## **Ladue Invitational Spring Tournament IV**

Written and edited by Ben Zhang, Jialin Ding, Kisan Thakkar, Enze Chen, Michael Prablek, and Sam Crowder

## Round 14

## **Tossups**

1. In one of this author's novels, the narrator V. discovers that Nina Lecerf must have had a love affair with his half-brother. This author of *The Real Life of Sebastian Knight*, also wrote a novel in which the narrator replaces a professor at Waindell University after Dr. Hagen departs for a more prestigious college. Another of his works includes a 999-line poem by (\*) John Shade. This author of *Pnin* wrote about a character who participates in a play called *The Enchanted Hunters*, which is directed by Clare Quilty. In that novel, Humbert Humbert is obsessed with nymphets like Dolores Haze. For ten points, name this author of *Pale Fire* and *Lolita*.

ANSWER: Vladimir Vladimirovich Nabokov

<KT>

2. This religion divides time into repeating cycles of happiness and sorrow known as Kalacakra. The Agamas and the biographical Kalpa Sutra are among the texts of this religion. One sect in this religion believes Mallinath was a woman, and members of its other notable sect do not (\*) wear clothes. Some practitioners of this religion wear masks to avoid accidentally swallowing insects. This religion, which is separated in Svetambara and Digambara sects, venerates the twenty-fourth Tirthankara, Mahavira. For ten points, identify this Indian religion that emphasizes the principle of non-violence, or ahimsa.

ANSWER: Jain ism

<JD>

3. One of this composer's pieces consists of six movements, each named after a verse from the Song of Solomon. This composer of Flos Campi included "Song of the Exposition" as the first movement to a work based on Leaves of Grass. Another of his symphonies incorporates music from a movie featuring Robert Scott's expedition. A (\*) George Meredith poem inspired a work by this composer that uses ascending scales to depict the action of the title bird. This composer of A Sea Symphony named another piece after the composer of Spem in alium. For ten points, name this English composer of Sinfonia Antarctica, The Lark Ascending, and Fantasia on a Theme by Thomas Tallis.

ANSWER: Ralph **Vaughan Williams** 

<MP>

4. This country's K5 Plan attempted to seal its western border by constructing a minefield known as the Bamboo Curtain. This country's "dark ages" saw its capital at Longvek captured by Ayutthaya. Its temple mountain of Bakong was constructed by Indravarman I, who led an empire founded by Jayavarman II. UNTAC restored peace in this country, which entered into a civil war soon after Norodom Sihanouk was deposed by (\*) Lon Nol. That period of strife saw currency abolished, "year zero" established by Brother Number One, and land mines placed around Angkor Wat. For ten points, identify this country where Pol Pot once led the Khmer Rouge.

ANSWER: Kingdom of **Cambodia** [or **Kampuchea**]

<JD>

5. This object originated from a son of Theophane and Poseidon, who saved the children of Athamas and Nephele. The person who seized this object killed Absyrtus to expedite his return home. This object was made after Helle fell into the sea and Phrixus arrived on the island of Colchis, where he presented it to its king Aeetes. (\*) Pelias claimed that he would give up the throne of Iolcus if his one-sandaled nephew brought this object back. That nephew had to yoke brazen bulls and sow dragon's teeth before acquiring this object and escaping with his lover Medea. For ten points, name this object, made from the skin of a ram that was sought by Jason and the Argonauts.

ANSWER: Golden Fleece

<BZ>

6. A kind of "switching" described by this word refers to the formation of a new river channel during avulsion. This letter names a function that is zero everywhere except at zero and has an integral of one over the real numbers. In chemistry, this type of bond is usually found in organometallic species or excited pi antibonding orbitals, and this letter denotes (\*) partial charges for atoms in a molecule. Cuspate, arcuate, and bird-foot are ways to describe hydrological features with this name. Displacement is often written with this capital letter and x, symbolizing a change in position. For ten points, identify this greek letter symbolized by a triangle.

