

COLLABORATIVE ACADEMIC SPRING TOURNAMENT 2019

Edited by Alston Boyd, Eric Mukherjee, Jacob O'Rourke, Jakob Myers, Kai Smith, and Olivia Lamberti.

Written by Akshay Govindan, Arjun Nageswaran, Deepak Moparthi, Eric Mukherjee, Geoffrey Chen, Govind Prabhakar, Jacob Augelli, Jakob Myers, Moses Schindler, Noah Sheidlower, Olivia Lamberti, Raj Paul, Vishwa Shanmugam, and William Golden.

PACKET 6 TOSSUPS

1. **People of this type were transported on unmarked freighters called “hell ships.” Joseph Dietrich oversaw a massacre of 84 people of this type near the Belgian town of Malmedy. One person of this type was displayed naked in a tiger cage at the Ueno Zoo, and Roger Bushell led 76 of these people through the “Harry” tunnel in a “Great (*) Escape” from Stalag Luft III. Louis Zamperini recounted his experiences as one of these people in his memoir *Unbroken*, in which he survives a B-29 crash before being placed in a Japanese work camp for the remainder of World War II. For 10 points, give this term for soldiers or civilians captured by enemy troops during an armed conflict.**

ANSWER: **prisoners of war** [or **POWs**; accept specific answers such as **Allied POWs** or **American POWs** or **POWs** captured by the **Axis** powers; prompt on **prisoners**; prompt on **romushas** before “Malmedy”] <JA>

2. **A standard reading for this holiday is Genesis 3:19, the source for the most common practice on this holiday. The equivalent of this holiday in the Orthodox Church is Clean Monday. In the Catholic Church, this holiday is the first on which the Alleluia is not sung before the Gospel. This holiday’s central practice uses the leftovers of (*) Palm Sunday services, reflecting the fact that sinners “are dust and to dust [they] shall return.” For 10 points, name this first day of Lent observed by some Western Christians with dark crosses drawn on their foreheads, the day after Fat Tuesday.**

ANSWER: **Ash Wednesday**

3. **Immune attack on these cells results in a disease in which an LP shows albuminocytologic (“AL-byoo-MIN-oh-SIGH-toe-logic”) dissociation, called Guillain-Barré (“ghee-YAN bah-RAY”) syndrome. These cells are produced throughout life in the dentate gyrus (“JI-rus”) and the subventricular zone. The disordered protein alpha-synuclein (AL-fuh sin-NEW-clee-in) can aggregate inside these cells. Oligodendrocytes (“AH-lee-go-DEN-droh-sites”) produce a fatty substance which (*) covers these cells. Glial (“GLEE-ull”) cells provide support for these cells. These cells release glutamate, GABA, and many other neurotransmitters at their synaptic terminals. For 10 points, name these cells containing dendrites and axons, which make up the nervous system.**

ANSWER: **neurons** <AG>

4. **These entities can be identified based on their F1 and F2 formants. Two of these constructs occurring next to each other sometimes form a hiatus. Rhotic (“ROH-tik”) examples of these constructs occur when they follow the letter “R.” The diachronic (“die-uh-CRAW-nik”) assimilation of these entities that leads them to become similar is referred to as their namesake (*) “harmony.” Otto Jespersen noted that these constructs underwent a gradual increase in height during their “Great Shift.” A combination of these entities results in a diphthong (“DIP-thong”), and features of these constructs include backness and roundness. For 10 points, name these sounds produced by the open vocal tract which are contrasted with consonants.**

ANSWER: **vowels** <NS>

5. **During this dynasty, an argument over the cost of bamboo poles led to a Muslim uprising in the Dungan Revolt. In this dynasty, households were divided into systems of eight banners maintained by the descendants of Nurhaci. A country's "Century of Humiliation" began after this dynasty was forced to sign a series of (*) "unequal treaties." Its rule ended after the three year old emperor Puyi was forced to step down. The British fought two wars with this dynasty over opium. It came to power after Manchus overthrew the Ming in 1644. For 10 points, name this last ruling dynasty of China.**

