

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 11 Tossups

1. **In this modern country, a British army led by William Elphinstone was almost completely destroyed by Wazir Akbar Khan. The People's Democratic Party of this country seized power in the Saur Revolution. King Zahir Shah ruled this country from 1933 to 1973, and the border between this country and its southern neighbor is known as the Durand Line. (*)** Russia proposed this nation as a “buffer” state during the Great Game. Stinger missiles were supplied to the *mujahideen* in this country, and it fought from 1979 to 1989 in a war often considered the “Soviet’s Vietnam.” For 10 points, name this country whose Taliban was overthrown in a 2001 invasion.

ANSWER: Islamic Republic of Afghanistan <LL>

2. **A character with this first name buries a companion by laying her in water after that companion is impaled on a sword by a character who comes out of nowhere. That person with this first name befriends Aeris and hunts Sephiroth as the protagonist of (*)** *Final Fantasy VII*. A team with this name sponsors *Smash* players Mango and Ally, and a *League of Legends* team containing Impact, Jensen, and Sneaky. This kind of object gives the protagonist of *Starfox* his last name. A turtle floating on one of these objects signals the start of races in Mario Kart games. For 10 points, name these puffy objects often found in the sky.

ANSWER: clouds [accept Cloud 9; accept Cloud Strife; accept Fox McCloud] <AF/JR>

3. **When this quantity is measured in a rotating reference frame, it contains a correction term equal to “omega cross omega cross r .” This quantity, whose CGS unit is the gal, is squared and multiplied by charge-squared in the numerator of the Larmor formula for radiative power. This vector quantity points radially (*)** inward with magnitude “ v -squared over r ” for uniform circular motion. This quantity, whose standard value due to gravity is denoted by a lowercase g , is multiplied by mass on the right-hand side of Newton’s second law. For 10 points, name this quantity that results from forces acting on an object, the rate of change of velocity.

ANSWER: acceleration <SE>

4. **This novel’s protagonist fulfils a drunk woman’s fantasy by using lipstick to write “Sybil, you were raped by Santa Claus: Surprise” on her stomach. This novel’s protagonist hears a speech about the “vision” of a college’s Founder from Reverend Barbee, who turns out to be blind. Its protagonist mixes in ten black drops to make the purest “Optic (*)** White.” This novel’s protagonist meets the Sambo-Doll seller Brother Clifton and works for Liberty Paints. This novel ends after Ras the Destroyer sparks a race riot, and it begins with its narrator forced into a “Battle Royale.” For 10 points, name this novel by Ralph Ellison.

ANSWER: Invisible Man [do not accept or prompt on “The Invisible Man”] <JR>

5. **This city was the base of music publisher and sonatina composer Muzio Clementi, who dominated its concert life after the death of Johann Christian Bach. The “Gypsy” piano trio was written in this city. The slow movement of a piece written in this city is interrupted by “Turkish” percussion and trumpet fanfares. Beethoven published his Opus 1 while his (*)** teacher was away in this city. A 1791 trip to this city was organized by Johann Peter Salomon. A group of symphonies written for this city have nicknames like “Miracle,” “Drumroll,” and “Surprise.” For 10 points, name this capital city for which Haydn wrote his last twelve symphonies.

ANSWER: London <JR>

6. **Tenant farmers in this place were helped by the Wyndham Land Purchase Act, which was agitated for by the Land League. A 1798 rebellion in this place was led by Wolfe Tone. An event in this place led to the conversion of “souters” and was exacerbated by absentee landlords. That event in this place led to a wave of (*) “coffin ships” and the repeal of the Corn Laws. A man from this place was acquitted of involvement in the Phoenix Park Murders but was disgraced after the disclosure of his affair with Kitty O’Shea. This place gained Home Rule in 1914 after a campaign led by Charles Parnell. For 10 points, name this island that was hit by an 1840s potato famine.**

ANSWER: **Ireland** [or **Eire**] <LL>

7. **In the first stanza of “Ode on Indolence,” one of these objects being “shifted round” is compared to the three figures seen by the speaker. This object titles a poem describing a “heifer lowing at the skies,” led by a “mysterious priest” to a “green altar.” This object, which can “express a flowery tale more sweetly than our rhyme,” is described as a (*) “Sylvan historian,” and prompts the line “heard melodies are sweet, but those unheard are sweeter.” This object is called “Thou still unravish’d bride of quietness” and seems to say “Beauty is truth, truth beauty.” For 10 points, John Keats wrote an “Ode on a Grecian” example of what ceramic receptacle?**