ANSWER: <u>delta</u> [accept specifics like <u>delta</u> switching, Dirac <u>delta</u> function, <u>delta</u> bond, river <u>delta</u>] <EC>

- 7. One of this man's sculptures shows a monkey grasping the shin of a writhing figure. This man designed the Laurentian Library for the Basilica of San Lorenzo. The biblical subject of one of his sculptures is notable for having horns. This man, who created *Dying Slave* and *Moses* for the tomb of (\*) Pope Julius II, drew himself in the flayed skin of St. Bartholomew in one fresco. Another of his frescoes shows a man stretching his arm to touch God's finger. This painter of *The Creation of Adam* and *The Last Judgement* also sculpted a male nude with a slingshot over his shoulder. For ten points, identify this Italian artist who sculpted a marble David and painted the ceiling of the Sistine Chapel. ANSWER: Michelangelo di Lodovico Buonarroti Simoni [accept either underlined name]
- 8. One philosopher from this movement divided "protreptic," "elenctic," and "instructional" modes of consultation and claimed that the faculty of "prohairesis" separates humans from other animals. Arrian compiled the text Discourses from this school, which developed the concept of pneuma. This school's followers included Cleanthes and Epictetus, and one (\*) Roman emperor wrote a set of 12 books on this philosophy entitled Meditations. This school emphasized that "virtue is sufficient for happiness." Marcus Aurelius was a member of, for ten points, what ancient school of philosophy founded by Zeno of Citium that advocated freedom from emotion?

ANSWER: Stoicism

<KT>

9. The Fermi level uses thermodynamic work to explain this property, one form of which equals inductance times the time derivative of current. It is related to the change in magnetic flux for time-varying magnetic fields, and the point at which insulators fail is known as the (\*) "breakdown" point of this quantity. For static fields, the sum of this quantity around a loop equals zero, according to Kirchhoff's second law. Power is expressed as current multiplied by this quantity, which is required for current to flow, and otherwise expressed as current times resistance in Ohm's law. For ten points, identify this electrical quantity stored in batteries.

ANSWER: <u>voltage</u> [accept <u>electric potential</u> energy <u>difference</u>, <u>electric tension</u>, <u>electric pressure</u>, or <u>e</u>lectro<u>m</u>otive <u>f</u>orce] <EC>

10. In October 2013, the University of Malaysia awarded this world leader an honorary doctorate in economics. He was visited by an escaped sushi chef who had previously served his father. This figure's first public speech was converted into the hymn "Onwards Toward the Final Victory." His government once threatened to "strike mercilessly without notice" in a fax to a neighboring country. In December 2013, this leader executed his (\*) uncle, who had been his second-in-command. This "Supreme Leader" is currently the youngest head of state in the world. For ten points, name this current leader of North Korea who came to power after the death of his father Kim Jong-il.

ANSWER: <u>Kim Jong-un</u> [prompt on partial answer] <JD>

11. This man wrote a dialogue between his "head" and his "heart" in a letter to Maria Cosway. One of his policies was ridiculed by a cartoon depicting a green turtle biting the pants of a man who complains about the "cursed Ograbme". That policy was replaced by one of non-intercourse due to the unpopularity of the (\*) Embargo Act. This president had earlier resigned as Washington's Secretary of State due to disagreements with Alexander Hamilton, who was killed by this man's first vice president Aaron Burr. For ten points, name this Democratic-Republican president who signed the Louisiana Purchase and succeeded John Adams.

ANSWER: Thomas **Jefferson** 

<BZ>

12. This country is separated from its western neighbor by the Tornio River. After its city of Turku was devastated by a fire, the national university moved to this country's current capital, which was renovated by Carl Ludwig Engel. Its capital also contains Senate Square and the offshore fortress of (\*) Suomenlinna. Lake Saimaa is located in this country, which controls the Aland Islands at the mouth of the Gulf of Bothnia. A nearby country's city of Tallinn lies across this country's namesake gulf from its capital, which is the northernmost in continental Europe. For ten points, identify this country with capital at Helsinki.

ANSWER: Republic of Finland

 $\langle JD \rangle$ 

13. Cauchy condensation applies powers of two to test one property of these constructs, and Parseval's theorem applies to one type named after Joseph Fourier that consists of sines and cosines. Ones with partial sums that cancel out can be simplified telescopically, although that method can fail when a certain property doesn't hold. That property, tested using the nth root, limit, or ratio tests, is (\*) convergence. The Maclaurin type is a special case of the Taylor type of these centered at zero, and taking the first term divided by one minus the common ratio gives the value of the infinite geometric type. For ten points, identify these constructs that sum the terms in a sequence.

