

Berus-Lie Academic Spring Tournament (BLAST)

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Packet 6: If differentiation undoes integration, does that make the derivative disintegration?

Tossups

1. Mozart's wife Constanze ["**kon-STAHNT-sub**"] premiered one movement of Mozart's "Great" C minor work in this genre. It's not a concerto, but Mozart's C major 15th work in this genre derives its nickname from its frequent performances during coronations; that work exemplifies the *brevis* variety of these works. Beethoven wrote a work of this kind in C major fifteen years before his more famous D major *solemnis* work in this genre. A work of this type named after (*) Pope Marcellus supposedly convinced the church to allow polyphonic music, and is by Giovanni Palestrina. This type of work usually begins with the *Kyrie* ["**KEE-ree-ay**"] and ends with the *Agnus Dei*. For 10 points, name this type of choral work that sets the Catholic liturgy to music. ANSWER: **mass** [accept *missa solemnis*; accept *missa brevis*; accept *Krönungsmesse*; accept "Coronation **Mass**"; do not prompt on or accept "requiem mass"] <ML, Auditory Fine Arts> {Fine Arts, Auditory Fine Arts}

2. An essay by this author ends with him making "body-shaped indentations" when a twister blows him into a fence. This author declared "I wish you way more than luck" and proclaimed the "capital-T Truth" about an old and young swimming fish in a commencement speech he gave at Kenyon College, "This is Water." In another essay, this author detailed an existential week-long (*) Caribbean cruise. This author's essay "Derivative Sport in Tornado Alley" is found in his collection *A Supposedly Fun Thing I Will Never Do Again*. This author's experience with drug addiction and tennis inspired the character Hal Incandenza, a student at the Enfield Tennis Academy. For 10 points, name this author of *Infinite Jest*.

ANSWER: David Foster **Wallace** <WZ, Other Literature> {Literature, Short Fiction/Other}

3. A company which primarily traded this good utilised a fleet of steamboats known as the "Great White Fleet." One trader gained the moniker "the Ice King" for using refrigerated ships to transport this good. Sam Zemurray ran a corporation which traded this good called "El Pulpo." Carlos Castillo Armas came to power in a CIA-backed coup after (*) Jacobo Arbenz threatened a company producing this good. William Cavendish names a type of this good, which also named unstable states in Latin America that relied heavily on the export of this crop. For 10 points, the United Fruit Company derived most of its profits from selling what curved yellow fruit? ANSWER: **bananas** [prompt on fruit until "Fruit"] <GP, Ancient/Other History> {History, Ancient/Other History}

4. An event of this type in Zoroastrianism involves the arrival of the Saoshyant, and is known as Frashokereti. Another event of this type sees Koka and Vikoka aiding the demon Kali against an avatar of Vishnu, and is the subject of the Kalki Purana. An event of this type sees a chimera-like beast carry the Seal of Solomon, and features Masih ad-Dajjal attempt to persuade followers (*) of Islam to join his cause. Seven trumpets are sounded in a depiction of this event, which is preceded by the breaking of Seven Seals. Pestilence, War, Famine, and Death are amongst the Four Horsemen that appear in a type of this event, which is paired with the Second Coming of Jesus Christ. For 10 points, name this subject of the Book of Revelation, which is also known as the Apocalypse. ANSWER: end of the world [accept end of an age and end of the Kali Yuga, accept the Apocalypse, Frashkoreti, and the Second Coming of Jesus Christ before mentioned] <AN, Religion> {Beliefs, Religion}

5. A 2019 *Science* article by Hoshika et al. reported a system using four synthetic examples of these molecules called hachimoji. Ultraviolet light can cause two molecules in this class to dimerize [“DYE-mer-ize”], leading to the need for their “excision repair.” Analogues of these molecules include the chemotherapeutic 5-FU and the HIV drug AZT. Modified versions of these molecules are used to terminate a chain in a method named for (*) Sanger. CpG islands have a high proportion of two of these molecules. This class of molecules is subdivided into purines and pyrimidines [“py-RIH-mih-deens”]. For 10 points, name these molecules that include adenine, guanine, and uracil, which are used to build up DNA and RNA. ANSWER: (DNA/RNA) nucleotides [accept nucleosides, nucleobases, nitrogenous bases, nucleoside triphosphates, or ddNTPs, or nucleic acids; prompt on bases or base pairs] <KL, Biology> {Science, Biology}

