

2020 Matt Cvijanovich Memorial Tournament:

Edited by Ganon Evans, Jacob O'Rourke, William Grossman, Karthik Prasad, Stefan Calin, Eric Chang, Alex Dzurick, and Sean Phillips

Written by Lalit Maharjan, Arjun Gonuguntla, Michael Eng, Annie Lin, Shohom Chakraborty, Aditya Sivakumar, Ameya Singh, Bo Chi, Vishal Kanigicherla, Pratyush Jaishankar, Joshua You, Rohan Shelke, Aidan McWilliams, and generous submissions

Packet 4

1. Square butt and t-joints can be made using the electroslag and electrogas type of this technique in shipbuilding. A common method of this technique uses a tungsten electrode to send a current through a plasma. The “heat-affected zone” is an area where this technique alters the properties of the (*) alloy. The “arc” form of this process uses electricity to generate temperatures around 10,000 degrees Fahrenheit and requires the use of a hard face-shield with UV shades to protect from bright light and sparks. For 10 points, name this process in which high heat fuses metal together.

ANSWER: welding [accept arc welding; accept electroslag welding; accept electrogas welding; accept tungsten inert gas welding; prompt on “metalworking”] <Lalit Maharjan>/<ed. SC>

1. The Comanche Nation culturally broke away from this tribe through their adoption of horses. For 10 points each:

[10] Name this tribe, whose Chief Pocatello signed the Treaty of Box Elder with the U.S. government and began integrating with Mormon settlers after the Bear River Massacre.

ANSWER: Shoshone [prompt on Sheepeater Indians]

[10] Perhaps the most famous Shoshone is this woman, who joined the Lewis and Clark Expedition as an interpreter in 1804. This woman gave birth to her son Jean Baptiste Charbonneau on that journey.

ANSWER: Sacagawea [or Sakakawea]

[10] Pocatello names a city in this state. The Nez Perce homeland is mostly in this state, which is where Chief Joseph and his people began their journey to Canada.

ANSWER: Idaho <Ganon Evans>

Note to Moderators: Heed the Pronunciation Guides

2. After Tezcatlipoca [“tez-caht-lee-poke-uh”] accused Chalchiuhtlicue [“CHAL-chee-oot-lee-kway”] of faking her kindness, her tears drowned the world in this substance for 52 years. Quetzalcoatl [“ket-zal-co-aht-uhl”] covered bones stolen from the underworld in this substance to create the humans of the fifth world. This substance gave Huitzilopochtli [“huhwee-zil-oh-poach-tlee”] the strength to prevent the end of the world. (*) Aztec religious rituals would involve the bathing of idols in this substance, and accounts described walls plastered in this substance during those rituals. For 10 points, name this substance pumped by an organ removed during Aztec sacrifices.

ANSWER: blood <Lalit Maharjan>/<ed. EC>

2. Consuming this substance is said to change the blood in a mortal to *ichor* [“I-core”]. For 10 points each:

[10] Name this “food of the gods” often paired with nectar. This substance is often said to grant immortality or longevity.

ANSWER: **ambrosia**

[10] Psyche is given ambrosia so she could become immortal along with this love of hers. This man possesses a bow and arrow that causes anyone struck by the arrows to immediately fall in love.

ANSWER: **Cupid** [or **Eros**]

[10] Thetis rubs ambrosia on the corpse of this man, who was heavily implied to be a lover of her son. This hero killed Sarpedon, and after being struck by Euphorbos’ spear, he was killed by Hector.

ANSWER: **Patroclus** <Lalit Maharjan>/<ed. EC>

3. While walking through the Beautiful Gate with John, this figure heals a disabled man. In Acts, this man washes the feet of Cornelius the Centurion, and in doing so, converts the first Gentile to Christianity. Along with John and James, this man was one of Jesus’ closest “pillars.” In Matthew 16:18, Jesus tells this man that he is the (*) “rock on which I will build my church.” This man, who was crucified upside-down, is often depicted holding the keys to heaven. Simon was the previous name of, for 10 points, what apostle who denied Jesus three times and is considered the first Pope?

ANSWER Simon **Peter** [prompt on Simon before mention] <Religion> <Ganon Evans>

3. Answer the following about the usage of planes during World War II. For 10 points each:

[10]The Mitsubishi Zero which was developed in this country possessed a notoriously thin aluminum skin which allowed it to be agile at the cost of protection. This country encouraged kamikaze pilots three years after it bombed Pearl Harbor.