ANSWER: series [do NOT accept "sequence"]

<EC>

14. Youths armed with knives were instructed to kill anyone found outside at night as part of this city's annual tradition of Krypteia. In one conflict, Syracuse was defended by Gylippus, a general from this city whose governing bodies included a council of elders known as the gerousia. Its two (\*) jointly ruling kings were overseen by the five ephors. A force from this city lost to Epaminondas and Sacred Band of Thebes at Leuctra, and its admiral Lysander won at Aegospotami. This city's most notable battle saw Leonidas hold off an army of Persians at Thermopylae. For ten points, identify this Greek city-state that fought against Athens in the Peloponnesian War.

ANSWER: Sparta [or Lacedaemon]

<JD>

15. One work that shares its title with this poem mentions how "We wonder... Where London stood, holding the Wolf in chace" and was written by Horace Smith in a competition against this poem's author. The speaker of this poem notices the "hand that mocked" and "the (\*) heart that fed" after reading passions "which yet survive". The speaker also describes the "frown/ And wrinkled lip" of an object that is "Half sunk". This work also mentions how "the lone and level sands stretch far away" from a "Colossal wreck". A "traveller from an antique land" mentions "Two vast and trunkless legs of stone" in, for ten points, what work about a "king of kings" by Percy Shelley?

ANSWER: "Ozymandias"

<KT>

16. One of these animals is the son of the Emperor-Over-the-Sea and is killed by Deep Magic from the Dawn of Time, but revives himself through Deeper Magic from before the Dawn of Time. That animal of this type sang his world into existence before the eyes of Digory, Polly, and Jadis. In *A Song of Ice and Fire*, one of these animals is featured on the sigil of House Lannister. Another one of these animals visits an (\*) elephant graveyard despite the protests of Zazu. That animal of this type is chased out of the Pridelands by three hyenas, but is later called back by Nala to overthrow his uncle Scar. For ten points, identify this animal exemplified by C.S. Lewis's Aslan and by Simba.

ANSWER: lions

<JD>

17. Allylic rearrangement occurs when an S<sub>N</sub>1 substitution shifts the position of this structure, which is forbidden at bridgeheads of ring systems according to Bredt's rule. The Diels-Alder reaction modifies conjugated systems in which these alternate in a ring, often inducing resonance. They are responsible for cis-trans isomerism, and they are formed from overlapping p-orbitals creating a (\*) sigma and pi bond. At least one of these is present in an alkene [read "al-keen"], making it unsaturated, and they are the only bonds present in diatomic oxygen. For ten points, identify this covalent bond indicated by two lines on a Lewis dot diagram.

ANSWER: <u>double bond</u> [prompt on partial; prompt on "covalent bond;" do NOT accept any other type] <EC>

18. Esther Summerson marries a literary character with this profession, Allan Woodcourt, in *Bleak House*. Another character with this profession warns his brother Peter, the Mayor, that the water supplying the new baths is contaminated. In addition to Thomas Stockmann from *An Enemy of the People*, another character with this profession is devastated after the death of his wife (\*) Leora from the plague. Another character with this job falls in love with the nurse Lara while he works for a battlefield hospital, and in a different novel, one character with this profession takes a potion to transform into Mr. Hyde. For ten points, identify this profession of Arrowsmith, Zhivago, and Jekyll.

ANSWER: doctor [or physician; accept surgeon, bacteriologist, and other such specific types of doctors]

19. Members of this organization were raided by privateers hired by Albrecht von Mecklenburg called the Victual brothers, whom it initially supported. The Treaty of Stralsund was signed between this organization and the Danish king Valdemar IV, who had attacked Visby, one of its members. Bergen contains the only surviving example of (\*) trading posts called *kontors* established by this organization. Members of this organization could appeal to the council of its capital, Lübeck. For ten points, name this trade confederation which consisted of towns along the Baltic and North seas. ANSWER: Hanseatic League [or Hansa]

 $\langle BZ \rangle$ 

20. Anchorage dependence can reduce the rate at which this process occurs *in vitro*. In somatic tissue, the beginning and end of this process coincide with the rise and fall of levels of maturation-promoting factor, which contains a cyclin-dependent kinase. The (\*) G1, S, and G2 phases comprise the interphase period which precedes this process. This phase is followed by cytokinesis, and sees kinetochores move up spindle fibers and towards the centrosome. This process results in the separation of sister chromatids and the formation of two identical daughter cells. For ten points, name this cycle of eukaryotic cell division which includes metaphase and prophase.