ANSWER: **urns** [accept “Ode on a **Grecian Urn**”; do **not** accept or prompt on synonyms like “vases”] <JR>

8. **This man once threw a spear that could not be pulled out of the ground and later grew into a cornel tree. This man created a personal bodyguard of 300 soldiers known as the Celeres. This king’s most famous action occurred on the day of the Parilia festival. Fighting between factions loyal to him and factions loyal to Tatius eventually led to (*) Numa Pompilius being crowned as this man’s successor. This king undertook his most famous act after he saw six more vultures than his brother, giving him the right to choose the location where a city was founded. For 10 points name this founder of Rome and brother of Remus.**

ANSWER: **Romulus** <AF>

9. **The birth of this genre is often tied to the discussions of the “Florentine Camerata.” In the 18th century, several innovative works in this genre were co-written with Ranieri de’ Calzabigi. This genre developed along with monody and the use of *basso continuo* around 1600. Many early works in this genre were titled for (*) Orpheus, including a “reform” work by Christoph Willibald Gluck and a pioneering work by Claudio Monteverdi. This genre was made possible by the speech-like style of recitatives, which are contrasted with arias. For 10 points, name this genre of classical musical theater that often features divas.**

ANSWER: **operas** <JR>

10. **A king of this country was also king of Sweden before being kicked out by Charles IX. In 1697, the Elector of Saxony converted to Catholicism to become this country’s king. This country elected France’s Henry III to be their king. This country was attacked in the Deluge and it was later ruled by Augustus the Strong. This country was united in the Union of (*) Lublin while it was ruled by the Jagiellonians. The 1683 Siege of Vienna was turned back by this country’s king John III Sobieski. This country, which was once ruled together with Lithuania, was home to the Winged Hussars. For 10 points, name this Eastern European country that Prussia, Austria, and Russia “partitioned.”**

ANSWER: **Poland-Lithuania** [accept either **until** Lithuania is mentioned; accept **Polska**; accept **Lietuva**] <JR>

11. If you take the natural log of a quantity denoted by *this letter*, then take the derivative with the respect to temperature, the result is the change in enthalpy over “*R-T*-squared,” by the Van ‘t Hoff equation. A quantity denoted by *this letter* is proportional to the exponential of negative activation energy over “*R-T*.” A quantity denoted by *this letter* has units of inverse (*) seconds for first-order reactions and can be calculated with the Arrhenius equation. A quantity denoted by this letter is given by product concentrations over reactant concentrations. For 10 points, give this letter that denotes both the rate constant and the equilibrium constant.

ANSWER: k <AF>

12. In this novel, a senate candidate for the Conservative Party adopts the motto “those who have always won will win again.” A character in this novel is forced to marry the Count de Satigny after her relationship with a farmhand is exposed, but after his lewd activities with the servants are revealed, she leaves him and returns to the *hacienda Las* (*) Tres Marias with her daughter Alba. In this novel, Esteban works in a mine to earn enough money to be worthy of Rosa the Beautiful, but she is killed before they can be married. Clara del Valle predicts the future of the Trueba family in—for 10 points—what magical realist novel by Chilean author Isabel Allende?

ANSWER: *The House of the Spirits* [accept *La casa de los espíritus*] <CK>

13. *Warning: specific term required.* This kind of stimulus is often produced via the stimulation of medium spiny neurons in the nucleus accumbens. These stimuli were produced via electrical stimulation in rats by Peter Milner and James Olds. These stimuli are mediated by a substance that also allows action selection in the (*) basal ganglia. The substance that mediates this kind of stimulus also regulates motor control and is produced in the substantia nigra. The compulsive seeking of this kind of stimulus is the basis of addiction. This kind of stimulus prompts the release of dopamine. For 10 points, name this kind of stimulus, which is your brain telling you to feel good because it likes something.