ANSWER: Empire of **Japan** [or **Nippon**-koku; or **Nihon**]

[10] During the Battle of Britain, this German air force led by Hermann Göring failed to break Royal Air Force superiority. This air force developed the *stuka* dive bomber.

ANSWER: **Luftwaffe**

[10] An important contribution to the RAF’s victory in the Battle of Britain was the development of this R.J. Mitchell designed aircraft which succeeded the Hurricane as the backbone of British air forces.

ANSWER: Supermarine **Spitfire** <Michael Eng>/<ed. GE>

4. During this conflict, the destruction of stone statues sacred to Hermes prompted outrage which enabled Gylippus’s landing. During the Second Battle of Syracuse in this conflict, a lunar eclipse created mass panic amongst retreating triremes. The Decelean War began after (*) Alcibiades’s [“al-suh-bi-uh-dees-uhs”] disastrous Sicilian Expedition in this larger conflict. This war contained an armistice called the Peace of Nicias, and Lysander won its main naval battle at Aegospotami [“egos-spot-uh-my”]. During this war, a leader gave the Funeral Oration and died from a plague; that leader was Pericles. Thucydides chronicled, for 10 points, what war between Athens and Sparta?

ANSWER: **Peloponnesian** War [prompt on the Sicilian Expedition with “During what conflict did that occur?”] <Shohom Chakraborty>/<ed. GE>

4. This country's golden Neutrality Monument of its first president once rotated to face the sun. For 10 points each:

[10] Name this country, whose first president Saparmurat Niyazov instituted bizarre totalitarian laws such as renaming its calendar months and dates after himself and banning gold teeth.

ANSWER: **Turkmenistan** [or **Turkmenia**]

[10] Niyazov was the first President of Turkmenistan after the dissolution of this larger country in 1991. This communist superpower instituted Russian as an official language over Central Asia.

ANSWER: **Soviet Union** [or **Union of Soviet Socialist Republics**; or **USSR**; or **CCCP**; prompt on **Russia**]

[10] One of Niyazov's reforms was introducing a Latin alphabet for Turkmen, replacing the Russian alphabet named for this Orthodox saint. This scholar's development of his namesake simplified alphabet is credited with helping Christianize Slavic peoples in the 800's.

ANSWER: Saint **Cyril** [accept **Cyrillic**] <Ganon Evans>

5. Three of these beings nearly kill a man sent to broker a real estate transaction for Peter Hawkins of Exeter. One of these beings attacks the crew of the Russian ship *Demeter* one-by-one. That being is tracked down by a Dutch professor (*) using hypnosis. Quincey Morris kills one of these beings by stabbing it in the heart with his Bowie knife. Abraham Van Helsing determines Lucy Westenra was attacked by one of these beings after noticing two small wounds in her neck. For 10 points, name this supernatural creature exemplified by the Transylvanian Count Dracula.

ANSWER: **vampire** [accept Count **Dracula** until read] <Lalit Maharjan>/<ed. WG>

5. The insertion of the "Hopscotch" transposon in teosinte branched 1 acts as an enhancer of gene expression and explains the increased apical dominance in this organism. For 10 points each:

[10] Name this important genetic model organism, 85% of which is composed of transposons such as the Ac/Ds system, whose B73 strain was sequenced in 2008.

ANSWER: **Zea mays** [or **corn**; accept **maize**]

[10] The Ac/Ds system was discovered on the ninth one of these structures in *Zea mays* whose namesake instability involves breakage of their telomeres followed by fusion of sister chromatids. These structures are composed of condensed DNA.

ANSWER: **chromosomes** [accept **chromosomal** instability]

[10] This scientist discovered the BFB cycle of chromosomal instability as well as the Ac/Ds system in maize. She also used chromosomal knob markers to validate her transposon theory of "jumping genes."

ANSWER: Barbara **McClintock** <Stefan Calin>/<ed. SC>

6. The uptake of phosphorus and nitrogen in these systems is described as "nutrient spiralling." These systems can be described by a continuum concept, which categorizes consumers into shredders, collectors, and grazers. Abandonment of these systems and formation of new ones occurs via (*) avulsion and they contain lotic ecosystems. These systems are bordered by riparian zones. When the meanders of these bodies are cut off, oxbow lakes are formed, and these entities deposit sediment at their deltas. For 10 points, identify these aquatic ecosystems exemplified by the Mississippi.