ANSWER: Qing dynasty <WG>

6. **This author described the title figure as having "nocturnal visions" in a poem beginning "My impoverished muse, alas!" This author of "The Sick Muse" discussed the concept of *flaneur* "(flah-NOOR)" in the essay "The Painter of Modern Life." He depicted animals whose "great white wings drag beside them like oars" in one poem, and addressed the (*) "hypocrite reader" in a poem that addresses the concept of *ennui* ("ahn-WEE"). This author of "The Albatross" divided his major poetry collection into the sections "Wine," "Revolt," and "Spleen and Ideal." For 10 points, name this Parisian poet of "To the Reader" which was included in his *Les Fleurs du Mal*.**

ANSWER: Charles Baudelaire [or Charles Pierre Baudelaire] <NS>

7. **An A-flat major concerto for this instrument was inspired by Armenian folk music and was composed by Alexander Arutunian ("ARE-rue-TWO-nee-an"). Jean-Baptiste Arban published a famous pedagogical method book for teaching this instrument. This instrument's "piccolo" variety was popularized in Baroque works like *Brandenburg Concerto No. 2*. Following a percussion introduction, this instrument plays rising notes F B-flat F to open (*) Copland's *Fanfare for the Common Man*. This instrument's "Voluntary" by Jeremiah Clarke is often played at weddings. For 10 points, name this highest-pitched brass instrument played by Wynton Marsalis and Louis Armstrong.**

ANSWER: trumpet <NS>

8. **The arrangements of these molecule's substituents can be isotactic, syndiotactic, or atactic. The degree of reactions producing these molecules can be calculated as one over the quantity one minus p according to the Carothers ("ker-OTHERS") equation. Production of these molecules occurs either in step growth or chain growth mechanisms. These products are graphically depicted by a molecule in (*) parentheses with a subscript of n. Polyethylene ("POL-ee-ETH-uh-leen") is a common example of these substances, which also include Kevlar and Nylon. For ten points, what molecules are composed of repeated monomer units?**

ANSWER: polymers <AG>

9. **One campaign ad in this state's 2016 senate election featured a candidate assembling an AR-15 blindfolded. That candidate, Jason Kander, served as mayor of a city in this state. This state passed a ballot measure banning "right to work" laws in 2018. This state's senior senator is Roy (*) Blunt, and after being indicted for invasion of privacy, this state's governor, Eric Greitens resigned from office. This state's former attorney general, Josh Hawley, defeated its incumbent Democratic senator, Claire McCaskill, in the 2018 midterms. For 10 points, name this state governed from Jefferson City.**

ANSWER: Missouri <GP>

10. **In one novel, this character is shot in the leg during the execution of his intricate plan that involved snakes and a sheet ladder. After accidentally revealing his engagement to Amy Lawrence, he visits a graveyard where he witnesses the framing of Muff Potter. This resident of St. Petersburg becomes trapped with his love interest in McDougal's Cave, where the villainous (*) Injun Joe later starves to death. As punishment for skipping school, this character's Aunt Polly forces him to whitewash a fence. For 10 points, name this friend of Huckleberry Finn and mischievous title character of a novel by Mark Twain.**

ANSWER: Tom Sawyer [accept either underlined name] <RP>

11. **One enemy of this man can hear a deer stir in the forest from sixty leagues away. At a wedding, this man attempts to sleep with a bride before the groom, although he is fought off by another man. This man ties stones to his feet to retrieve an immortality-granting plant at the (*) bottom of the sea, which is later stolen by a serpent. This man, who is two thirds god, rejects the goddess Ishtar after defeating Humbaba in the Cedar Forest with the help of Enkidu. For 10 points, name this King of Uruk who is the subject of a Mesopotamian epic.**

ANSWER: Gilgamesh <GC>

12. **In this country, abortion was legalized by the Veil Law. Thousands of women from this country marched on a royal palace due to the high price of bread. Gossip about a ruler from this country led to the Affair of the Diamond Necklace, and that ruler was later caught attempting to flee to Varennes (“vah-REN”). In this country, Charlotte (*) Corday murdered a member of the Jacobins in his bathtub. A peasant girl told by God to fight for this country during the Hundred Years’ War was later burned at the stake. For 10 points, name this country, where “Let them eat cake” was probably not said by its queen, Marie Antoinette.**