ANSWER: rewards [accept word forms like rewarding; prompt on any answer like positive, pleasurable, “stuff you like,” etc.; prompt on addictive or word forms before “compulsive”] <JR>

14. A rise in this quantity gives foehn wind its warmth. If this quantity is low for a while, a weather map will often show a purple line alternating semicircles and triangles. This quantity is high at the “horse latitudes” and very low where the two Hadley cells start near the Equator. This quantity decreases along with temperature when a cold front advances. Precipitation is (*) suppressed when this quantity is high, and a “zone” where this quantity is low usually breeds storms. Lines on a weather map where this quantity is the same are called “isobars.” Wind is mostly a result of differences in this quantity. For 10 points, name this quantity that’s measured with a barometer.

ANSWER: atmospheric pressure <JR>

15. One of this man’s books emphasizes the role of physical force in the act of painting lines, which can create “lyricism” or “drama.” This man described a “Language of Form and Color” that can express an artist’s “inner necessity.” He wrote *Point and Line to Plane* while working at the (*) Bauhaus [“BOW-howss”]. This author of *Concerning the Spiritual in Art* founded a movement that included August Macke and Franz Marc. His many *Improvisations* and *Compositions* are usually considered to be the first modern abstract paintings. For 10 points, name this Russian founder of *Der Blaue Reiter*.

ANSWER: Wassily (Wassilyevich) Kandinsky <JR>

16. **This book's namesake author is often identified with an unnamed person whom its central figure "loved." This book includes two dialogues with Nicodemus, and it includes a two-word sentence that's the shortest verse in most versions of the Bible. It originated the epithet (*) "Doubting Thomas."** It opens by describing the *logos* that "was with God" and "was God." This is the only book to describe Jesus raising Lazarus and turning water into wine at Cana. This gospel includes the "God so loved the world" line and begins "In the beginning was the Word." For 10 points, name this non-synoptic fourth Gospel, whose namesake shares his name with the saint who baptized Jesus.

ANSWER: Gospel according to **John** (The two-word sentence is "Jesus wept.") <MK/JR>

17. **The male protagonist of this novel tries to discover the "one-millionth part" of each woman that makes her unique, which he claims only comes out in bed. The protagonists of this novel get together through six "fortuities," which makes the husband wonder if his wife is part of his "it must be," an idea derived from Beethoven. This novel attacks the notion of "totalitarian kitsch" via the painter (*) Sabina, who poses wearing nothing but a bowler hat. This novel challenges Nietzsche's idea of "eternal return" through the story of the Czech dissidents Tereza and Tomas. For 10 points, name this novel by Milan Kundera that examines the possibility of life without "weight."**

ANSWER: *The **Unbearable Lightness of Being*** [or *Nesnesitelná lehkost bytí*] <JR>

18. **These structures contain large numbers of glyoxysomes to produce carbohydrates in the absence of photosynthesis. Phytochromes were discovered in these structures. They're not leaves or buds, but these structures are kept "dormant" by high abscisic acid levels, which drop after a surge in gibberellins. The setting in which these structures form differentiates (*) gymnosperms from angiosperms. These structures contain endosperm and a cotyledon or two. They're formed when an ovule meets some pollen. For 10 points, name these embryos that pierce their hard outer coat to germinate and become plants.**

ANSWER: **seeds** [prompt on embryos; prompt on fruit] <JR>

19. **This ingredient is roasted to make the snack *leblebi*. This is the primary ingredient in the pancake *farinata* or *cecina* ["cheh-CHEE-nah"] and in the Sicilian street food *panelle*. Water from this ingredient is often used to make the egg white substitute aquafaba. It's ground to make gram flour, and it's the star ingredient in chana masala. This is the main ingredient in the best-selling product of (*) Sabra. It's not eggplant, but this is the primary ingredient in a dish made with olive oil, lemon juice, garlic, and tahini. Either this ingredient or fava beans is ground and deep-fried to make falafel. For 10 points, name this legume that's ground to make hummus.**

ANSWER: **chickpeas** [or **garbanzo** beans; accept "**gram**" before it is mentioned] <JR>

20. **This city was home to an intellectual debate club called the Junto, as documented in an "American life" by Walter Isaacson. After murdering twenty-one Susquehannock in the Conestoga Massacre, the Paxton Boys marched to this city. Bifocal glasses were invented in this city, which was taken after the Battle of (*) Brandywine. *Poor Richard's Almanac* was published in this city, as was a *Gazette* that printed a political cartoon of a cut-up snake captioned *Join, or Die*. This city hosted both Continental Congresses and the Constitutional Convention. For 10 points, name this city founded by William Penn, which was home to Ben Franklin.**