ANSWER: **rivers** [accept **streams**] <Stefan Calin>/<ed. SC>

6. Stories in this work include one where Federigo wins the hand of a maiden after cooking his prized pet falcon and another where Griselda gives up her children to prove her loyalty. For 10 points each:

[10] Name this collection of stories told by a group of travelers from Florence over the span of ten days to pass time while escaping the Black Death.

ANSWER: *The **Decameron***

[10] *The Decameron* was written by Giovanni Boccaccio, a 14th-century author from this country also home to Dante Alighieri.

ANSWER: **Italy** [accept the **Italian** Republic or Republic of **Italy**]

[10] This character in *The Decameron* usually tells the last tale of each day and therefore does not have to oblige to the rules of the theme of the day. He is seen by many as Boccaccio himself in the story.

ANSWER: **Dioneo** <Eric Chang>/<ed. WG>

Note to players: Description Acceptable.

7. The Pigeon League opposed this idea. After being interrogated about this idea, one man allegedly mused “Eppur si muove.” Thomas Kuhn primarily examined this non-chemistry idea as an example of a major paradigm shift in *The Structure of Scientific Revolutions*. To reconcile the old (*) Ptolemaic model with this one, Tycho Brahe developed his Tychonic system. Galileo was tried and put under house arrest for supporting this idea. Nicolas Copernicus pioneered, for 10 points, what now established fact about Earth’s place in the solar system?

ANSWER: **heliocentrism** [accept answers indicating that the **Earth revolves around the Sun** or **the Sun is at the center of the solar system**; accept the **Copernican** Model before mention] <Lalit Maharjan>/<ed. GE>

7. When asking God about this condition, a poet receives the answer of “who best bear his mild yoke, they serve him best.” For 10 points each:

[10] Name this condition, which is considered in a poem which laments a “talent which is death to hide/lodged with me useless.”

ANSWER: **blindness** [accept “On His **Blindness**,” accept word forms such as being **blind**; prompt on descriptive answers such as being **unable to see** with “What is the name for that condition?”]

[10] This poet of “When I Consider How My Light Is Spent” had his daughters Ann, Mary, and Deborah transcribe many of his poems, such as “Il Penseroso” and a pastoral elegy dedicated to Edward King titled “Lycidas.”

ANSWER: John **Milton**

[10] Milton dictated this epic poem which describes Adam and Eve’s temptation. Satan proclaims “it is better to rule in hell than serve in heaven” from his palace in Pandemonium in this poem.

ANSWER: **Paradise Lost** <Ganon Evans>/<ed. WG>

8. In one story by this author, two men find a filled purse and one tells the other to “stick to your ‘I’” since “you would not say ‘we’ before.” A crow in one of this author’s stories drops stones in a pitcher of water so he can drink it. A story by this author is resolved when a fox dismisses the (*) grapes he cannot reach as being sour. This author wrote of a boy who isn’t believed when he cries about a wolf and also told of a hare whose overconfidence causes him to lose a race to a tortoise. For 10 points, name this Greek storyteller of numerous fables.

ANSWER: **Aesop** <Lalit Maharjan>/<ed. WG>

8. The Komabayashi-Ingersoll limit represents the maximum amount of solar flux a planet can receive with flat outgoing radiation without undergoing this phenomenon. For 10 points each:

[10] Name this phenomenon in which an accumulation of carbon dioxide and other gases prevent thermal radiation from a planet, creating an increasingly hot surface.

ANSWER: **runaway greenhouse** effect [prompt on “greenhouse effect”]

[10] This planet’s runaway greenhouse gas effect resulted in it having the highest temperature in the Solar System. Maxwell Montes is found on this second planet from the Sun.

ANSWER: **Venus**

[10] In 2020, scientists using the JCM Telescope detected phosphine in the Venusian atmosphere, possibly meaning that there exists life beneath the clouds of this compound that blanket it.