ANSWER: France <WG>

13. **A photographer in one of this author’s plays is mocked by a group of dancing girls who call his camera a “one-eyed box.” This translator of Euripides’ *The Bacchae* (“BAK-eye”) wrote of how Death discovered the Not-I Bird in another of his plays. In a play by this author, the teacher Lakunle (“lah-KOON-lay”) is devastated after (*) Sidi (“SEE-dee”) marries Chief Baroka. Olunde commits ritual suicide instead of his father Elesin (“eh-lee-shin”) in one of this author’s plays, in which a policeman discovers Simon Pilkings wearing robes used for the *egungun* ceremony. For 10 points, identify this Nigerian playwright of *The Lion and the Jewel* and *Death and the King's Horseman*.**

ANSWER: Wole Soyinka [accept Akinwande Oluwole Babatunde Soyinka] <NS>

14. **The magnitude of this force can be calculated as two times mass times velocity crossed with angular velocity. This force’s namesake frequency can be calculated as twice the rotation rate times the sine of latitude. Ekman spirals are formed when currents experience this force. Hurricanes don’t form at the equator due to the (*) absence of this force. Along with the centrifugal force, this fictitious force appears in rotating reference frames. For ten points, name this force which results in the deflection of moving objects to the left when experiencing clockwise rotation.**

ANSWER: Coriolis force or effect <AG>

15. **In one video game appearance, this character is able to drive an unlockable green and white airplane called the “Hurricane.” This character is able to perform a sacrificial knockout via the side special “Flying Slam” in *Super Smash Bros. Brawl*, and is the game’s (*) heaviest playable fighter. In his first video game appearance, this character can be defeated by hitting an axe that destroys the bridge he is standing on. This character typically employs minions such as Hammer Bros and Bullet Bills in his quest to take over the Mushroom Kingdom. For 10 points, name this fire-breathing “King of the Koopas” who often kidnaps Princess Peach in the Mario franchise.**

ANSWER: Bowser <JA>

16. **Commandino’s theorem describes the concurrence of four of these constructs in a tetrahedron. If one of these constructs is drawn through the largest angle of a right triangle, its length is equal to half that of the hypotenuse. The length of these segments can be found from the squares of the side lengths of a triangle via Apollonius’ (“AH-puh-LOH-nee-us”) theorem, and these segments are divided in a (*) 2:1 (“two-to-one”) ratio by a concurrence point known as the centroid. For 10 points, identify this line that connects the vertex of a triangle to the midpoint of the opposite side, which shares its name with the middle value of a data set.**

ANSWER: median <JA>

17. In a novel, the skull of one of these animals is placed underneath a flag beside a gun in the presence of Minimus. One of these animals describes his mother teaching him a song with a tune somewhere between “Clementine” and “La Cucaracha.” A fictional animal of this type dons a bowler hat after winning the Battle of the (*) Windmill and begins to sing the hymn “Beasts of England.” At the end of one novel, these animals are found to be “more equal” than the others and become indistinguishable from Mr. Jones. For 10 points, name this type of animal exemplified by Squealer, Snowball, and Napoleon in George Orwell’s *Animal Farm*.

ANSWER: pigs [in *Animal Farm*]

18. This artist designed the emblem to the First International Peace Conference, which was one of his many drawings of doves. He painted a brooding portrait of his friend, the poet Gertrude Stein. This artist painted in the “synthetic” style of an art movement to depict a harlequin holding a guitar in *Three Musicians*. African (*) masks inspired the appearance of five women in his painting *Les Femmes d’Alger (O. J. R. M.)*. This man, who co-created an art movement with Georges Braque (“jawrj BRAK”), made a large painting that depicts the chaos of a town bombed during the Spanish Civil War. For 10 points, name this artist of *Guernica* and pioneer of Cubism.