6. After one ruler of this kingdom faced revolts from the Rawandiyya [“ruh-one-dee-ya”] people, he established the City of Peace to ensure his own safety. This kingdom, whose ruler al-Mansur became unpopular after the murder of Abu Muslim, was dominated by the Barmakid family in its early days. A ruler of this kingdom was mentioned by Einhard as gifting an elephant and water clock to (*) Charlemagne. This kingdom saw the art of papermaking spread to the west after the Battle of Talas River. The House of Wisdom was established in Baghdad, the capital of this caliphate. For 10 points, which caliphate was ruled by men such as Harun al-Rashid and succeeded the Umayyads? ANSWER: Abbasid Caliphate <AN, World History> {History, World History}

7. This author wrote a poem that derides a woman as “insignificant” because “such an injury drives a lover to love more often.” Another poem by this author counts “Libyan grains of sand” when describing the number of kisses he wished to give his lover. The phrases “let us live and let us love” and “I hate you and I love you” begin two more poems by this author to that same woman. This author, who threatened to (*) assault two critics in his *carmen* 16, wrote an elegy to a brother that ends with the phrase “avē atque valē.” [av-ay at-kay val-ay] For 10 points, name this Roman author of the poem “Hail and Farewell,” who addressed many love poems to Lesbia. ANSWER: Gaius Valerius Catullus <ML, Non-Epic Poetry> {Literature, Non-Epic Poetry}

8. In one work in this art form, a boy in winter clothes sticks out his tongue to catch ashes from a dumpster fire. An artist who *initially* worked in this art form memorialized Charlie Parker as “Charles the First” in one of many paintings featuring his three-pointed crown motif. Al Diaz was part of a collaboration in this art form, whose dissolution caused the other member to write (*) “SAMO© [“say-moh”] is dead.” In a work in this art form, a masked young man throws a bouquet of flowers like a Molotov cocktail. That artist in this art form created a monochromatic girl who reaches out for a red, heart-shaped balloon. For 10 points, name this style of art practiced by Jean-Michel Basquiat [“bas-key-AHT”] and Banksy. ANSWER: graffiti [or graffito; accept street art, prompt on “murals,” prompt on “spray paint” by asking “for what form of art is the spray paint used?”] <DP, Other Visual Arts> {Fine Arts, Other Fine Arts}

9. Electride salts created from alkali metals in solutions of this compound appear blue and are used in the first step of the Birch reduction. The chemotherapy drug cisplatin [“sis-platin”] contains ligands of chlorine and this compound. In the preparation of Tollens’ reagent, this compound is added to the product of the silver nitrate and sodium hydroxide reaction. This compound is oxidized to synthesize (*) hydrazine. A process used to create this compound requires breaking a triple bond and uses an iron catalyst. That process is named for Carl Bosch and Fritz Haber. For 10 points, name this formula with chemical formula NH_3 .

ANSWER: ammonia [accept NH_3 before mentioned] <DB, Chemistry> {Science, Chemistry}

10. Frederick Law Olmsted planned to build a canal between this city’s Washington and Jackson Parks, which was completed as a greenery strip. In this city, Henry Moore’s sculpture *Nuclear Energy* can be found at the former location of Stagg Field. In 1949, one of this city’s major airports was renamed to honor the Battle of (*) Midway. Enrico Fermi designed the world’s first nuclear reactor at one of this city’s universities, which is known as [this city] Pile-1. Frank Lloyd Wright’s Robie House and the Willis Tower are found in this city. For 10 points, name this city located on the southwestern shore of Lake Michigan, the largest in Illinois.

