Bulldog High School Academic Tournament 2017 (XXVI): Revenge of the BH-SAT
Written by Yale Student Academic Competitions (Stephen Eltinge, Adam Fine, Isaac Kirk-Davidoff, Moses Kitakule, Laurence Li, Jacob Reed, Mark Torres, James Wedgwood, Cathy Xue, and Bo You), Jason Golfinos, and Clare Keenan
Edited by Jacob Reed

Packet 14 Tossups

1. **A property of these things titles a 2011 book about Poggio Bracciolini** ["PAW-jyoh brah-chyoh-LEE-nee"] **and "How the World Became Modern" by Shakespeare scholar Stephen Greenblatt. These things were theorized to refute Parmenides' assertion that all change is an illusion. Free will arises because these things can randomly "swerve," according to** *De rerum natura* **by (*)** Lucretius. These things were proposed by Leucippus and discussed by Democritus. These things were later introduced in a scientific context by John Dalton. For 10 points, name these tiny particles named for being indivisible, although they turned out to be made of neutrons, protons, and electrons.
ANSWER: **atom**s [or **atomon**; or **atoma**] <JR>

2. **This coauthor of a book on how "Political, Racial, Class, and Religious Lines" are being erased to "Change the Way We Live" formerly ran the creatively-named "The Polling Company." This senior advisor to Newt Gingrich's 2012 presidential bid accused Donald Trump of "bulldozing" over the "little guy" while head of Ted Cruz's PAC Keep the Promise I. After revelations of Paul (*)** Manafort's Ukrainian ties, he was replaced by this frequent target of parodies by Kate McKinnon. This strategist referred to a "Bowling Green" massacre and coined the term "alternative facts." For 10 points, what woman was Donald Trump's campaign manager?
ANSWER: Kellyanne **Conway** [or Kellyanne Elizabeth **Fitzpatrick**] (The book is called *What Women Really Want*.) <MK>

3. **These entities account for the "***L* equals one" contribution to the electric potential, which is described by first-order spherical harmonics. A time-varying one of these entities produces the radiation emitted from "rabbit ears" and other simple antennas. These entities, which experience a torque when placed in an electric field, produce an electric potential that falls off with the (*)** square of distance and a field that falls off with the cube of distance. The strength of one of these entities, which is measured in debyes and calculated as "*q* times *d*," is known as its "moment." For 10 points, name these entities that consist of separated positive and negative charges.
ANSWER: electric **dipole**s [accept electric **dipole** moment] <SE>

4. **A novel by this author features communal singing of songs like "This May Be My Last Time," "Standing in the Need of Prayer," and "Somebody Needs You, Lord." In that novel by this author, after Roy is stabbed, he's beaten with a belt for telling his father Gabriel not to slap his mother. A "Letter to my Nephew" by this author inspired** *Between the World and Me* **by Ta-Nehisi Coates. One of his protagonists speaks in tongues on the "Threshing Floor" of the Temple of Fire Baptized Church on his fourteenth birthday, and is named John (*)** Grimes. For 10 points, name this black American author of *The Fire Next Time* and *Go Tell it On the Mountain*.
ANSWER: James (Arthur) **Baldwin** <JR>

5. **This material was decorated with cords of rope in a Chalcolithic culture of Northern Europe, as well as in Jomon-period Japan. This material is manipulated in "jiggering" and "jollying." This material is mixed with water to make a slip, which was often used to decorate it. This material was first used near the beginning of the Neolithic, a bit before the invention of (*)** agriculture. Archaeologists study bits of this material called "sherds." To replace coiling, the wheel was first invented to manipulate this substance via "throwing." For 10 points, name this material that's often glazed before being fired in kilns.
ANSWER: **clay** [or **ceramic**; accept **pottery**] <JR>