ANSWER: **Philadelphia** [accept **Philly**] <JR>

Tiebreaker

21. **This compound reacts with penicillin to inactivate transpeptidase. The transfer of four electrons to complex IV of the electron transport chain produces two molecules of this compound. Excitation of P700 causes the “splitting” of this compound by P680. At 25 degrees celsius, a reaction in this compound is described by the constant “10 to the negative-14th.” In vascular plants, this compound is transported in the (*) xylem. During the day, CAM plants close their stomata to prevent loss of this compound. K_w measures this compound’s autoionization and K_{s-p} measures a compound’s solubility in this liquid. For 10 points name this “universal solvent” with formula H-2-O.**

ANSWER: **water** [accept **H-2-O** until it’s read] <CK>

Bonuses

1. These laws were intended to curb the strength of Dutch trade after the Eighty Years' War. For 10 points each:

[10] Name these laws, passed in 1651 and the subsequent decades. They began to be enforced more strictly with the 1764 Sugar Act.

ANSWER: **Navigation Acts**

[10] The non-enforcement of the Navigation Acts was given a positive spin by Edmund Burke, who used *this* two-word phrase to describe the lax enforcement of British laws in the Colonies.

ANSWER: **salutary neglect**

[10] The Navigation Acts are generally considered to have promoted mercantilism and bullionism, which advocated stockpiling these two precious metals. Name both.

ANSWER: **gold** AND **silver** [accept in either order] <JR>

2. The dried form of this dough is described by the adjective *harina*. For 10 points each:

[10] Name this ground corn dough that's used to make pupusas and tamales.

ANSWER: **masa** [accept **masa harina**]

[10] Masa is also the main ingredient when making *these* flatbreads out of corn. This food forms the covering of burritos and quesadillas.

ANSWER: **tortillas**

[10] Masa is made from hominy corn, which has been treated with *this* kind of solution. Bagels and pretzels are dipped in this kind of solution to give them their shiny exterior.

ANSWER: **alkaline** [or **basic**; accept answers like "**high pH**" or "**pH above 7.0**"; accept **lye** solution] <JR>

3. These organs are made up of functional units called nephrons. For 10 points each:

[10] Name these organs that send urine to the bladder.

ANSWER: **kidneys**

[10] A number of kidney diseases can produce this condition. This kind of swelling is caused by the accumulation of fluid just under the skin.

ANSWER: **edema** ["uh-DEE-muh"]

[10] Other kidney diseases can cause this condition, which can make your red blood cells explode via osmosis. This condition is often caused by overhydration at sporting events due to loss of electrolytes.

ANSWER: **hyponatremia** [prompt on descriptions like **low sodium** in the blood] <JR>

4. At the end of the play in which these animals appear, they crowd around the stage, stamping and panting in a rhythmic fashion. For 10 points each:

[10] Name these animals which Daisy and logician Dudard turn into in the third act of a play. The sick Jean turns into one of these animals in the second act.

ANSWER: **rhinoceros** [accept attempts at plural forms]

[10] Many rhinoceroses¹ appear in *Rhinoceros*, a play by this 20th-century Romanian-French author of *The Bald Soprano* and other plays characterized as "Theatre of the Absurd."

ANSWER: Eugène **Ionesco**

[10] The Theatre of the Absurd drew inspiration from the writings of this French author. This man's essays "The Theatre of Cruelty" and "No More Masterpieces" were collected in his *The Theatre and its Double*.

ANSWER: Antonin **Artaud** [or Antoine Marie Joseph **Artaud**] <LL>

¹ Yes, really, "rhinoscerotes"—ed.

5. For 10 points each—answer the following about synagogue architecture:

[10] Synagogues contain an “eternal” one of these objects called a *ner tamid*. Hanukkah commemorates one of these objects in the Second Temple that miraculously lasted for eight days; a description is fine.

ANSWER: **lights** [accept any **light source** like a **candle**, **lamp**, **flame**, or **fire**; accept **menorah**]

[10] A synagogue’s ark, or *aron kodesh*, contains *these* objects, which are paraded around the synagogue before being used on the *bimah*.

ANSWER: **Torah** scrolls [or **Sefer Torah**; prompt on just **scrolls**]

[10] The terminology used in this question comes from *this* Jewish tradition, which is contrasted with Sephardic Judaism. This term refers to Jews from Central and Eastern Europe.