ANSWER: Chicago <CS, Geography> {Other, Geography}

11. In Irish mythology, Fergus Mac Róich’s [“MAK ROHSH’s”] sword Caladbolg has the ability to produce these things with each swing. In Lenape myth, Crow originally possessed an attribute similar to an attribute of these things, but lost that attribute after carrying the gift of fire in his beak from the Great Sky Spirit back to earth. These things are created when its namesake animal moves from waterhole to waterhole. That animal came from beneath the ground and shaped the land during the (*) Dreamtime and is a “serpent” named for one of these things in Aboriginal myth. Heimdall guards another object made from these things that connects Asgard and Midgard, the Bifrost Bridge. For 10 points, Iris is the Greek goddess of what colorful objects?

ANSWER: rainbows <SZ, Mythology> {Beliefs, Mythology}

12. A colony in this present-day country allied themselves with the Mi’kmaq during Father Le Loutre’s [“le loo-truhs”] War. A group of 800 women known as the “King’s Daughters” were sent to promote population growth in this country. In 1670, Prince Rupert of the Rhine was given territory in this country known as his namesake “land.” The (*) Marquis de Montcalm was killed while defending the Plains of Abraham in this country. Following the dissolution of the colony of Acadia in this present-day country, its occupants fled to Louisiana. For 10 points, name this country whose colony of Acadia was located in present-day Nova Scotia.

ANSWER: Canada [prompt on New France or Acadia before mentioned] <HP, American History> {History, American History}

13. Deflection is proportional to the fourth power of this quantity for uniform loads on both cantilevers and simply-supported beams. Young’s modulus times cross-sectional area divided by this quantity for a bar equals its stiffness. Cauchy [“KO-shee”] strain is proportional to the change in this quantity divided by its original value, and the coefficient of linear expansion of a material relates change in this property to (*) change in temperature. The period of a pendulum is proportional to the square root of this quantity, and the restoring force of a spring is proportional to the change in this property from equilibrium. For 10 points, name this property, typically denoted with a lowercase l and measured in meters.

ANSWER: length <SL, Physics> {Science, Physics}

14. **This character can only remember the sound of an “ice cream vendor blowing his tin trumpet” while in a courtroom. This character reads a newspaper clipping about a wealthy Czechoslovakian man who is beaten to death by his mother and sister, who do not recognize him. Harun, whose brother Musa was murdered, narrates a novel titled for the “investigation” of this character by (*) Kamel Daoud. This character drinks coffee and falls asleep while keeping vigil for his mother, whose death opens the novel in which this character appears. This character uses his friend Raymond’s gun to shoot an Arab on a beach. For 10 points, name this protagonist of Albert Camus’s *The Stranger*.**

ANSWER: **Meursault** [accept *The Meursault Investigation*; prompt on *The Stranger* or *L’Etranger*] <HP, Long Fiction> {Literature, Long Fiction}

15. **One work by this philosopher states that the mind can generate images out of sensory input through compounding, transposing, augmenting, and diminishing. In that work, this philosopher argued that miracles could never happen due to the evidence supporting the consistency of the laws of nature. A concept created by this philosopher explains the difficulty in deriving (*) prescriptive statements from descriptive ones. This philosopher’s classification of perceptions as either “impressions” or “ideas” is exemplified by his “missing shade of blue” thought experiment. This man formulated the is-ought problem in his *A Treatise of Human Nature*. For 10 points, name this Scottish empiricist philosopher who wrote *An Enquiry Concerning Human Understanding*.**

ANSWER: David **Hume** <DB, Philosophy> {Thought, Philosophy}

16. **Roger Ng and Tim Leissner have been charged with crimes relating to an ongoing scandal in this country. Jho Low, a fugitive from this country, had ties with the leader of its UMNO Party. Siti Aisyah [“city ay-see-yah”] and Doan Thi Huong [“doe-an tee hu-ong”] were convicted of a 2017 crime in this country, even though they thought it was a TV prank. In January 2019, this country’s king (*) Muhammad V abdicated, after having earlier pardoned the politician Anwar Ibrahim for sodomy. In July 2018, this country’s former prime minister Najib Razak was arrested in connection with its ongoing 1MDB scandal. For 10 points, name this country whose flagship airlines flight 17 was shot down over Ukraine in early 2014.**