6. **This deity is thought to be connected with the name *si-to-po-ti-ni-ja*, found in an early Linear B inscription. Later epithets for this deity include "Aganippe" and "Thesmophoros." This goddess tried to repay Celeus for his kindness by making his son Demophon immortal, but (*)** Demophon's mother walked in on this deity laying him on the fireplace. This goddess gained a student in Triptolemus while staying in Eleusis, and she absent-mindedly ate Pelops' shoulder while she was distracted by her search for a missing daughter. For 10 points, name this harvest goddess whose daughter Persephone was kidnapped by Hades.
ANSWER: **Demeter** [accept **Ceres**] <JW>

7. **A sculpture in this city depicts a woman with a horse-like elongated face, whose neck and hair are connected by a series of rods. This city is home to Joan Miró's sculpture *The Sun, the Moon and One Star*, as well as Alexander Calder's stabile *Flamingo* and a namesake namesake steel sculpture by Picasso. A park in this city houses a (*)** bean-shaped, highly polished stainless steel sculpture called *Cloud Gate* by Anish Kapoor. A museum in this city owns Grant Wood's *American Gothic*, Edward Hopper's *Nighthawks*, and Georges Seurat's *La Grande Jatte*. For 10 points, name this midwestern city home to the Art Institute.
ANSWER: **Chicago**, Illinois <JR>

8. **A poet in this language described spending seventeen months in prison and wrote "They led you away before sunrise" in a ten-poem cycle that includes the poem "Instead of a Preface." That 1943 work, "Requiem" is part of this language's Silver Age. In a poem in this language, the title character sermonizes that he would get bored of marriage to a girl who wrote him a love letter. In that poem in this language, which uses sonnets alternating (*)** masculine and feminine rhymes, the title "superfluous man" dances with the wrong girl at a name-day celebration ball, and dies in a duel with Lensky. For 10 points, name this language of Anna Akhmatova and Alexander Pushkin.
ANSWER: **Russian** [or **russki**] (The other poem is Pushkin's *Eugene Onegin*.) <JR>

9. **These entities are operated on by the Gouraud method and similar algorithms. That class of shading algorithms named for these entities are the most widely used 3D shaders. The equation "negative *b* over two-*a*" is used to find one of these entities. For a quadratic equation, completing the square converts the equation to the (*)** form named after one of these entities. For a polyhedron, "two, plus edges, minus faces" equals the number of these entities. The dual of a polyhedron has faces centered at these points on the original polyhedron. For 10 points, name these points where two edges or line segments meet.
ANSWER: **vertex** [accept **vertices**; accept **vertex** shading; accept **vertex** configuration; accept **vertex** form] <AF>

10. **This man was the dedicatee of his colleague Joseph Story's *Commentaries*. Daniel Webster once claimed that this man took in his arguments like a "baby takes in his mother's milk." This man took a literal interpretation of the Contract Clause when siding with (*)** Dartmouth College over the government of New Hampshire. This man argued that a Maryland tax on a federal bank was illegal when ruling in favor of James McCulloch. He established judicial review with his ruling in *Marbury v. Madison* and was succeeded by Roger Taney ["TAW-nee"]. For 10 points, name this Chief Justice of the Supreme Court from 1801 to 1835.
ANSWER: John **Marshall** <JR>

11. **A type of rock known as the "glass" of these creatures is one of the few materials that harms monsters called Others. Viserys is deemed to *not* be one of these creatures after he is drowned in molten gold. Two of these creatures are imprisoned in a pit under the Great Pyramid after a third of them kills a small child. The skulls of nineteen of these creatures, the last of which were apparently no (*)** larger than dogs, are kept in the Red Keep. In another series, one of these creatures is revealed to be female and is rechristened "Norberta." Daenerys Targaryen is known as the "mother" of—for 10 points—what fire-breathing reptiles?
ANSWER: **dragon**s <BY>