ANSWER: <u>mitosis</u> [prompt on "cell division" or "cell cycle"; do not accept or prompt on "meiosis"] <BZ>

21. The speaker of one of this poet's works commands the reader to "Take thou the world and all that will" in a poem describing "The Flesh and the Spirit". The speaker of another of her poems "washed [the] face" and "stretched the joints" of the title object, which is an "ill-formed offspring." In yet another work, the speaker was "waken'd... with thund'ring noise" in a "silent night" after which she notes how "the world no longer let [her] love". This poet of (\*) "The Author to Her Book" wrote that "if two were ever one then surely we" in a poem addressed "To [her] Dear and Loving Husband." For ten points, identify this poet of *The Tenth Muse Lately Sprung Up in America*.

ANSWER: Anne <u>Bradstreet</u> [accept Anne <u>Dudley</u>] <KT>

22. In one section of this work, a tree-soul identifying himself as an advisor to Emperor Frederick explains how he is pecked by the Harpies. This poem begins "midway upon the journey of" the main character's life, and he sees Ugolino perpetually chewing on the skull of Ruggieri. Before Phlegyas rows the central character in the City of (\*) Dis, he learns the story of Paolo and Francesca. The narrator, who is assisted by Geryon, reads the inscription, "Abandon hope all ye who enter here." Virgil guides the narrator through the nine circles of hell in, for ten points, what first section of *The Divine Comedy*, written by Dante Alighieri?

ANSWER: *The Inferno* [prompt on "*The Divine Comedy*" or "*La Divina Commedia*" before "first section" is mentioned] <KT>

## **Bonuses**

1. Bonus: Its adult participants yelled "Sockeroo!" and "Pow!" For ten points each:

[10] Name this 1960s experiment which discovered that children exposed to aggressive behavior against the namesake toy were more likely to act aggressively themselves.

ANSWER: Bobo doll experiment

[10] The Bobo doll experiment was conducted by this Stanford psychologist, who worked with Dorothea and Shelia Ross. He also authored *Social Foundations of Thought and Action*.

ANSWER: Albert Bandura

[10] The Bobo doll experiment demonstrated the "observational" and "social" theory of this process, which allows humans to acquire new behaviors and information. Repetition is a method for achieving this process.

ANSWER: <u>learning</u> [accept wordforms and equivalents]

<KT>

2. Bonus: It was sent to its composer's friend Anselm Huttenbrenner. For ten points each:

[10] Name this B-minor symphony which only has two complete movements. Its third movement is a scherzo, and some believe that the composer instead used its finale as the entr'acte to his work *Rosamunde*.

ANSWER: <u>Unfinished</u> Symphony [accept <u>Symphony No. 8</u> in B minor, D.759 or <u>Symphony No. 7</u> in B minor]

[10] This Austrian composer of the *Unfinished Symphony* also composed several *lieder*, such as his *Winterreise* song cycle.

ANSWER: Franz Peter Schubert

[10] This chamber piece by Schubert contains variations of his earlier lied, *Die Forelle*, in its fourth movement. It unusually includes a part for the double bass rather than a second violin and is named after a certain type of fish.

ANSWER: Trout Quintet [accept Piano Quintet in A Major]

<KT>

3. Bonus: O'Brien gives the protagonist a copy of this man's book on "Oligarchical Collectivism". For ten points each:

[10] Name possibly fictional leader of the Brotherhood, who is characterized as the enemy of Big Brother in Oceania.

Winston Smith learns that the future lies "with the Proles" in a book written by him.

ANSWER: **Emmanuel Goldstein** [accept either name]

[10] Emmanuel Goldstein is a character in this novel, which ends with O'Brien explaining to Winston that he will never know if the Brotherhood truly exists.

ANSWER: Nineteen Eighty-Four

[10] This English author wrote *Nineteen Eighty-Four* and a novel in which Snowball and Napoleon seize control over the other animals after Old Major dies, *Animal Farm*.

ANSWER: George Orwell [or Eric Arthur Blair]

<KT>

4. Bonus: Answer some questions about branches of Islam, for ten points each:

[10] Several legal schools, like the Hanbali and Hanafi schools, comprise this largest branch of Islam, which is practiced across much of the Islamic world. It is often contrasted with Shi'a Islam.

ANSWER: Sunni Islam

[10] The poet Rumi belonged to this mystical branch of Islam known for the dances of its Whirling Dervishes.

ANSWER: Sufism [or tasawwuf]

[10] This ultra-conservative branch of Sunni Islam is the dominant form of Islam in Saudi Arabia. Its adherents consider themselves distinct from the Salafists.