ANSWER: **Ashkenazi** [accept **Ashkenazic** Jews or **Ashkenazim**] <JR>

6. This artist’s most famous work was displayed in the “This Is Tomorrow” exhibition. For 10 points each:

[10] Name this member of the Independent Group who designed the cover of the Beatles’ *White Album*. His most famous work is topped by photo of Earth taken from *Life* magazine, and includes a poster for *Young Romance*.

ANSWER: Richard **Hamilton** (That collage is called *Just what is it that makes today's homes so different, so appealing?*)

[10] A few years later, this other artist painted his influential *Look Mickey!* In another of his paintings, a woman thinks “I don’t care! I’d rather sink than call Brad for help!”

ANSWER: Roy (Fox) **Lichtenstein** (That painting is called *Drowning Girl*.)

[10] Hamilton and Lichtenstein were member of this movement, which often used images from advertising and mass media. Andy Warhol exemplified this movement with his silkscreens of Marilyn Monroe and Campbell’s soup cans.

ANSWER: **Pop art** <LL>

7. These expressions only include additions, subtractions, positive exponents, and coefficients. For 10 points each:

[10] Name these expressions, such as “three- x -squared plus x plus 2,” which define functions like quadratics and cubics.

ANSWER: **polynomials**

[10] Much of the behavior of a polynomial is determined by its degree. Give the degree of the following polynomial: “ x -cubed- y , plus x -squared- y -to-the-fourth, plus x - y ”

ANSWER: **six**

[10] If all the terms of a polynomial function are of the same degree, it is given *this* name. The inner product is a “bilinear” one of these functions, whose “differential” kind can be integrated with the general Stokes’ theorem.

ANSWER: **forms** [accept **bilinear forms**; accept **differential forms**; prompt on **homogeneous** polynomials] <JR>

8. This man argued that, at birth, the mind is a *tabula rasa*. For 10 points each:

[10] Name this 17th-century English philosopher who wrote *An Essay concerning Human Understanding*. His *Second Treatise on Government* claims that all people have a right to “life, liberty, and property.”

ANSWER: John **Locke**

[10] Locke’s theory of the *tabula rasa* means that all knowledge is of *this* kind. In *Critique of Pure Reason*, Kant argued that statements like “five plus seven equals twelve” are *not* of this type, even though they’re synthetic.

ANSWER: **a posteriori**

[10] Locke epitomized this broad school of thought also advocated by George Berkeley. This idea, which held that all knowledge comes from our senses, was once opposed by Cartesian rationalism.

ANSWER: **empiricism** <JR>

9. A massive four-volume history of literature in this language was written by translator Donald Keene. For 10 points each:

[10] Name this language whose translators into English include Jay Rubin. A classic work in this language is now available in competing translations by Dennis Washburn, Edward Seidensticker, and Royall Tyler.

ANSWER: **Japanese** [or **Nihongo**]

[10] Washburn, Seidensticker, and Tyler translated this Japanese “tale,” which is often considered the first modern novel. This book was written by Murasaki Shikibu around the year 1000 during the Heian period.

ANSWER: *The Tale of **Genji*** [or ***Genji Monogatari***]

[10] Seidensticker was also a main translator for this Japanese novelist. The clubfooted Kashigawa brags about seducing women who feel sorry for his disability in this author’s novel *The Temple of the Golden Pavilion*.

ANSWER: Yukio **Mishima** [accept names in either order] <JR>

10. For 10 points each—answer the following about the number 12 in chemistry:

[10] A one-molar solution of *this* compound will have a pH of 12. An industrial process produces this compound using an iron catalyst promoted with an oxide of either potassium, calcium, silicon, or aluminum.

ANSWER: **ammonia** [or **N-H-3**]

[10] Both of the maximally dense crystal lattice structures have a coordination number of twelve. Name *either* structure.

ANSWER: **hexagonal close packed** OR **face centered cubic** [or **hcp**; or **fcc**]

[10] This strong acid gets a value of negative 12 on the Hammett acidity function, which extends pH to superacids. This diprotic acid has formula H-2-S-O-4.

ANSWER: **sulfuric** acid <AF>

11. Three or so of the important early members of this family were named Megacles. For 10 points each:

[10] Name this family that included Athenian reformers like Cleisthenes and Pericles, who claimed descent from Nestor’s great-grandson.