12. **One of these characters declares, "Good God! We're out of our depth here" after unsuccessfully diagnosing another character's ailment as "moroseness." These characters parody the Lord's Prayer in lines like "Give us this day our daily mask," and they meet a Player who orders around the boy Alfred. One of these characters screams, "WHO DO YOU THINK YOU ARE?" during a game in which they are only allowed to (*)** ask "Questions." These characters investigate a title character's apparent insanity at the behest of Claudius, but are killed upon arrival because of a forged letter. For 10 points, name these two estranged friends of Hamlet who are "dead" in a play by Tom Stoppard.
ANSWER: **Rosencrantz** AND **Guildenstern** [accept *Rosencrantz and Guildenstern are Dead*] <LL>

13. **The Athenian Exekias is best-known for his decorations of these objects. A Chinese variety of these objects is named for plums, thus the name *meiping*. These were the most iconic objects produced from Longquan** ["long-CHWEN"] **celadon. The Wedgwood firm made several copies of one of these objects named for the Duke of Portland. Large varieties of them include the *pithos* and the *hydria*. An artificial mound in Rome was made from the remains of these objects. In ancient Greece, these objects were painted in (*)** "red-figure" and "black-figure" styles. Types of them include the amphora. For 10 points, name these tall, open vessels that often hold flowers.
ANSWER: **vase**s [accept **amphora**e; prompt on ceramics or pottery] <JR>

14. **This practice was condemned in the *Libri Carolini*, in what is often taken as a forewarning of the Great Schism. It was ended at the Second Council of Nicaea by Irene of Athens. This practice was started as a power grab by Leo the Isaurian. An outbreak of this practice in Netherlands was christened *Beeldenstorm*. This practice was carried out by mobs during the Dissolution of the Monasteries and again by the Puritans. After 1453, the Ottomans carried out this practice using (*)** plaster in the Hagia Sophia. This practice follows from the Second Commandment's injunction against "graven images." For 10 points, name this practice of destroying religious images.
ANSWER: **iconoclasm** [accept word forms like **iconoclast**s] <JR>

15. **If the latent heat is independent of temperature, the Clausius–Clapeyron equation gives *this function* of a ratio of two pressures in terms of two inverse temperatures. This function of product concentration is written linearly with respect to time in the integrated rate law for a first-order reaction. "pH minus pKa" equals *this function* of the ratio of concentrations of an anion and its (*)** conjugate acid according to the Henderson–Hasselbalch equation. This function is applied to the acid dissociation constant to get pKa. Negative *this function* of the concentration of H-plus ions gives the pH of a system. For 10 points, name this function whose inverse function is the exponential function.
ANSWER: **log**arithm [accept natural **log**arithm or **ln**; accept base-10 **log**arithm] <AF>

16. **One of the final parts of this practice commemorates a sermon on the Mount of Mercy. The end of this practice is marked by commemoration of Abraham's attempted sacrifice of Isaac. This practice involves running between two hills to recreate Hagar's search for water. This practice, which is contrasted with (*)** *umrah*, is done while wearing two pure white sheets with no hems or stitches in a state called *ihram*. Francis Burton disguised himself to perform this practice. This practice climaxes with a sevenfold circumambulation called *tawaf*. During this practice, one touches the black stone at the center of the Kaaba. For 10 points, name this pilgrimage to Mecca.
ANSWER: **Hajj** [prompt on pilgrimage to Mecca before that's mentioned] <JR>

17. **In a photograph of an event with this name, the priest Edward Daly waves a bloody handkerchief. David Cameron apologized for that event of this name after the publication of the Saville Report. That event with this name was investigated in the Widgery Tribunal and took place in the Bogside area of Derry. In another event with this name, a crowd singing "God save the Tsar" was led by Father (*)** Gapon to the Winter Palace. That event with this name led to the October Manifesto by Sergei Witte, which created the Duma. For 10 points, give this nickname of days when protesters were shot at by police, including a 1905 massacre in Russia and a 1972 massacre in Northern Ireland.
ANSWER: **Bloody Sunday** [or **Krovavoye voskreseenye**] <MK/JR>