ANSWER: **sulfuric acid** [or **H₂SO₄**] <Ganon Evans>/<ed. SC>

9. In an oratorio by this composer, a bass soloist emulates a plowman whistling the second movement of one of this composer’s earlier symphonies. This composer was the court musician for the Esterházy family. The first oboe and second horns in a symphony by this composer are the first to (*) blow out candles as they leave the performance stage during its finale. This composer also wrote a symphony that contains a sudden G major fortissimo chord intended to awake the audience. For 10 points, name this Austrian “Father of the Symphony” whose 105 symphonies include the “Farewell” and “Surprise.”

ANSWER: Franz Joseph **Haydn** <Ganon Evans>/<ed. KP>

9. The permitted energy levels of these models increase proportionally to “n-squared.” For 10 points each:

[10] Name this model in quantum mechanics consisting of a particle trapped in between impenetrable barriers.

ANSWER: **particle in a box** [or **infinite potential well**, or **infinite square well**]

[10] The permitted energy levels of the particle in a box model are found by solving a wave equation created by this Austrian scientist who also conjured a famous thought experiment in quantum mechanics.

ANSWER: **Schrodinger** equation

[10] The “particle in a box” model applies to quantum dots, extremely small examples of these materials whose properties lie in between those of a conductor and insulator.

ANSWER: **semiconductor** <Lalit Maharjan>/<ed. SC>

10. This operation is performed on the action to yield the Lagrangian, while force equals the negative of this operation performed on potential energy. The sinusoidal motion of simple harmonic oscillation can be found by solving an equation that sets “negative k-x over m” equal to this operation performed twice on “x”. Net force equals this operation performed on (*) momentum according to Newton’s Second Law. Performing this operation with respect to time on velocity yields acceleration. For 10 points, name this operation from calculus contrasted with an integral.

ANSWER: **derivative** [accept **differentiation**; accept specific answers like “time **derivative**” or “**derivative** with respect to position,” generously prompt on answers like “finding the slope” or “finding the rate of change”] <Lalit Maharjan>/<Ed. SC>

10. “He who makes great thoughts, often makes great errors” but can you avoid those errors by naming the philosopher attributed to certain famous quotes? For 10 points each:

[10] This Spanish-American author wrote *Scepticism* and *Animal Faith* and said, “Those who cannot remember the past are condemned to repeat it.”

ANSWER: George **Santayana** [or Jorge Agustín Nicolás Ruiz de **Santayana** y Borrás]

[10] This early Greek philosopher wrote *On Nature* but is perhaps better remembered for stating “No man ever steps in the same river twice.”

ANSWER: **Heraclitus** of Ephesus

[10] *Cogito, ergo sum* or “I think, therefore I am” was proposed by this French philosopher and mathematician. His works include *Passions of the Soul* and *Discourse on the Method*.

ANSWER: René **Descartes** <Eric Chang>

11. In this play, a character remarks “Nothing’s planted. I don’t have a thing in the ground” in reference to a sudden desire for gardening during a discussion at Frank’s Chop House. That character in this work gives a pair of silk stockings to The Woman during an affair in Boston that was seen by his son, who (*) steals objects like Bill Oliver’s fountain pen and a football. After being fired from his job, this play’s protagonist commits suicide to obtain insurance money for his family. For 10 points, name this play centering around Linda, Happy, Biff, and Willy Loman, by Arthur Miller.

ANSWER: ***Death of a Salesman*** <Eric Chang>/<ed. WG>

11. Russian composers have frequently included fast, difficult pieces in their repertoire. For 10 points each:

[10] An excerpt from Nikolai Rimsky-Korsakov’s *Tale of Tsar Sultan* uses rapid sixteenth-note chromatic scales around E to imitate buzzing and depict the “Flight” of one of these insects.

ANSWER: bumble**bee** [or **shmel**; accept “Flight of the Bumble**bee**”]

[10] The overture to this composer’s opera *Ruslan and Ludmila* has a tempo of 140 per half note and an unusual F major second theme. This “Father of Russian Classical Music” composed *A Life for the Tsar*.

ANSWER: Mikhail **Glinka**

[10] This composer’s fast Piano Concerto no. 3 is widely considered to be one of the most difficult piano pieces written. This composer created 24 variations on a violin caprice in his *Rhapsody on a Theme of Paganini*.