ANSWER: **Malaysia** [The 2017 crime is the assassination of Kim Jong-Nam.] <GP, Current Events> {Other, Current Events}

17. **This artist produced a lithograph of a naked male bathing himself which he later sawed in half and burned, *Sultry Night*. This artist deemed one of his paintings as satire because of the German origin of a painting in the background. In that aforementioned satire, the three central figures stand in front of Emmanuel Leutze’s *Washington Crossing the Delaware*. In another painting by this artist, a (*) red curtain held by the title figure separates the viewer from the central scene, which depicts a child confessing to his father. His sister Nan modeled for the woman in the most famous painting by this artist of *Daughters of Revolution* and *Parson Weem’s Fable*. For 10 points, name this painter of *American Gothic*.**

ANSWER: Grant **Wood** <KM, Visual Fine Arts> {Fine Arts, Visual Fine Arts}

18. **The Photian controversy concerned the appointment of leaders of this institution. This institution opposed the usage of the Filioque [“fee-lee-o-kay”] clause. Saint Athanasius established a monastery governed by this institution on the island of Mount Athos, which remains politically autonomous to this day. This institution attempted to compel the use of the (*) Greek language in the liturgy under Michael I Cerularius. In protest of emperor Leo III’s decree that this institution begin the iconoclasm, its leader Germanos I resigned as Patriarch of Constantinople. For 10 points, name this church which during the Great Schism feuded with the Catholic papacy.**

ANSWER: Eastern **Orthodox** Church [accept either underlined portion; accept Eastern **Orthodoxy**, **Orthodox** Catholic Church; prompt on Christian Church, Christianity] <CS, European History> {History, European History}

19. An algorithm for solving these problems adjusts its state at a rate according to a decreasing “temperature” value, and is called “simulated annealing.” A simple algorithm for these problems repeatedly subtracts a multiple of the gradient at the current point. That algorithm, which finds local solutions to these problems, is gradient descent. Walking toward lower values for the objective (*) function along edges of a polytope is used in the simplex algorithm, which solves one type of these problems called linear programming. For 10 points, name these problems in computer science that seek the maximum or minimum value of an expression. ANSWER: optimization [accept linear programming or LP before mention; accept maximization or minimization before mention; accept combinatorial optimization] <SL, Computer Science> {Science, Other Science}

20. The protagonist of one of this man’s novels is born after his mother Isabel is raped by Atanasio on the Cocuya estate. In a novel by this author, a historian reads the memoirs of General Llorente [“your-en-tay”] and discovers that the title woman is a young image of an elderly widow. Filberto purchases a statue of a rain god which eventually comes alive in this author’s story (*) “Chac Mool.” Another of this author’s novels details its main character’s love for Regina and Catalina and is narrated from the deathbed of its title corrupt tycoon. In a novel by this author, General Tomas Arroyo shoots Harriet Winslow’s companion, the title *Old Gringo*. For 10 points, name this Mexican author of *The Death of Artemio Cruz*. ANSWER: Carlos Fuentes Macías <ARB, Long Fiction> {Literature, Long Fiction}

Bonuses

1. One major involved in this battle would go on to perpetrate the Sand Creek Massacre. For 10 points each:

[10] Name this battle in which forces under John Slough and John Chivington prevailed at locations such as Apache Canyon. A key Union victory, it is often referred to as the “Gettysburg of the West.”

ANSWER: Battle of **Glorieta Pass**

[10] The Battle of Glorieta Pass took place in this territory, where they would later lose the Battle of Albuquerque. Stephen Kearny aided in setting up the early law code of this territory, whose capital was located at Santa Fe.