18. **In one of these poems, the title object builds a little cupola after getting "dressed like a warrior," but Maria sticks it in her basket, submerges it in a pot, and "undresses" it scale by scale. Another of these poems declares that "beauty is twice beautiful, and goodness twice good, when it concerns" the title objects, which make "two wool fish" of his feet. Poems of this kind about an artichoke, socks, and other (*)** "Elemental" things were written by Pablo Neruda. The speaker of a poem of this kind has "been half in love with easeful Death," declares "Thou wast not born for death!" and wonders "Do I wake or do I sleep?" For 10 points, Keats wrote what kind of poem "to a Nightingale?"
ANSWER: **ode**s [or **oda**s; accept more specific answers like **_Elemental Odes_**] <JR>

19. **A pianist-composer from this country famously played with so much _rubato_ that dances in three-four sounded almost like they were in four-four. This country hosts a piano competition that brought Maurizio Pollini and Martha Argerich to fame. This country is evoked by a genre of piano pieces with nicknames like "Military" and (*)** "Heroic." Poetry from this country supposedly inspired one of its composers to write four _Ballades_. The mazurka is from this country. An uprising in this country inspired the "Revolutionary" Étude. For 10 points, name this home country of Frédéric Chopin [shoh-PAA"], who evoked it in his polonaises.
ANSWER: **Poland** [or **Polska**] <JR>

20. **This many amino acids are used for catalysis at the active site of enzymes like chymotrypsin. The antioxidant glutathione is made of this many amino acids. DNA has this number of natural conformations. A protein with this many strands contains lots of hydroxyproline, which means Vitamin C is needed to make it. The end of (*)** mRNA denoted "this number-prime" is given a poly-A tail. Collagen is made of this many strands. RNA and DNA share this number of nucleobases, since thymine is swapped out for uracil. ATP has this many phosphate groups. For 10 points, give the number of nucleotides in a codon, which is one _more_ than the number of helices in DNA.
ANSWER: **three** [accept **catalytic triad**; accept **tripeptide**; accept **three-prime** end; accept **triple** helix] <AF>

Tiebreaker
21. **One of these preparations was developed following a study by Bodian and Horstmann. That one of these preparations was later outcompeted by one made by Albert Sabin after contamination at Cutter Laboratories caused five deaths. These preparations are often combined with adjuvants, and they can be either (*)** "inactivated" or "attenuated." Several of them are combined as DPT or DTaP, as well as the MMR one. While working with sick chickens, Louis Pasteur discovered these preparations, and then applied them to anthrax and rabies. Jonas Salk figured out how to prevent polio using—for 10 points—what inoculations that immunize patients against diseases?
ANSWER: **vaccine**s [or **vaccination**s; prompt on inoculations or immunizations] <AF>

Bonuses

1. This process occurs after the Dicer enzyme cleaves the double-stranded form of a certain molecule. For 10 points each:
[10] Name this process that leads to gene "knockdown" via inhibition of target messengers. It was first discovered by introducing transgenes into petunias and noting the resulting change in color.
ANSWER: **RNA interference** [or **RNAi**]
[10] Andrew Fire and Craig Mello won the 2006 Nobel Prize for their work on RNA interference in this model organism, which was the first organism to have its complete genome sequenced.
ANSWER: *C*aenorhabditis *elegans*
[10] *C. elegans* is also the simplest organism known to exhibit this phenomenon, which is divided into non-REM and REM phases in humans. This phenomenon is inhibited in insomnia.
ANSWER: **sleep**ing <AF>