ANSWER: Sergei **Rachmaninoff** <Ganon Evans>/<ed. KP>

12. The only cast of this work created by the lost-wax method was first displayed at the St. Louis World’s Fair in 1904 before being given to the University of Louisville. This work resembles Michelangelo’s statue of Lorenzo de Medici, and a portion of it was destroyed by a fanatic named (*) Poitron. Originally, the name of this sculpture was *The Poet* as a reference to Dante. Initially part of its artist’s *The Gates of Hell* series, for 10 points, name this bronze sculpture by Auguste Rodin that shows a nude male sitting on a rock with his head resting on the back of his hand.

ANSWER: *The **Thinker*** [or *Le **Penseur***] <Eric Chang>/<ed. EC>

12. This politician rose to prominence after he carried the skull of a girl shot by government forces in Ciénaga to his country's Congress. For 10 points each:

[10] Name this politician, whose 1949 assassination triggered a ten year civil war between his country's Conservatives and Liberals called La Violencia.

ANSWER: Jorge Eliécer **Gaitán** Ayala

[10] La Violencia took place in this Latin American country. Pablo Escobar's Medellín Cartel operated out of this country, which was where Gaitán served as the Mayor of Bogota.

ANSWER: Republic of **Colombia**

[10] In the aftermath of La Violencia, this Marxist rebel group formed after an attack on the Marquetalia enclave. In 2016, Juan Manuel Santos signed a ceasefire with this group once led by Timochenko.

ANSWER: **FARC-EP** [accept **Fuerzas Armadas Revolucionarias de Colombia** or **Revolutionary Armed Forces of Colombia**] <Shohom Chakraborty>/<ed. GE>

13. While receiving a gold medal, this athlete once threw a bouquet of flowers after a bee flew out. This highest-scoring member of the Final Five has been coached by Aimee Boorman since age 8. At the Rio Olympics, this athlete met her crush, Zac Efron. This athlete's (*) 30 medals place her behind Vitaly Scherbo and Larisa Latynina to becoming the most awarded athlete in her sport. Two routines named after this athlete include a double backflip with three twists and a double-twisting double backflip off a balance beam. For 10 points, name this most decorated American gymnast.

ANSWER: Simone **Biles** <Shohom Chakraborty>/<ed. SP>

13. One character in this play asks, "Does anyone ever realize life while they live it...every, every minute?" to which another character responds, "No. Saints and poets maybe." For 10 points each:

[10] Name this play set in Grover's Corners that features the Stage Manager explaining the story of George Gibbs and Emily Webb, who relives her twelfth birthday upon her death.

ANSWER: ***Our Town***

[10] This American playwright wrote *Our Town* as well as a play about the Antrobus family, *The Skin of Our Teeth*.

ANSWER: Thornton **Wilder**

[10] Wilder also wrote a novel about the collapse of one of these structures that leads to the death of Marquesa de Montemayor. Hart Crane wrote an epic poem titled after one of these structures in New York.

ANSWER: **bridges** [accept *The **Bridge** of San Luis Rey* or "The **Bridge**"] <Eric Chang>/<ed. WG>

14. In this body of water, the theme park Blackgang Chine can be found on an island that hosts a garlic festival in the town of Ryde. Jersey and Guernsey cows are native to islands in this body of water which is also home to the Isle of Wight. The culturally Gallic regions of Cornwall and (*) Brittany are separated by this body of water. Traversing this body of water is a notable solo swimming feat, but many travelers use its namesake tunnel instead to cross from Folkestone to Calais. For 10 points, name this body of water which separates France and the United Kingdom.

ANSWER: the **English Channel** [accept La **Manche**] <Ganon Evans>/<ed. AD>

14. Players of this game perform tasks such as emptying a garbage shoot or a Medbay Scan on maps like The Skeld and Mira HQ. For 10 points each:

[10] Name this online social deduction game in which Imposters try not to “act sus” and get ejected into outer space.

ANSWER: **Among Us**

[10] In a typically bizarre 2020 moment, xQc, JackSepticEye, Alexandria Ocasio-Cortez, and Jagmeet Singh played Among Us together over this online streaming platform. In January 2021, this streaming platform banned the “PogChamp” emote after the January 6th storming of Congress.

ANSWER: **Twitch**.tv

[10] AOC played with this Twitch streamer whose fibromyalgia causes him to have an incredibly deep voice. This streamer released the songs “Agoraphobic” and “E-Girls are Ruining My Life!”