ANSWER: Wahhabism [or Wahhabiyyah]

<JD>

5. Bonus: Its Imam Reza shrine is the largest mosque in the world by dimension. For ten points each:

[10] Identify this city known as the home of the poet Ferdowsi. This second-largest city in its country is located close to the border with Turkmenistan and Afghanistan.

ANSWER: Mashhad

[10] Mashhad is a city in this country, which is the location of ancient capitals like Persepolis and Isfahan. Its current capital is Tehran.

ANSWER: Islamic Republic of Iran [or Persia]

[10] Iran controls the northern coast of this strategically important choke point connecting the Persian Gulf to the Arabian Sea. About a fifth of the world's petroleum passes through this strait.

ANSWER: Strait of Hormuz

<JD>

6. Bonus: One character in this work receives a gold cabinet filled with family pictures. For ten points each:

[10] Name this novel in *The Human Comedy*, in which the title daughter of Felix falls in love with cousin Charles, but later decides to marry Cruchot des Bonfons after Charles becomes wealthy.

ANSWER: Eugénie Grandet

[10] This author included Eugenie Grandet in his Human Comedy, which also contains works like Le Pere Goriot and The Wild Ass's Skin.

ANSWER: Honoré de Balzac

[10] In *The Human Comedy*, Balzac included novels like *César Birotteau* in a section named after *Scenes* from this city's life. The title of Charles Dickens's *A Tale of Two Cities* references London and this city.

ANSWER: Paris

<KT>

7. Bonus: He once dressed up as Freya to retrieve a weapon that Thrym stole. For ten points each:

[10] Identify this Norse god of thunder who wields the hammer Mjolnir.

ANSWER: Thor

[10] Thor's greatest enemy is this creature, which was also called the Midgard Serpent. Thor once hooked this creature when he went fishing with the giant Hymir.

ANSWER: Jormungandr

[10] Thor and Jormungandr kill each other during this event, which is preceded by Fimbulwinter and is survived by Thor's sons Modi and Magni.

ANSWER: Ragnarok

<BZ>

8. Bonus: The "while" type of this construct checks a boolean condition before executing a block of code. For ten points each,

[10] Name these iterative structures that repeat a set of instructions until a specific condition is met. Infinite ones run continually until an error results because the condition can never be satisfied.

ANSWER: <u>loop</u>s

[10] Unlike a while loop, this type of count-controlled loop uses a loop variable to count a known number of iterations. It can also be used to enumerate the objects in a set.

ANSWER: for loop [accept foreach loop]

[10] Amateur programmers often encounter this error when making iterative loops, because they calculate boundary points in error or falsely believe using n dividers creates n sections.

ANSWER: <u>fencepost</u> error [accept <u>telegraph pole</u> error or <u>lamp-post</u> error or <u>off-by-one</u> error] <EC>

9. Bonus: The Simba Rebellion was part of a 1960s crisis in this modern-day country. For ten points each:

[10] Identify this former Belgian colony whose first post-independence prime minister, Patrice Lumumba, was executed in its breakaway region of Katanga.

ANSWER: <u>Democratic Republic of the Congo</u> [or <u>DRC</u>; or <u>Congo-Kinshasa</u>; do not accept "Republic of the Congo"; prompt on "Congo"]

[10] Dag Hammarskjöld died in a plane crash while en route to mediate a cease-fire in the Congo Crisis. Hammarskjöld was the secretary-general of this organization, which was later led by U Thant and Kofi Annan.

ANSWER: United Nations

[10] The Congo Crisis ended with the rise of this US-backed dictator, whose Authenticity Campaign included renaming the Congo to Zaire, and who wore a signature leopard-skin hat. He was finally ousted from power in 1997.

ANSWER:  $\underline{Mobutu}$  Sese Seko [or Joseph-Desire  $\underline{Mobutu}$ ]

 $\langle JD \rangle$ 

10. Bonus: Two candles, a mirror, and one of these objects lie on the mantlepiece in Magritte's *Time Transfixed*. For ten points each:

[10] Identify these objects, several of which are in the process of melting in *The Persistence of Memory*.

ANSWER: clocks [or pocket watches]

[10] *The Persistence of Memory* is a painting by this Spanish surrealist artist, who included twenty-eight Venus de Milos in his *Hallucinogenic Toreador*.