2. Chinese instruments played in this fashion include the *guzheng* and the *guqin* [“goo-CHIN”]. For 10 points each:
[10] Name this way in which zithers like the *koto* are played. This is also how the *shamisen* and *biwa* are played.
ANSWER: **pluck**ing [or **plucked string**; accept **strum**ming; prompt on strings]
[10] The *koto*, *biwa*, and *shamisen* are instruments from this East Asian country, which is home to *Taiko* drumming. Its *Gagaku* orchestras were likely imported from China through Korea.
ANSWER: **Japan** [or **Nihon**; or **Nippon**]
[10] The Japanese *koto* is often tuned to the *in* scale, which has this many notes. The Japanese *yo* scale also has this many notes, as does Indonesian *slendro*.
ANSWER: **five** <JR>

3. This book is narrated by a man named Orhan who says that he is writing *The Museum of Innocence*. For 10 points each:
[10] Name this novel in which the poet Ka investigates the aftermath of a headscarf ban.
ANSWER: *Snow* [or *Kar*]
[10] In a novel by this unrelated author, Shimamura and the geisha Komako take a train from Tokyo into "snow country."
ANSWER: Yasunari **Kawabata** [accept names in either order]
[10] Unsurprisingly, this American poet often wrote about snow, in poems like "Stopping by Woods on a Snowy Evening." He also claimed that taking the path less-travelled by makes all the difference in "The Road Not Taken."
ANSWER: Robert (Lee) **Frost** <JR>

4. After this offensive failed, it was countered by the Hundred Days Offensive, which broke the Hindenburg Line. For 10 points each:
[10] Name this 1918 German offensive that included Operation Michael and Operation Georgette. It was a failed attempt to win the war before American troops could arrive.
ANSWER: **Spring** Offensive [accept **Ludendorff** Offensive; accept **Kaiserschlacht** or **Kaiser's Battle**]
[10] The Spring Offensive ended at the second battle of *this* French river. Taxis were used to bring French reinforcements to the first battle of this river, at which Joseph Joffre's victory ended the Schlieffen [“SHLEE-fun”] plan.
ANSWER: **Marne** River
[10] The Spring Offensive did *almost* succeed: the German army got within artillery range of *this* capital city of France.
ANSWER: **Paris** <LL>

5. For 10 points each—answer the following about the Jewish calendar:
[10] Like the Islamic and Chinese calendar, the Jewish calendar is of *this* type, which is why the dates of Rosh Hashanah, Ramadan, and Chinese New Year don't seem to be fixed.
ANSWER: **lunar** calendar [accept **lunisolar**]
[10] Of course the dates *are* in fact fixed; for instance, the ninth day after Rosh Hashanah is always *this* holiday. All healthy adult Jews fast on this Day of Atonement.
ANSWER: **Yom Kippur**
[10] Well, maybe the dates aren't *completely* fixed. The timing of Purim sometimes changes due to *this* feature of the Jewish calendar.
ANSWER: **extra month** [or **embolismic month**; or **intercalary month**; accept descriptive answers like **one additional month**; accept more specific descriptions like **Adar sheni** or **second Adar**] <JR>

6. For 10 points each—answer the following about electronegativity differences:
[10] First, what kind of bond would be formed between an element with an electronegativity of three and another element with an electronegativity of zero-point-nine?
ANSWER: **ionic** bonds (The elements in question are chlorine and sodium, so you just made table salt.)
[10] An electronegativity difference gives *this* quality to a chemical bond. This quality is really strong in water molecules, since their hydrogens are really positive and their oxygens are super-negative.
ANSWER: **polar**ity [prompt on ionic character]
[10] Electronegativity differences are ignored when calculating formal charge. To calculate formal charge, what quantities do you subtract from the number of valence electrons the neutral atom would have? You can name either.
ANSWER: the number of **nonbond**ing electrons OR one-**half** the total number of **bond**ing electrons [accept *N* AND *B* **over 2**] <JR>