ANSWER: Pablo Picasso (or Pablo Ruiz Picasso; or Pablo Diego José Francisco de Paula Juan Nepomuceno María de los Remedios Cipriano de la Santísima Trinidad Mártir Patricio Clito Ruiz y Picasso) <WG>

19. While working for this organization, Margaret Hamilton coined the term “software engineering.” A member of this organization, Eileen Collins, has performed the 9 minute-long Rendezvous Pitch Maneuver. Mae Jemison worked for this organization for ten years, and it employed Katherine Johnson as a human (*) “computer.” This organization was blamed for the death of the teacher Christa McAuliffe and six others in a 1986 explosion that destroyed a vehicle previously used by Sally Ride. An employee of this organization said “That’s one small step for man” on a mission with Buzz Aldrin. For 10 points, name this organization that sent *Apollo 11* to the moon.

ANSWER: NASA [or National Aeronautics and Space Administration] <WG>

20. Dall’s Sheep inhabit this state’s Chignik Mountains, which lie in a protected area surrounding Lake Clark. A plain of fumaroles known as the Valley of Ten Thousand Smokes lies northwest of this state’s Mount Katmai. The northernmost dune field in the U.S. is found in this state’s Kobuk Valley, which lies at the southwestern edge of the (*) Brooks Range. This state contains a humpback whale sanctuary in Glacier Bay National Park, and another preservation area in this state is home to the highest point in North America. Denali and Gates of the Arctic are among the eight national parks of, for 10 points, what largest state in the U.S.?

ANSWER: Alaska <JA>

PACKET 6 BONUSES

1. Processes with this property are necessarily quasi-static. For 10 points each:

[10] Name these processes which occur as a series of infinitesimal changes.

ANSWER: **reversible** processes

[10] Reversible processes hold this quantity, a measure of disorder, constant. The second law of thermodynamics states that it can't decrease in closed systems.

ANSWER: **entropy** [or **S**]

[10] This hypothetical thermodynamic cycle consists of two isothermal and two adiabatic ("aid-ee-uh-BAT-ik") steps and is reversible. Its efficiency is equal to 1 minus the quotient of the temperature of two reservoirs.

ANSWER: **Carnot** ("car-NOH") cycle <GC>

2. In this building, Mrs. Gorf would wiggle her ears and stick out her tongue to turn children into apples. For 10 points each:

[10] Name this building which was built thirty stories high, with one classroom in each floor. Louis Sachar wrote a series of "Sideways Stories" about it.

ANSWER: **Wayside** School

[10] Sachar also wrote this novel about Stanley Yelnats, who is sent to Camp Green Lake to dig the title objects.

ANSWER: **Holes**

[10] The town of Green Lake was home to this schoolteacher, who became an outlaw after her interracial relationship with Sam the Onion Man was discovered. At the end of *Holes*, her buried treasure is discovered.

ANSWER: Kissin' **Kate** Barlow [or Katherine **Barlow**] <WG>

3. A boy in this novel changes his name to Isaac after converting to Christianity. For 10 points each:

[10] Name this novel in which Okonkwo is exiled from his Igbo village, which sets off a chain of events that end in his suicide.

ANSWER: **Things Fall Apart**

[10] This Nigerian author of *Things Fall Apart* also wrote its sequel, *No Longer at Ease*.

ANSWER: Chinua **Achebe**

[10] *No Longer at Ease* takes its title from this writer's poem "Journey of the Magi." One of his poems is divided into sections including "The Fire Sermon" and "What the Thunder Said."

ANSWER: T.S. **Eliot** [or Thomas Stearns **Eliot**]

4. Answer the following about the violent deaths of outlaws in the Wild West, for 10 points each:

[10] Nicknamed for his young age, this outlaw was killed at age 21 after Sheriff Pat Garrett supposedly shot him in his bedroom.

ANSWER: **Billy the Kid** [or William H. **Bonney**; or Henry **McCarty**; or Henry **Antrim**]

[10] The Earp brothers and Doc Holliday engaged in a shootout with the Clanton-McLaury Gang at the OK Corral in this Arizona town.

ANSWER: **Tombstone**

[10] Jack McCall shot this man in the back during a poker game as he was holding a hand of two aces and two eights. According to legend, he married Calamity Jane on his way to Deadwood, South Dakota.