ANSWER: Salvador <u>Dalí</u> [or Salvador Domingo Felipe Jacinto <u>Dalí</u> i Domènech]

[10] Before writing for *L'age d'Or*, Dali collaborated with Luis Buñuel to write this short film, which begins with an eyeball being slashed by a razor.

ANSWER: Un Chien Andalou [or An Andalusian Dog]

<JD>

11. Bonus: Enclosing a number x in curly brackets, which computes the fractional part of x, denotes subtracting this function of x from x itself. For ten points each,

[10] Identify this step function that computes the greatest integer less than or equal to the input.

ANSWER: floor function

[10] The floor function does not satisfy this property because the y values jump at the integers. Generally, a graph satisfies this property if it can be drawn as a single, unbroken curve.

ANSWER: **continuity** [accept word forms like **continuous**]

[10] Continuity along an interval is one of the requirements for this theorem which states that if "f of a" equals "f of b," then the first derivative equals zero somewhere along the interval from a to b.

ANSWER: Rolle's theorem

<EC>

12. Bonus: The protagonist of this book learns about a rocket with serial number 00000 in Hermann Goring's casino. For ten points each:

[10] Identify this novel centering on Tyrone Slothrop, which ends with the landing of a V-2 rocket. It begins with the sentence, "A screaming comes across the sky."

ANSWER: Gravity's Rainbow

[10] This American author wrote *Gravity's Rainbow* and about Oedipus Maas's discovery of a conflict between Tristero and Thurn und Taxis in *The Crying of Lot 49*.

ANSWER: Thomas Ruggles Pynchon, Jr.

[10] In this first novel by Thomas Pynchon, Benny Profane is a member of the Whole Sick Crew and Herbert Stencil searches for the title woman.

ANSWER: V.

<KT>

13. Bonus: Anson Burlingame challenged him to a duel that he later chickened out of. For ten points each:

[10] Name this South Carolina Congressman, whose uncle Andrew Butler was insulted in a May 1856 speech.

ANSWER: Preston Smith Brooks

[10] Several days after the speech, Preston Brooks assaulted this senator with a cane. During Reconstruction, this man led the Radical Republicans in the Senate.

ANSWER: Charles Sumner

[10] Sumner was beaten after he gave a speech decrying the "Crime Against" this territory, where the votes of border ruffians resulted in a proslavery government and violence led to it being nicknamed "Bleeding".

ANSWER: Kansas

<BZ>

14. Bonus: Answer the following about recent natural disasters, for ten points each:

[10] This typhoon devastated much of the Philippines in November, and resulted in almost two million homeless people and hundreds of thousands of refugees.

ANSWER: Typhoon <u>Haiyan</u> [accept Typhoon <u>Yolanda</u>]

[10] The northeastern United States was hit by this hurricane in October of 2012. Obama's relatively quick response to the devastation wrought by this hurricane may have boosted his election numbers in heavily affected states.

ANSWER: Hurricane **Sandy** [or Superstorm **Sandy**]

[10] The Yarnell Hill Fire occured in the summer of 2013 in this state, where nineteen members of a firefighting crew known as the Hotshots were killed in the wildfire.

ANSWER: Arizona

 $\langle BZ \rangle$ 

15. Bonus: One analogue of this statement used to find the expectation value for momentum is Ehrenfest's theorem. For ten points each:

[10] Identify this law which states that force equals mass times acceleration.

ANSWER: Newton's Second Law of Motion

[10] One can integrate the equation F = ma to find this quantity equal to force multiplied by the time interval of the applied force. This quantity also equals change in momentum.

ANSWER: impulse

[10] For a simple harmonic oscillator, one equates Newton's Second to Hooke's law to find this quantity whose square equals the coefficient k divided by m. It is also the coefficient of t in the sinusoidal position function.

ANSWER: angular frequency [accept omega; do NOT accept just "frequency"]

<EC>

16. Bonus: It was besieged by forces under the Earl of Salisbury, who cut off its access to the Loire. For ten points each:

[10] Name this city, where the French won their first significant victory after their loss at Agincourt by repelling a 6-month siege.

ANSWER: Orléans

[10] The arrival of this "Maid of Orléans" resulted in the end of the siege less than two weeks later. She was eventually executed by the English for heresy.

ANSWER: Joan of Arc [or Jeanne d'Arc]

[10] The Siege of Orléans and the Battle of Agincourt occurred during this war between England and France that lasted a little over a century.