7. For 10 points each—answer some questions about the Strategic Arms Limitation Treaty talks:
[10] The SALT talks were held between the U.S. and this other superpower, which was then led by Leonid Brezhnev.
ANSWER: **U.S.S.R.** [or **Soviet Union**; or **Union of Soviet Socialist Republics**; or **C.C.C.P.**; prompt on Russia]
[10] SALT I required that the U.S.S.R. and United States limit themselves to *this* number of locations with anti-ballistic missiles. This number was applied to the "world" of countries like the U.S.S.R. and China.
ANSWER: **two** [accept **Second** World]
[10] The most recent successor to SALT was the New START treaty, which was signed by Barack Obama and *this* then-President of Russia.
ANSWER: Dmitry (Anatolyevich) **Medvedev** <MK>

8. For 10 points each—answer the following about classic Italian cinema:
[10] Italian film after World War II was dominated by *this* movement, which focused on the living conditions of the poor and used amateur actors. This movement was exemplified by the films *Rome, Open City* and *Bicycle Thieves*.
ANSWER: Italian **neorealism** [or **neorealismo**; do not accept or prompt on "realism"]
[10] This Italian director began to move away from neorealism with his 1954 film *La Strada*. This man used dream-like imagery and plots throughout films like *La Dolce Vita* and *8½*.
ANSWER: Federico **Fellini**
[10] Starting in the 1960s, Franco Zeffirelli began making renowned adaptations of this English playwrights's works. Laurence Olivier directed and acted in adaptations of this man's plays *Henry V*, *Richard III* and *Hamlet*.
ANSWER: William **Shakespeare** <JR>

9. This book was followed by other specimens of "impassioned prose," like *Suspiria de Profundis*. For 10 points each:
[10] Name this autobiographical book from 1821, which describes the "pains" and "pleasures" of the title substance.
ANSWER: ***Confessions of an English Opium-Eater*** [accept answers like Thomas **De Quincey's *Confessions***, but prompt on just *Confessions*]
[10] Thomas De Quincey's *Confessions of an English Opium-Eater* is a classic text of this literary movement of the early 19th century, which emphasized nature, intense emotions, and the irrational, in reaction to the Enlightenment.
ANSWER: **Romanticism**
[10] De Quincey also wrote a series of essays on *this* activity "considered as one of the fine arts." In an 1823 novel, Justine Moritz is associated with this activity because of William's locket.
ANSWER: **murder** [accept reasonable equivalents like **killing** or more specific methods like **strangling**; prompt on crime; prompt on death] <JR>

10. The title character of this movie sings the song "A Dream is a Wish Your Heart Makes" to a bunch of friendly birds. For 10 points each:
[10] Name this 1950 Disney animated film, which was the subject of a live-action remake in 2015. In this film, the title character's fairy godmother sings "Bibbidi-Bobbidi-Boo" while enchanting a pumpkin to become a carriage.
ANSWER: ***Cinderella***
[10] One of these creatures named Lucifer harasses Jaq and Gus throughout the film, but is eventually chased out of a window by Bruno.
ANSWER: a black **cat**
[10] Cinderella and Prince Charming sing this waltz when they meet. This song was replaced by the instrumental "La Valse de L'Amour" in the 2015 remake.
ANSWER: "**So This is Love**" <CX>

11. New Haven's Hillside Avenue is often considered to be the first one of these areas. For 10 points each:
[10] Name this kind of residential area, first made possible by streetcar lines connecting them to cities like Boston and New York. The book *Crabgrass Frontier* examines early examples of these areas like Brookline and Oak Park.
ANSWER: **suburb**s [accept word forms like **suburbia**]
[10] This man and Calvert Vaux designed one of the first planned suburbs at Riverside Park near to Chicago. This man also worked with Daniel Burnham to design the Midway Plaisance for the 1893 World's Columbian Exposition.
ANSWER: Frederick Law **Olmsted**
[10] The 1893 World's Fair is often considered the first application of *this* movement. Members of this movement, which has a two-word name, thought that nice-looking public spaces would make citizens act more "harmoniously."
ANSWER: **City Beautiful** <IKD>