ANSWER: **New Mexico** Territory

[10] Kearny is perhaps better known for his controversial court martial of this man. This 1856 Republican Presidential nominee was a leader of the Bear Flag Revolt in modern California.

ANSWER: John Charles **Fremont** <AN, American History> {History, American History}

2. The skin effect results from these phenomena. For 10 points each:

[10] Name these loops of current in a conductor, also known as Foucault’s currents, named for their resemblance to flows of water.

ANSWER: **eddy** currents

[10] Eddy currents occur when a conductor is present in a changing one of these entities. Denoted B, these entities are produced by moving charges and have strength measured in Teslas.

ANSWER: **magnetic fields**

[10] Changing magnetic fields cause eddy currents by this law. The direction of the eddies is given by Lenz’s law, which provides the minus sign in this law.

ANSWER: **Faraday**’s law of induction <SL, Physics> {Science, Physics}

3. Answer some things about Sichuan [“**see-shwan**”] cuisine. For 10 points each:

[10] Sichuan cuisine is known for this distinct taste, which is often achieved in Sichuan cuisine with the use of peppercorn and chili oil. A bean paste can also provide Sichuan food with this taste. A description is fine.

ANSWER: **spicy** [accept obvious equivalents such as **hot**, accept ma **la**]

[10] One popular Sichuan dish is mapo [this foodstuff]. This foodstuff is traditionally used as a food offering when visiting the graves of deceased relatives because spirits have long lost their chins and jaws, and only this foodstuff is soft enough for them to eat.

ANSWER: **tofu**

[10] Another popular Sichuan dish that consists of thinly sliced beef and beef offal is named for people of this status. That name was coined after two street vendors with this status made that dish extremely popular.

ANSWER: **married** couple [accept **husband and wife**; do not accept or prompt on “couple”] <SZ, Geography> {Other, Geography}

4. This character implores Sagittarius to guide a hunter, who prepares a second arrow in case his son was killed under the orders of this character. For 10 points each:

[10] Name this Swiss tyrant who orders William Tell to shoot an apple off of his son Walter’s head after William refuses to salute his hat.

ANSWER: **Gessler**

[10] This German playwright, who also wrote a trilogy about Austrian general Wallenstein, authored *William Tell*.

ANSWER: Friedrich **Schiller**

[10] This play, Schiller’s first, sees Franz Moor disinherit his brother Karl, who is forced to kill his lover Amalia after turning to a life of crime.

ANSWER: *The **Robbers*** [or *Die **Räuber***] <WZ, Drama> {Literature, Drama}

5. One work in this medium depicts a head with many rays behind it emerging from the clouds while a man on the ground eats a book. For 10 points each:

[10] Name this medium used in the *Apocalypse* series, which includes a work depicting men on horseback holding a bow, a sword, scales and a trident.

ANSWER: **woodcut**

[10] The *Apocalypse* series was made to illustrate the Book of Revelation by this German Renaissance artist of *Melencolia I* (one) and *Knight, Death, and the Devil*.

ANSWER: Albrecht **Dürer**

[10] Dürer collaborated with Matthias Grünewald on a work of this type commissioned by Jakob Heller. Grünewald also painted one of these works for the Monastery of St. Anthony in Isenheim.

ANSWER: **altarpieces** <AMB, Visual Fine Arts> {Fine Arts, Visual Fine Arts}

6. Sometimes, the formula “one-half base times height” doesn't cut it. For 10 points each:

[10] Heron's formula for a triangle's area makes use of this quantity alongside the three side lengths. It is equal to the sum of the side lengths divided by two.

ANSWER: **semiperimeter** [prompt on s]

[10] The area can also be found by multiplying the semiperimeter by this quantity, the distance from the intersection of the angle bisectors to each of the sides.

ANSWER: **inradius** [accept equivalents such as the **radius** of the **incircle**]

[10] The semiperimeter is equal to the radius of one of the excircles of these triangles. Their area can simply be computed by taking half the product of the lengths of the legs because they have a 90-degree angle.