ANSWER: **Alcmaeonidae** [or **Alcmaeonids**]

[10] Cleisthenes overthrew one of these rulers named Hippias. This title was taken by men like Peisistratus, who usually became rulers through mass uprisings against the aristocracy.

ANSWER: **tyrants** [or **tyrannos**; or **tyrannoi**]

[10] Paradoxically, tyrants often served as intermediate steps “toward” *this* form of government, whose Greek name means “rule of the common people.” Aristotle saw this system as a perversion of “polity” or republicanism.

ANSWER: **democracy** [accept word forms like **democratic**] <JR>

12. This opera’s male antagonist asks “Where have you gone, golden days of Spring?” in the aria “Kuda, kuda vi udalilis.” For 10 points each:

[10] Name this opera whose first act features the soprano’s “Letter Song.”

ANSWER: **Eugene Onegin** [or **Yevgeniy Onegin**]

[10] *Eugene Onegin* is an opera by this Russian composer, who also wrote *Swan Lake*.

ANSWER: Pyotr Ilyich **Tchaikovsky**

[10] Onegin is a major role for *this* male vocal range. Figaro has this voice type in *The Barber of Seville*, but has a voice type *lower* than this one in *The Marriage of Figaro*.

ANSWER: **baritone** <JR>

13. This substance inadvertently caused Chiron such pain that he gave up immortality. For 10 points each:

[10] Name this substance that caused the death of Heracles, after Deianira was tricked into giving him a shirt coated in the blood of the centaur Nessus, into which Heracles had introduced *this* substance.

ANSWER: the Lernaean **Hydra's venom** [accept reasonable equivalents like **Hydra poison**; accept the **Hydra's blood** and; prompt on just **venom** or **blood**]

[10] Heracles had used the Hydra's venom to coat the tips of these weapons. Paris killed Achilles with one of these weapons, and Heracles bequeathed his still-toxic ones to Philoctetes.

ANSWER: **arrows** [accept **bow and arrow**, but do **not** accept or prompt on "bows" alone]

[10] In agony from the Hydra's venom, Heracles built himself a funeral pyre and became a god. He then married *this* goddess of youth, whom Ganymede replaced as cupbearer.

ANSWER: **Hebe** <CX>

14. This poet set "The Prisoner" and other poems in the fictional island country of Gondal. For 10 points each:

[10] Name this English poet, who declared "No coward soul is mine" in an 1846 poem.

ANSWER: **Emily Brontë** [or **Ellis Bell**; prompt on just **Brontë** or **Bell**]

[10] Emily Brontë is much better-known for this novel about Cathy Earnshaw's love for the orphan Heathcliff. It's named after the farmhouse where Heathcliff lives on Thrushcross Grange.

ANSWER: **Wuthering Heights**

[10] The story of Heathcliff and Cathy is told by the housekeeper Nelly Dean to *this* man. This character narrates the opening and closing chapters of the novel.

ANSWER: Mr. **Lockwood** <JR>

15. This king of England came to power the year after the Treaty of Wallingford was signed. For 10 points each:

[10] Name this man, the son of Geoffrey V of Anjou and the first Plantagenet king of England. He took power in 1154.

ANSWER: **Henry II** [prompt on just **Henry**]

[10] Henry's predecessor was this king of England, who was captured at the Battle of Lincoln, but consolidated power with the Treaty of Wallingford before dying.

ANSWER: **Stephen** of Blois

[10] Stephen had fought during the "Anarchy" with Henry's mother Matilda, who took *this* title after marrying the German Henry V. Less famously, the *wives* of Otto the Great and Frederick Barbarossa were crowned with this title.

ANSWER: Holy Roman **Empress** [accept **Empress Matilda**; accept more specific answers like **Empress consort**] <MK>

16. This composer wrote the first concert waltz, his "Invitation to the Dance." For 10 points each:

[10] Name this German Romantic composer, whose two clarinet concertos, in E-flat major and F minor, are core to that instrument's repertoire. His nationalist operas were a major influence on Wagner.

ANSWER: Carl Maria von **Weber**

[10] Weber's was also wrote influential virtuoso works for this keyboard instrument. Weber's works were a major inspiration for later performers on this instrument, such as Franz Liszt.