12. The binomial distribution reduces to this distribution when you only conduct one trial. For 10 points each:
[10] Name this simple probability distribution that describes the outcome of events like flipping a coin where you have two possible outcomes.
ANSWER: **Bernoulli** distribution
[10] Bernoulli, binomial, what's the difference—when you add a bunch of random variables together, the central limit theorem says that their sum follows *this* distribution. This distribution takes the shape of a "bell curve."
ANSWER: **normal** distribution [or **Gauss**ian distribution]
[10] Actually, I just lied to you: the central limit theorem only holds when the variables have *this* property with respect to each other. Two events have this property if their joint probability equals the product of their probabilities.
ANSWER: **independent** [accept word forms like **independence**] <JR>

13. During a dream in the novel's epilogue, the moon "bursts" after the dreamer is assured that he imagined *this* character's execution. For 10 points each:
[10] Name this character who's followed around by the overzealous former tax collector Levi Matvei. A fictional book about this man's life is written in a Moscow psychiatric ward.
ANSWER: **Yeshua** Ha-Nozri [prompt on Jesus or Christ]
[10] The story of Yeshua Ha-Nozri is included in Mikhail Bulgakov's *The Master and Margarita*, which is based on the legend of this man. This character is tempted by Mephistopheles, and, in one version, seduces the girl Gretchen.
ANSWER: Dr. **Faust**
[10] Mephistopheles is either an agent of, or a stand-in for this this figure. Daniel Webster sells his soul to this figure in a Stephen Vincent Benét story.
ANSWER: the **Devil** [accept **Satan**; accept **Lucifer**] <JR>

14. Recent research has shown that these people didn't actually sculpt the Capitoline Wolf. For 10 points each:
[10] Name these people who *did* sculpt the Chimera of Arezzo. Much of their art is known from tombs in places like Veii.
ANSWER: **Etruscan**s
[10] The Chimera of Arezzo was sculpted during this phase of Etruscan art. In general, this term denotes Mediterranean culture after the spread of Greek influence by Alexander the Great.
ANSWER: **Hellenistic**
[10] The Chimera of Arezzo and Capitoline Wolf were sculpted out of this metal alloy. This metal was used for most of Auguste Rodin's sculptures, as well as Donatello's *David*.
ANSWER: **bronze** <JR>

15. The dwarf Andvari created one of these objects whose curse turned Fafnir into a dragon. For 10 points each:
[10] Name these objects, one of which Odin placed on Baldr's funeral pyre. That object, called Draupnir or "the dripper," could create eight identical copies of itself every ninth night.
ANSWER: **ring**s [also accept answers like **armband**s; prompt on treasure; prompt on jewelry; prompt on but DO NOT OTHERWISE REVEAL gold]
[10] Draupnir is made out of gold, just like sets of *these* objects that were owned by Idunn and Eris.
ANSWER: **apple**s [prompt on fruit]
[10] This goddess received a golden replacement after Loki stole her original hair. Thor slew Hrungnir after he bragged that he would kill the gods and take this goddess and Freyja as concubines.
ANSWER: **Sif** <JG>

16. For 10 points each—answer the following about famous "cries" in Latin American history:
[10] This *criollo* priest proclaimed Mexico's independence in the 1810 "Grito de Dolores," or "Cry of Dolores."
ANSWER: Miguel **Hidalgo** y Costilla
[10] The "Cry of Yara" was proclaimed by Carlos Manuel de Céspedes in this country as it fought for independence in the Ten Year's War. General Valeriano Weyler was known as a "Butcher" for actions in this modern country.
ANSWER: **Cuba**
[10] Pedro I declared this country's independence in the "Cry of Ipiranga." Pedro had earlier been king of Portugal, which colonized this large South American country.
ANSWER: Empire of **Brazil** <LL>