ANSWER: **Corpse** Husband <Ganon Evans>

15. Nahum Tate wrote a happier *History* of this play that ends with a character declaring “truth and virtue shall at last succeed.” One character in this play tricks his father into believing that he jumped off of a cliff, but that deception only works because his father’s eyes had earlier been plucked out with the cry (*) “Out, vile jelly!” The line “Blow, winds, and crack your cheeks! rage! Blow!” is cried in a fit of rage as the title character is outcast during a rainstorm in this play by Regan and Goneril. For 10 points, name this Shakespeare tragedy in which the title king splits up his kingdom between his daughters.

Answer: **King Lear** <Karthik Prasad>/<ed. WG>

15. Answer the following about immigration to Minnesota in recent history. For 10 points each:

[10] Many immigrants from this country moved to Minneapolis after this African country erupted in civil war in 1991. Ilhan Omar, a Minnesota congresswoman, was born in this country’s capital of Mogadishu.

ANSWER: **Somalia**

[10] Walter Mondale encouraged mass immigration of this ethnic group from Laos during the Vietnam War. Members of this group were featured in the film *Gran Torino*.

ANSWER: **Hmong** [accept **Hmoob**]

[10] The fastest growing population of immigrants to Minnesota are the Karen people from this country. Rohingya Muslims in this country’s Rakhine State are under persecution.

ANSWER: **Myanmar** [accept **Burma**] <Ganon Evans>/<ed. AD>

16. This city pardoned a man who had taken the Pledge of the Tree outside of it through the Treaty of Hudaibiya. A man originally from this city lost his uncle and wife Khadijah in the “Year of Sorrows.” To evade a plot by the Quraysh tribe of this city, (*) Ali impersonated his cousin to allow him to escape at night. Ibn Battuta initially set off only for this city but later traveled the world. The Hijrah was an event where a prophet and his followers fled from this city to Medina. For 10 points, Muhammad hailed from what holy city in Saudi Arabia?

ANSWER: **Mecca** <Lalit Maharjan>/<ed. GE>

16. In this novel, Nurse Ratched threatens to tell Billy Bibbit's mother that he lost his virginity on a fishing trip with the prostitute Candy. For 10 points each:

[10] Name this Ken Kesey novel. Chief Bromden smothers the lobotomized Randle McMurphy and escapes from a mental asylum at the end of this novel.

ANSWER: ***One Flew Over the Cuckoo's Nest***

[10] Ken Kesey and his Merry Pranksters are followed by this author in his book *The Electric Kool-Aid Acid Test*. In a novel by this author, Peter Fallow wins a Pulitzer Prize for covering the heavily racialized hit-and-run of Henry Lamb in his novel *The Bonfire of the Vanities*.

ANSWER: Tom **Wolfe** [or Thomas Kennerly **Wolfe** Jr.]

[10] Wolfe pioneered the immersive "New" style of this literary genre. Hunter S. Thompson developed the "gonzo" style of this literary genre by heavily immersing himself in stories that he wrote for newspapers such as *The New York Times*.

ANSWER: **journalism** [accept New **Journalism** or gonzo **journalism**; accepting words forms such as **journalists**; prompt on **reporting**] <Ganon Evans>/<ed. WG>

17. In a photograph "still life" from this country, busts of Cupid rest beneath a wine sack. A popular lithograph depicts an artist from this country in a balloon "elevating photography to new heights." Photos of a bicyclist zipping past a stairwell and a man jumping over a puddle in this country embodied an artist's idea of the (*) "decisive moment." A man having his shoes shined in this country was the first photograph of a person; that picture was taken by the inventor of the Daguerreotype ["dag-geyr-oh-type"] in this country. For 10 points, name this home country of the photographers Nadar and Henri Cartier-Bresson ["on-REE car-tee-YAY bre-SON"].

ANSWER: **France** <Ganon Evans>/<ed. EC>

17. For 10 points each, answer some questions about dogs in psychology.

[10] This Russian psychologist used a bell to stimulate saliva from dogs in a famous experiment as part of his work on classical conditioning.

ANSWER: Ivan Petrovich **Pavlov**

[10] Martin Seligman developed this theory in his experiment administering electric shocks to dogs grouped in pairs. One dog was given the ability to stop the shock with a lever, while its partner did not.

ANSWER: **learned helplessness**

[10] The Kinderschema is a model to explain why features associated with dogs, such as large eyes and round faces, are often rated higher on this subjective perception along with children and rabbits.