ANSWER: **right** triangle <SL, Math> {Science, Mathematics}

7. Answer some things about the spear Amenonuhoko [“**ah-MAY-no-nu-HOE-ko**”], for 10 points each:

[10] Amenonuhoko is the weapon of this god. While washing his face, this creator god gives birth to Tsukuyomi out of his right eye and Amaterasu out of his left eye.

ANSWER: **Izanagi-no-Mikoto**

[10] Izanagi, Tsukuyomi, and Amaterasu are part of this country's myth system. Legendarily, Izanagi used to Amenonuhoko to churn the oceans to create the first islands that became this country.

ANSWER: **Japan**

[10] Legendarily, this kami was created when Izanagi washed his nose, along with his sister, Amaterasu. He wields the sword *Kusanagi*, and is the kami of the sea.

ANSWER: **Susano'o-no-Mikoto** [accept “**his swift impetuous male augustness**”] <SZ, Mythology> {Beliefs, Mythology}

8. This group formed in 1768 in opposition to Stanislaw Poniatowski and foreign influence in their country. For 10 points each:

[10] Name this group of nobles which fought to defend the sovereignty of Poland-Lithuania. The chaos that ensued led the surrounding powers to engineer the First Partition of Poland.

ANSWER: **Bar Confederation**

[10] This nobleman in the Bar Confederation fled to France, and later America after its defeat in 1772. In America, he led the creation of cavalry units in the Continental Army before his death following the Siege of Savannah.

ANSWER: Casimir **Pulaski**

[10] The Bar Confederation was primarily revolting against this empire's influence. King Poniatowski had earlier been romantically involved with its empress, Catherine the Great.

ANSWER: **Russian** Empire <SL, European History> {History, European History}

9. In a sequel, this character enters “Siren of Babylon,” which proves to be both a dream and a nightmare. For 10 points each:

[10] Name this title character of two Gore Vidal novels. In the earlier novel, this camp enthusiast undergoes a clinical sex change and moves to California to teach at an Academy.

ANSWER: **Myra Breckinridge** [accept either underlined portion; accept **Myron** Breckinridge]

[10] Myra Breckinridge works in this industry. In *The Catcher in the Rye*, Holden’s brother D.B. moves to Hollywood to work in this industry.

ANSWER: **film** industry [accept equivalents like **movie** making; prompt on **entertainment**]

[10] In the sequel *Myron*, Myra is pressured to act like the “male” version of herself by a character based on this author of *The Executioner’s Song*.

ANSWER: Norman (Kingsley) **Mailer** <DP, Long Fiction> {Literature, Long Fiction}

10. Subjective idealism holds this concept to be the only thing that exists. For 10 points each:

[10] Name this concept, theories of which include ones which hold it to be non-physical, such as dualism.

ANSWER: **mind**

[10] This philosopher proposed that the mind and body are separate entities in his namesake dualism. He asserted the existence of his own mind with the statement “cogito ergo sum.”

ANSWER: René **Descartes** [“**day-carts**”]

[10] A common argument in favor of dualism regards the possibility of these entities, which are physically indistinguishable from humans but lack sentience or qualia.

ANSWER: philosophical **zombies** <SL, Philosophy> {Thought, Philosophy}

11. This composer’s final symphony in C major contains only one movement, while the first two movements of his fifth symphony were fused together. For 10 points each:

[10] Name this composer of seven symphonies who also composed the work *Finlandia*.

ANSWER: Jean **Sibelius**

[10] The third movement of Sibelius’s concerto for this instrument was called a “polonaise for polar bears.” That work’s first recording was done by Jascha Heifetz, a virtuoso of this instrument.

ANSWER: **violin**

[10] Sibelius’s violin concerto is in this note’s minor key, while Tchaikovsky’s is in its major key. Johannes Brahms also wrote his violin concerto in this note’s major key.