ANSWER: "Wild Bill" **Hickok** [or James Butler **Hickok**; prompt on Wild Bill] <WG>

5. Answer the following about notable women in classical music, for 10 points each:

[10] A female composer with this surname composed a Piano Trio in G-minor and Three *Romances* for Violin and Piano. Her husband, Robert, also composed works like such as the *Rhenish Symphony* and *Carnaval*.

ANSWER: **Schumann** [accept Clara or Robert **Schumann**, accept Clara **Wieck**]

[10] French composer Lili Boulanger (“boo-lahn-ZHEY”), who died at age 24, wrote won the Prix de Rome for a cantata titled for this figure “et Helene.” This character is also the title character of the most famous opera by Charles Gounod (“goo-NOH”).

ANSWER: **Faust**

[10] Germaine Tailleferre (“TIE-fair”), a member of Les Six, played this instrument, writing a sonata for it at the request of Spanish musician Nicanor Zabaleta. One of these instruments plays 12 Ds in a row to represent a clock striking midnight in *Danse Macabre*.

ANSWER: **harp** [accept concert **harp** or pedal **harp**] <NS>

6. One of these equations states that the change in “x” over time is equal to “alpha x minus beta x y”. For 10 points each:

[10] Name these differential equations in ecology whose solutions are two oscillating populations.

ANSWER: **Lotka-Volterra** equations [accept but do not reveal **predator-prey** equations]

[10] The Lotka-Volterra equations are used to model these systems, where one species kills and eats another.

ANSWER: **predator** and **prey** interactions

[10] Predator-prey interactions can be contrasted with this form of symbiosis (“sim-bye-OH-sis”), named for the fact that both organisms involved benefit.

ANSWER: **mutualism** <AG>

7. Answer the following about medieval conflicts between Christians and Muslims, for 10 points each:

[10] This series of holy wars was fought between Christians and Muslims for control of Jerusalem. The third one was fought between Richard the Lionheart and Saladin.

ANSWER: **Crusades** [or any numbered crusade, such as the First **Crusade**]

[10] In this 732 C.E. battle, Charles Martel, the leader of the Franks, halted Muslim advances into Western Europe.

ANSWER: Battle of **Tours** [or Battle of **Poitiers**]

[10] The Arabs were repelled in a 7th-century siege on this city after their opponents used Greek fire. This city’s defenses included the Walls of Theodosius and a chain across the Golden Horde.

ANSWER: **Constantinople** [or **Byzantium**; or **Istanbul**] <WG>

8. This man is described as “clean favored” and “imperially slim.” For 10 points each:

[10] Name this man, a “gentleman from sole to crown,” who is the subject of an Edwin Arlington Robinson poem.

ANSWER: “**Richard Cory**”

[10] The poem ends with Richard Cory going home “one summer night” and performing this action. Sylvia Plath performed this action in 1963 by sticking her head in a gas oven.

ANSWER: **suicide** [accept **death** or **dying**; accept any specific answer about taking one’s own life, such as **shooting** oneself or **asphyxiation**]

[10] Richard Cory takes place in this fictional town based on Gardiner, Maine. Other residents of this location include Mr. Flood and Miniver Cheevy.

ANSWER: **Tilbury Town** <GC>

9. Answer the following about the Volcano School of Art, for 10 points each:

[10] The Volcano School developed in this US state. Many works from that movement are on display at the Honolulu Museum of Art.

ANSWER: **Hawaii**

[10] Jules Tavernier, the most famous artist of the Volcano School, depicted this occurrence *Over Diamond Head*. A Monet painting depicting this occurrence depicts waves in Le Havre harbor and was compared to "wallpaper in its embryonic state" by Louis Leroy.

ANSWER: **sunrise** [or *Impression: Sunrise*]

[10] Another Volcano School artist who had this first name depicted Kilauea below gigantic black clouds. A better-known artist with this name painted *Sacred and Profane Love* and a nude Venus laying on a white bed next to her dog.

ANSWER: **Titian** [The artist's name is Titian Peale] <NS>

10. The short path form of this process utilizes a kugelrohr ("KOO-gehl-rohr") to minimize charring. For 10 points each:

[10] Name this technique which separates mixtures based on differences in volatility. Azeotropes ("AY-zee-oh-tropes") cannot be separated using the "simple" form of this technique.