ANSWER: **piano**forte

[10] Weber's *Turandot* also made him the first European composer to quote an actual tune from this country.

Instruments from this country include the *erhu* and the *pipa*.

ANSWER: **China** [or **Zhongguo**] <JR>

17. In this play, the Valium-addicted woman Harper Pitt meets Prior Walter in a dream. For 10 points each:
[10] Name this 1993 play by Tony Kushner, separated into two parts titled “Millennium Approaches” and “Perestroika.”

ANSWER: ***Angels in America***: *A Gay Fantasia on National Themes*

[10] In *Angels in America*, this lawyer contracts AIDS, but insists that it’s actually liver cancer. His nurse Belize steals some of the AIDS drug AZT he has hoarded, and he’s haunted by the ghost of Ethel Rosenberg.

ANSWER: **Roy Cohn** [accept either name]

[10] *Angels in America* is set primarily in New York City, which is also the setting of this novel by J.D. Salinger. In this novel, narrator Holden Caulfield wonders about deep questions like “where do ducks go when the lake freezes?”

ANSWER: *The **Catcher in the Rye*** <LL>

18. For a slow-moving source, the frequency change due to this effect is proportional to the relative velocity between source and observer. For 10 points each:

[10] Name this acoustic effect that is illustrated by the successive pitch increase and decrease for a passing siren.

ANSWER: **Doppler** effect [or **Doppler** shift]

[10] The frequency shift due to the Doppler effect becomes infinite when the relative velocity between the source and observer reaches *this* value. Under standard conditions, this quantity is about 770 miles per hour.

ANSWER: **speed of sound** [or **Mach 1**]

[10] If a source were moving *towards* an observer at a supersonic speed, then the sound heard by the observer would have *this* surprising property—although the shock wave from the approaching object would likely be a bigger worry.

ANSWER: the sound would be played **backwards** [accept equivalents like “in **reverse**”] <SE>

19. This album, recorded in Nashville, is generally considered to be the first studio *double* album of rock music. For 10 points each:

[10] Name this 1966 album that includes crazed-sounding tracks like opener “Rainy Day Women #12 & 35.” Critics tend to really like its tracks “Visions of Johanna” and “I Want You.”

ANSWER: ***Blonde on Blonde***

[10] *Blonde on Blonde* was recorded by this American singer-songwriter, whose songs include “The Times They Are a-Changin’” and “Blowin’ in the Wind.” This man won the Nobel Prize in Literature in 2016.

ANSWER: Bob **Dylan** [or Robert Allen **Zimmerman**]

[10] Bob Dylan’s album *Bringing it All Back Home* showed him in the middle of *this* process. This change supposedly inspired an axe attack at Newport, and caused people to scream things like “Judas” during concerts.

ANSWER: **electrification** [accept any description of going **electric** or **plugging in**] <JR>

20. The state of Baekje [“pek-jeh”] ruled during a period with this name. For 10 points each:

[10] Give this name for the period when Cao Cao [“tsow tsow”] founded the state of Wei, in AD 220.

ANSWER: **Three Kingdoms** [or **Sanguo** shidai; or **Samguk**-sidae]

[10] The Korean Three Kingdoms were partly followed by the state of Balhae [“ball-heh”], which was conquered by *this* dynasty. This dynasty was founded by the Khitans around the fall of the Tang, and was later overrun by the Jurchens.

ANSWER: **Liao** dynasty [or Great **Liao**; or Da **Liao**]

[10] The leader of the Khitans and Jurchens took this title. This title was later adopted by Mongol rulers like Genghis.

ANSWER: **khan** <JR>

Tiebreaker

21. For 10 points each—answer the following about the life and times of Stephen Jay Gould:

[10] Gould is best known for co-developing *this* theory with Niles Eldredge. This theory holds that evolutionary change isn't gradual, but rather takes place in short bursts, with namesake long periods of stasis in between.

ANSWER: **punctuated equilibrium**

[10] Much of Gould's biological field work concerned the *Poecilozonites* species of these gastropods. These land-based molluscs are distinguished from a similar gastropod by having shells.

ANSWER: **snails**

[10] Gould also spent much of his life critiquing this biologist's claim of evolutionary support for sociobiology. This scientist and ant expert also co-created the field of island biogeography with ecologist Robert MacArthur.

ANSWER: E.O. **Wilson** [Edward Osborne Wilson] <AF>