ANSWER: **D** [accept **D** major or **D** minor] <AN, Auditory Fine Arts> {Fine Arts, Auditory Fine Arts}

12. For all the hoots about owls, *Owls Do Cry*, as Janet Frame would tell you. For 10 points each:

[10] In the second part of *Owls Do Cry*, Daphne Withers narrates from one of these places. In another novel, the tyrannical Ratched rules over one of these places, which Chief Bromden believes is actually run by the mysterious Combine.

ANSWER: **asylum** [accept **mental** hospital; prompt on **hospital**; the latter clues are from *One Flew Over the Cuckoo’s Nest*.]

[10] In *Owls Do Cry*, Francie burns alive in a rubbish dump in this country. Keri Hulme, a novelist from this home country of Katherine Mansfield, used symbolism of the Maori people in her novel *The Bone People*.

ANSWER: **New Zealand** [or **Aotearoa**]

[10] *Owls Do Cry* takes its title from a song in this play. In a Martinican adaptation of this play, a character says his name is “given by hate” and demands to be called “X.”

ANSWER: *The **Tempête*** [or *Une **Tempête***, by Aimé Césaire; accept *A **Tempête***] <DP, Short Fiction/Other Literature> {Literature, Short Fiction/Other}

13. This agency's current chairwoman, Ellen Weintraub, published a June 2019 statement condemning potential candidates receiving campaign contributions from foreign nationals. For 10 points each:

[10] Name this independent agency that regulates campaign finances. An injunction filed by Citizens United against this agency led to a landmark 2010 Supreme Court Case.

ANSWER: **Federal Election Commission** [or **FEC**]

[10] *Citizens United* partially overturned a 2003 case brought by this Senator from Kentucky arguing that the Bipartisan Campaign Reform Act violated the 1st Amendment. He is the current Senate Majority Leader.

ANSWER: Mitch **McConnell**

[10] The Republican Party recently unveiled this online fundraising platform for individual donors to compete with ActBlue, a Democratic platform created in 2004.

ANSWER: **WinRed** <WZ, Current Events> {Other, Current Events}

14. This ruler began his political career as a cupbearer to Ur-Zababa of Kish. For 10 points each:

[10] Name this "great" king of Akkad who conquered his way across Mesopotamia to build the first significant empire in history.

ANSWER: **Sargon** of Akkad [accept **Sargon** the Great, **Sargon I**]

[10] Sargon built his empire after conquering much of this early civilization. Sargon's exploits were written on clay cuneiform tablets, a writing system pioneered by this first Mesopotamian civilization.

ANSWER: **Sumeria**

[10] Though ruling over the Sumerians, Sargon was likely a member of this foreign ethnic and linguistic group. These people, who inhabited regions such as Canaan, influenced the Sumerian language greatly with loanwords.

ANSWER: **Semites** [accept **Semitic** peoples] <CS, Ancient History> {History, Ancient/Other History}

15. The Casper strain of this model organism is popular in laboratory studies because of its transparent skin. For 10 points each:

[10] Name these striped tropical fish studied for their ability to regenerate a variety of cells.

ANSWER: **zebrafish** [or ***Danio rerio***]

[10] Among the cell types zebrafish can regenerate are cells of this organ. That regeneration occurs through cardiomyocyte proliferation and has the potential to treat human diseases of this organ that pumps blood.

ANSWER: **heart**

[10] During a period of zebrafish development, the embryo goes from the 4-cell to 64-cell stage by undergoing this process. This process is discoidal, telolecithal, and meroblastic in zebrafish.

ANSWER: **cleavage** <KL, Biology> {Science, Biology}

16. This psychologist's longtime collaborator Alexander Luria helped head a "Circle" named for this psychologist. For 10 points each:

[10] Name this psychologist who also theorized about learning through tasks that a child can only perform with the assistance of a "more knowledgeable other."