ANSWER: **distillation**

[10] This kind of distillation uses a packed column and repeated vaporization-condensation cycles to separate mixtures with components that have similar boiling points.

ANSWER: **fractional** distillation

[10] Ideal vapor-liquid equilibria in distillation are partially governed by this law, which states that the partial pressure of one component of a solution equals the total vapor pressure times the mole fraction of that component.

ANSWER: **Raoult's** law <AG>

11. Answer the following about 20th century British writers who incorporated Christianity into their fiction. For 10 points each:

[10] The lion Aslan's death draws parallels to Jesus' crucifixion in *The Lion, the Witch and the Wardrobe*, part of a series by C.S. Lewis titled for the *Chronicles of this fictional land*.

ANSWER: **Narnia** [or *The Chronicles of Narnia*]

[10] In a book series by this author and friend of C.S. Lewis, the elf Galadriel gives a group of travelers *lembas* bread, which symbolizes the Holy Eucharist.

ANSWER: J.R.R. **Tolkien** [or John Ronald Reuel **Tolkien**]

[10] This author of *The Man Who Was Thursday* wrote many short stories featuring the mystery-solving priest Father Brown.

ANSWER: G.K. **Chesterton** [or Gilbert Keith **Chesterton**] <WG>

12. A law legalising same-sex marriage in this country was passed after a nationwide postal survey. For 10 points each:

[10] Name this country where same-sex marriage was legalized in late 2017 during the tenure of Malcolm Turnbull. A bill that would have legalised same-sex marriage in this country was rejected by the government of John Howard.

ANSWER: Commonwealth of **Australia**

[10] Turnbull resigned as Australia's prime minister in August 2018, and the post is currently held by this man. Prior to becoming prime minister, this man served as Treasurer in the Trumbull government.

ANSWER: Scott **Morrison** [or Scott John **Morrison**]

[10] Australia is known for its harsh policies toward undocumented immigrants, many of whom are held on prison camps in this nearby country's Manus Island, which is located north of its capital of Port Moresby.

ANSWER: **Papua New Guinea** <GP>

13. This person edited *The Lily*, the first newspaper targeted to women. For 10 points each:

[10] Name this American woman, who names a type of loose outfit created as a healthier alternative to the constrictive dresses of the 19th century.

ANSWER: Amelia **Bloomer** [or Amelia **Jenks** Bloomer; or **Bloomers**]

[10] Elizabeth Cady Stanton and Susan B. Anthony, who are best known for campaigning for this cause, wore bloomers. Women who advocated for this right were called suffragettes.

ANSWER: the right to **vote** [accept anything involving women's **voting rights**; prompt on **suffrage**]

[10] Bloomer attended this 1848 meeting in New York concerning women's rights. Attendees signed the Declaration of Sentiments, which was modeled on the Declaration of Independence.

ANSWER: **Seneca Falls** Convention <WG>

14. The first official wedding under the church of this deity occurred in New Zealand in 2016. For 10 points each:

[10] Identify this deity revered in the satirical religious cult of Pastafarianism. Adherents believe that this entity influences reality through the use of a "noodly appendage".

ANSWER: The **Flying Spaghetti Monster** [or **FSM**]

[10] The Flying Spaghetti Monster was first described by Bobby Henderson as a counterexample to this religious position. This creationist belief states that the universe and its life forms must be the result of some rational action, because some structures could not have arisen by chance.

ANSWER: **intelligent design**

[10] The emblem of the Flying Spaghetti Monster is copied from the Christian "Ichthys" symbol, which depicts one of these creatures. In the Bible, Jesus feeds 5,000 people using five loaves of bread and two of these creatures.

ANSWER: **fish** <JA>

15. Answer the following about literary physicists, for 10 points each:

[10] A Michael Frayn play named for this city discusses a 1941 meeting between Werner Heisenberg and Niels Bohr. "The Little Mermaid" was written by Hans Christian Andersen, who worked in this capital city.

ANSWER: **Copenhagen**

[10] In Friedrich Dürrenmatt's play *The Physicists*, Ernst believes that he is Einstein while Herbert believes that he is this physicist. Voltaire popularized a myth about an apple falling on his head.