17. One of these books takes its title from Paul Laurence Dunbar's poem "Sympathy." For 10 points each:
[10] Name this genre James McBride's *The Color of Water*. Henry Adams is most famous for one of these books, along with his book *Mont Saint Michel and Chartres*.
ANSWER: **autobiography** [or **memoir**s; accept *The **Education** of Henry Adams*]
[10] This man wrote a *Narrative* of his life as a slave, and the memoir *My Bondage and My Freedom*. This Maryland native advocated abolition in his newspaper *The North Star*.
ANSWER: Frederick **Douglass** [or Frederick Augustus Washington **Bailey**]
[10] This other man temporarily saved himself from bankruptcy by publishing the memoirs of Ulysses S. Grant. This man's three-volume *Autobiography* was published starting in 2010, 100 years after his death.
ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**] <JR>

18. For 10 points each—answer the following about the results that earned Duncan Haldane, Michael Kosterlitz, and David Thouless the 2016 Nobel Prize in Physics:
[10] Their research drew on this branch of mathematics, which studies objects that can be continuously deformed. In this field, a coffee cup and a donut are considered "equivalent," since they have the same number of holes.
ANSWER: **topology**
[10] Kosterlitz and Thouless used the two-dimensional XY model to propose that thin films could display this behavior. Other materials that display this behavior can form a Rollin film that creeps up surfaces.
ANSWER: **superfluid**ity
[10] The Kosterlitz–Thouless transition describes the unbinding of topological defects given this name. This term also refers to regions of a fluid in which the curl of the flow velocity is nonzero.
ANSWER: **vortices** [or **vortex**] <SE>

19. This region's religious traditions include Kagyupa and Bön. For 10 points each:
[10] Name this autonomous region of Western China, whose namesake form of Buddhism is led by Dalai Lama. This region's namesake "plateau" lies to the north of the Himalayas.
ANSWER: **Tibet** [or **Bod**; or **Xizang**]
[10] This city is now the capital of the Tibet Autonomous Region, and it contains the former home of the Dalai Lama. By some estimates, nearly half of this city's inhabitants were Buddhist monks in the early 20th century.
ANSWER: **Lhasa** [accept **Chengguan**]
[10] The Dalai Lama's former residence is *this* palace in Lhasa. This fortress-like complex contains a Red Palace and a White Palace.
ANSWER: **Potala** Palace <JW>

20. For 10 points each—answer the following about the early development of psychology:
[10] This method was used by Wilhelm Wundt and other early experimental psychologists. This method involves asking patients to self-reflect on their conscious thoughts and feelings, instead of trying to observe them externally.
ANSWER: **introspection**
[10] Introspection was used widely by this student of Wilhelm Wundt, who created an influential early doctoral program at Cornell. This Brit coined the term "empathy."
ANSWER: Edward B. **Titchener**
[10] Introspection was rejected as unscientific by John B. Watson and other adherents of *this* approach. In B.F. Skinner's "radical" version of this approach, all thoughts and actions are basically conditioned responses to stimuli.
ANSWER: **behaviorism** [accept **radical behaviorism**] <BY>

Tiebreaker

21. Why are vitamins even important? Find out by answering these questions, for 10 points each.

[10] You've probably heard that you need to eat carrots to get *this* vitamin in the form of beta-carotene. While it's not true that megadoses of this vitamin will help you see in the dark, you *would* go blind without it.

ANSWER: Vitamin **A** [or **retinol**; or **retinoic acid**]

[10] Pregnant women often take *this* vitamin to prevent neural tube defects. You can't make DNA or RNA without this vitamin, which is also known as Vitamin B9.

ANSWER: **folic** acid [or **folate**]

[10] Vitamin B2, a.k.a. riboflavin is necessary for many of the reactions in cellular respiration. To actually use riboflavin, your body converts it to cofactors that are either a mononucleotide or a dinucleotide—name *either*.

ANSWER: **FMN** OR **FAD** [or **flavin mononucleotide** or **flavin adenine dinucleotide**] <JR>