ANSWER: Lev Semionovich **Vygotsky** ("vie-got-ski") [or Lev Simkhovich **Vygodskii**]

[10] That theory is Vygotsky's idea of the "zone of proximal [this process]" Jean Piaget divided the cognitive variety of this process into sensorimotor, pre-operational, concrete operational, and formal operational stages.

ANSWER: child **development**

[10] Vygotsky also posited that "inner speech," which is speech of this kind, develops after children begin speech with others. Piaget's idea of "private speech" is also of this kind. A description is fine.

ANSWER: **to themselves** [accept talking **to yourself** or equivalents indicating the child is talking to themselves like **thinking out loud**] <AMB, Social Science> {Thought, Social Science}

17. For 10 points each, answer some questions about famous bridges in Chinese history:

[10] An incident on a bridge named after this man sparked the Second Sino-Japanese War after Japanese troops forced the town of Wanping to surrender. Rustichello Pisa wrote about this man's time in the court of Kublai Khan.

ANSWER: Marco **Polo**

[10] The Jade Belt Bridge was one of six distinctly-styled bridges built across Kunming Lake by this dynasty's Qianlong Emperor. The bridges originate from the Summer Palace, which was renovated by Cixi ["see-shi"] during this dynasty.

ANSWER: **Qing** ["ching"] Dynasty [accept **Manchu** Dynasty]

[10] During this event, Edgar Snow recounts how soldiers bravely crossed the Luding chain bridge under machine gun fire and defeated their opponents. This event took place following the Fifth Encirclement Campaign.

ANSWER: **Long March** <HP, World History> {History, World History}

18. Poems about trash are not necessarily trash. For 10 points each:

[10] The speaker of a poem in this collection beckons the reader "Let us disappear in automobile graveyards." That poem, "Junkman's Obligato," is featured alongside "I am waiting" in this collection.

ANSWER: *A **Coney Island of the Mind*** [by Lawrence Ferlinghetti]

[10] The speaker of this author's "Burning Trash" imagines a husband who "had two comforts he could see, just two." This author's poem "Ex-Basketball Player" is probably a reference to his character of "Rabbit" Angstrom.

ANSWER: John **Updike**

[10] In this poem's second section, "A Game of Chess," the speaker imagines that "[they] are in rat's alley / Where the dead men lose their bones." In its previous section, this poem's speaker meets Madame Sosostris.

ANSWER: *The **Waste Land*** [by T.S. Eliot] <HP, Non-Epic Poetry> {Literature, Non-Epic Poetry}

19. These musicians often tune to a shruti box or tanpura. For 10 points each:

[10] Name this type of musician, such as MS Subbulakshmi. These musicians use talams to keep time and can perform in forms such as varnams and kritis.

ANSWER: **singers** [accept **mouth** or voice or anything that indicates the musicians are **singing**; accept **vocalists**; prompt on, but DO NOT OTHERWISE REVEAL **Carnatic** musicians or **Indian** musicians]

[10] Singers in Carnatic music are traditionally accompanied by *mridangams*, which belong to this general class of instruments. The *mridangams* are used to keep beat and are not to be confused with the *tablas* of Hindustani music, which also belong to this class.

ANSWER: **drums** [accept **percussion**]

[10] *Mridangams* and *tablas* are from this country, the home of Hindustani and Carnatic music.

ANSWER: Republic of **India** <AN, Other Fine Arts> {Fine Arts, Other Fine Arts}

20. Almost every salt of this transition metal is insoluble or sparingly soluble in water due to the relatively high covalent character of the bond between the cation and anion. For 10 points each:

[10] Name this transition metal with symbol Ag.

ANSWER: **silver**

[10] Silver fluoride, on the other hand, is soluble in water due to fluorine's low value for this quantity, which measures how readily its electron cloud forms an induced dipole.

ANSWER: **polarizability** [do not accept "polarity"]

[10] The silver salt of this anion is also exceedingly water soluble. This anion has formula ClO_4^- and is a strong oxidizing agent due to having chlorine in its +7 oxidation state.

ANSWER: **perchlorate** <CT, Chemistry> {Science, Chemistry}