ANSWER: Sir Isaac **Newton**

[10] Madame Olivier, a famous nuclear physicist, appears in this author's *The Big Four*. Samuel Ratchett is stabbed to death by the friends and family of Daisy Armstrong in another novel by this author.

ANSWER: Agatha **Christie** [that novel is *Murder on the Orient Express*] <NS>

16. X-ray crystallography photographs taken by Rosalind Franklin were used by James Watson and Francis Crick to deduce the double helical nature of this substance. For 10 points each:

[10] Name this nucleic acid made up of cytosine, guanine, adenine and thymine nucleobases, along with a sugar-phosphate backbone.

ANSWER: **DNA** [accept, but do not reveal **Deoxyribonucleic acid**]

[10] The sugar in DNA is a deoxygenated version of this sugar, which is also the sugar found in RNA.

ANSWER: **ribose**

[10] A precursor to ribose is produced in a pathway named after sugars with this many carbons. Both ribose and xylulose have this many carbons.

ANSWER: **5** [accept **pentoses**, or **pentose** phosphate cycle/pathway/shunt] <GC>

17. In 1811, this person was executed by a firing squad in the state of Chihuahua. For 10 points each:
[10] Name this priest who made a speech called the *Grito de Dolores*, which started the Mexican War of Independence.

ANSWER: Miguel **Hidalgo** [or Father **Hidalgo**; or Miguel Hidalgo y **Costilla**]

[10] Mexico gained its independence from this European country.

ANSWER: **Spain** [or **España**]

[10] Mexico fended off another invasion from the French in this 1862 battle. Mexicans celebrate their victory at this battle during Cinco de Mayo.

ANSWER: Battle of **Puebla** <WG>

18. Answer the following about creatures in Chinese folklore, for 10 points each:

[10] At Chinese New Year, performers will often manipulate a decorative one of these serpentine creatures in a namesake dance. This tradition originally honored these mythical beings' roles as water or weather deities.

ANSWER: **dragons**

[10] In Chinese astrology, a black one of these animals represents the northern quarter of the celestial sphere. The earliest Chinese legends were inscribed on oracle bones, which were often made from the shells of these animals.

ANSWER: **tortoises** [or **turtles**]

[10] The birth of Confucius was legendarily foretold by the appearance of one of these hoofed beings, a symbol of fertility. These creatures were often depicted with antlers, fish-like scales, and the head of a dragon.

ANSWER: **qilin** [prompt on Chinese **unicorn**] <JA>

19. Walter Benjamin's *Theses on the Philosophy of History* discusses how historical materialism is like a robot playing this game. For 10 points each:

[10] Identify this game played by Fabiano Caruana and Magnus Carlsen. FIDE officiates this game's World Championship, which is played on a 8 by 8 board.

ANSWER: **chess**

[10] Boris Spassky of the Soviet Union lost to this chess Grandmaster in the 1972 World Chess Championship. This man fled to Iceland late in his life due to mental illness.

ANSWER: Bobby **Fischer** [or Robert James **Fischer**]

[10] Bobby Fischer's match against Donald Byrne was called "The Game of the Century." The match began with the Grunfeld Defense, in which this piece is the first piece that black moves to gain control of the center of the board.

ANSWER: **knight** <NS>

20. In this essay, the author criticizes Meinong's theory of subsistence for allowing for way too many nonexistent objects. For 10 points each:

[10] Name this essay that introduces a theory of "definite descriptions," phrases that uniquely pick out a single object in the world. This essay famously analyzes the sentence "The present King of France is bald."

ANSWER: "**On Denoting**"

[10] This philosopher wrote the works "Why I Am Not a Christian" and "On Denoting." He used a teapot in space as an analogy for belief in God.

ANSWER: Bertrand **Russell**

[10] Russell worked with Alfred Whitehead on a work titled *Principia* ("prin-KIP-ee-uh") [this subject]. His work *The Principles of* [this subject] reports on the developments of Georg Cantor and David Hilbert, two men who work in this field, whose subfields include set theory and algebra.

ANSWER: **mathematics** [accept *Principia* **Mathematica**] <NS>