered Lonely as a Cloud.”

ANSWER: William **Wordsworth**

[10] Wordsworth also included this shorter poem in *Lyrical Ballads*, in which he exclaims “Great God! I’d rather be / a pagan, suckled in a creed outworn” and hopes to “have sight of Proteus rising from the sea.”

ANSWER: **“The World Is Too Much With Us”** <JW>