ANSWER: **cuteness** [prompt on **lovable**, **adorable**, or **attractive**] <Eric Chang>/<ed. AD>

18. This doctrine could be narrowly tailored to further compelling governmental interests in the case *Adarand v. Peña*. The Philadelphia Plan was an example of this policy, where a points-based version of it was ruled unconstitutional in *Gratz v. Bollinger*. Abigail Fisher's lawsuits against the (*) University of Texas in 2013 and 2016 challenged this policy. Quotas in this doctrine were outlawed in the 1978 *Regents of the University of California v. Bakke* decision. For 10 points, name this controversial doctrine that favors and supports disadvantaged groups in employment and admission.

ANSWER: **affirmative action** <Ameya Singh>/<ed. GE>

18. This painting, first revealed at the Centennial Exhibition shows a man in the back furiously writing notes in a very large book and a woman covering her eyes in horror. For 10 points each:

[10] Name this painting, which depicts the namesake man using a metal stick with blood to perform a certain operation.

ANSWER: *The **Gross Clinic***

[10] This Pennsylvanian artist painted *The Gross Clinic* and was known for being a strong advocate of realism. Some of his other works include *The Agnew Clinic* and *Max Schmitt in a Single Scull*.

ANSWER: Thomas **Eakins**

[10] This other painting by Eakins, located at the Amon Carter Museum, shows a group of six nude men at the title location in Dove Lake.

ANSWER: The **Swimming Hole** [accept **Swimming** or *The **Old Swimming Hole***]

<Shohom Chakraborty>/<ed. EC>

19. A language used for developing these things is interpreted by the Zend engine and appends a dollar sign to all variables. Python’s BeautifulSoup library is used to gather information from these things. Sergey Brin co-invented an algorithm that ranks these things based on number of (*) links. Ruby on Rails and PHP are languages for developing these things. A uniform resource locator for these things is linked to IP addresses using the domain name system. JavaScript is used to make these things interactive. For 10 points, name these things designed using CSS and HTML.

ANSWER: **webpage** [or **website**, accept **web application**, accept **web server**, accept **PageRank** even though the “Page” in that term doesn’t refer to a webpage, prompt on “search results”, generously prompt on “internet”] <Lalit Maharjan>/<ed. SC>

19. This sect was founded by George Fox, and practitioners are often known for their pacifism. For 10 points each:

[10] Name this predominantly American religious denomination often called the Society of Friends, who are said to tremble in the name of the lord.

ANSWER: **Quakers**

[10] “Unprogrammed” Friends meetings for worship are often conducted with a significant portion in this manner, allowing participants to hear the “still small voice” of God.

ANSWER: **silent** [accept synonyms and word forms such as remaining **quiet** or **not speaking**]

[10] This New England group persecuted Quakers for their lack of emphasis on sacraments and difference in religion. This group is known for strict piety, from which stemmed the Salem witch trials.

ANSWER: **Puritans** <Religion> <Vishal Kanigicherla>/<ed. GE>

20. Partnership with a firm in this industry led to a 40 percent reduction in emergency room utilization under Medicaid’s NEMT policies. Firms in this industry raised \$181.4 million to pass Proposition 22. Two firms in this industry threatened to pull service from California in August 2020 in response to legislation classifying their (*) independent contractors as employees. A blog post by Susan Fowler led Travis Kalanick to resign as CEO of one firm in this industry. The taxi industry is threatened by, for 10 points, what industry dominated by Lyft and Uber?

ANSWER: **ridesharing** [accept word forms; accept **ride-hailing**, **app-taxi**, **e-taxi**, or a **mobility service provider**; accept a **T**ransportation **N**etwork **C**ompany; prompt on **taxi**s alone before mention] <Ganon Evans>/<ed. AD>

20. This element acts as a sacrificial anode in the process of galvanization, where it is electroplated onto steel. For 10 points each:

[10] Name this silvery-gray transition metal with symbol Zn.

ANSWER: **zinc**

[10] The plating of zinc onto iron is an endergonic reaction since zinc is higher in this series. Alkali metals such as lithium appear at the top of this list and unreactive metals such as platinum appear at the bottom.

ANSWER: **activity** series [or **reactivity** series]

[10] The activity series depicts either an oxidation or reduction reaction component which are reactions of this type. Two of these reactions add up to form a redox reaction.

ANSWER: **half** reaction <Michael Eng>/<ed. SC>