ANSWER: **Hundred Year**'s War

<BZ>

17. Bonus: One of his poems claims "America, from a grain/ of maize you grew." For ten points each:

[10] Name this Chilean poet of *Elemental Odes* who wrote "Tonight I can write the saddest lines" and "The memory of you emerges from the night around me" in his collection, *Twenty Love Poems and a Song of Despair*.

ANSWER: Pablo Neruda [or Neftali Ricardo Reyes Basoalto]

[10] In his *Canto General*, Pablo Neruda wrote about "The Heights" of this Incan site in one poem, which begins, "Arise to birth with me, my brother" and asks it to "Give me your hand out of the depths".

ANSWER: Machu Picchu [accept Machu Pikchu]

[10] This other Chilean poet wrote about "the icy niche where men placed you" in her *Sonnets of Death*. She also stated that "Beauty shall rise from your heart in song" in her poem, "Decalogue of the Artist."

ANSWER: Gabriela Mistral [or Lucila Godoy Alcayaga]

<KT>

18. Bonus: Answer some questions about World War II films, for ten points each:

[10] This 1998 Steven Spielberg film sees Tom Hanks play Captain John Miller, who leads his squad in search for the title character. It begins with a historically accurate storming of the beaches at Normandy.

ANSWER: Saving Private Ryan

[10] Ken Watanabe plays General Kuribayashi in this director's *Letters from Iwo Jima*. This director's other films include *Mystic River* and *Gran Torino*.

ANSWER: Clint Eastwood

[10] The firebombing of Kobe features prominently in this terribly depressing Studio Ghibli animated film, which sees Seita die of malnutrition after his sister Setsuko builds the title construct in an abandoned bomb shelter.

ANSWER: Grave of the Fireflies [or Hotaru no haka]

<JD>

19. Bonus: Prince Rupert's metal, containing 75% copper and 25% zinc, exemplifies the alpha form of this material and is used as an imitation for gold. For ten points each,

[10] Identify this metal that is used for decorative coatings and many musical instruments.

ANSWER: brass

[10] Brass, bronze, and steel are examples of these types of solid metal solutions.

ANSWER: alloy

[10] Steel and cast iron alloys are rapidly cooled through its eutectoid point and hardened in this process. It is followed by tempering to achieve a desired hardness.

**ANSWER:** quenching

<EC>

20. Bonus: For ten points each, answer the following about unusual assassinations:

[10] The KGB assassinated the dissident Georgi Markov by shooting a pellet of this poison with an umbrella. In April 2013, a man from Mississippi mailed letters containing this poison to Barack Obama and Roger Wicker.

ANSWER: ricin

[10] This Russian mystic and advisor to Nicholas II did not eat the cyanide-laced cakes that he was given, so he was then shot and thrown into a river. According to legend, he died by drowning and hypothermia.

ANSWER: Grigori Yefimovich Rasputin

[10] The 210 isotope of this radioactive metal was used to poison the former FSB agent Alexander Litvinenko in 2006.

ANSWER: polonium

<BZ>

21. Bonus: Answer the following about leaves, for ten points each:

[10] The surface of leaves contain these microscopic pores which open to allow carbon dioxide in and close to prevent water loss. They are surrounded by two guard cells.

ANSWER: stomata

[10] Leaves are green because of this pigment, which absorbs solar energy to trigger the start of photosynthesis.

ANSWER: chlorophyll

[10] Most of the photosynthesis occurs in this leaf tissue, which is situated below the cuticle and epidermis. This tissue is divided into a palisade layer and a spongy layer.

ANSWER: mesophyll

<BZ>

22. Bonus: A man with a staff absentmindedly tends to his sheep in the center of this painting. For ten points each:

[10] Identify this painting in which a farmer plowing his field and a fisherman are both oblivious to the drowning title figure's legs poking out of the water.

ANSWER: Landscape with the Fall of Icarus

[10] Landscape with the Fall of Icarus is a painting by this Netherlandish artist, who also depicted a lively feast in The Peasant Wedding.

ANSWER: Pieter **Brueghel** the Elder

[10] This painting by Brueghel depicts a wintry scene in which three men return to a village with their dogs while several figures ice skate on a frozen lake in the distance.

ANSWER: *The <u>Hunters in the Snow</u>* [or *The <u>Return of the Hunters</u>*; or <u>Jagers in de Sneeuw</u>] <JD>