

LADUE INVITATIONAL SPRING TOURNAMENT 2013

Round 8

TOSS-UPS

1. In one of this author's works, the Mafia take people across the borders of a country to kill them; that work sees death fall in love with a cellist to whom she sends many violet letters. In a sequel to this author's most famous work, many voters submit blank ballots, and in one of this author's more controversial novels, the title character is incredibly adept at catching fish, and God chooses him to spread a (*) new religion. This author's most famous work opens at a stoplight, and the Doctor's Wife is one of few not afflicted by the title condition. For ten points, identify this Portuguese author of *The Gospel According to Jesus Christ* and *Blindness*.

ANSWER: Jose Saramago

<MS>

2. The ABC conjecture considers three numbers such that the largest is this function of the other two, and this operation applied to the Mobius functions of all divisors of a given integer yields zero. The degree of a multivariate polynomial is equal to the largest value of this operation applied to the exponents of a single term, and the result of this operation on two vectors can be found with the (*) "parallelogram rule." A capital sigma can denote repeated applications of it, and 0 is the identity of this operation. For ten points, identify this operation which yields a sum, symbolized by a plus sign.

ANSWER: addition (or summation before mentioned)

<MS>

3. This ruler's army defeated the forces of Mandalzade Hüsameddin at the Battle of Chesme, which resulted in Wallachia and Moldavia being given back to the Ottomans in the treaty of Kucuk-Kaynarca. This ruler helped place Stanislaw Poniatowski on the throne of Poland, and faced a Cossack rebellion led by Yemelyan (*) Pugachev.

Alongside Maria Theresa and Frederick the Great, this ruler participated in the Partitions of Poland, and was friends with writers like Diderot and Voltaire. This successor to Peter III was assisted by men such as Grigory Orlov and Grigory Potemkin, her lover. For ten points, identify this longest-serving Russian empress.

ANSWER: Catherine the Great (accept Catherine II or Yekaterina II Velikaya or Yekaterina Alexeevna; prompt on Catherine)

<KT>

4. One of this movement's founding members painted a goateed art critic holding a hat with his left hand over a swirling, colorful background; that work is his *Portrait of Félix Fénéon*. Another painting from this movement shows a white-clad child walking alongside a red-umbrella-wielding woman, in front of whom a brown dog sniffs the ground. One of this method's inventors was (*) Paul Signac, and this dominant technique of the Neo-Impressionist movement was used to paint *Sunday Afternoon on the Island of La Grande Jatte*. For ten points, identify this technique of painting practiced by Georges Seurat, in which tiny dots of color combine to form an image.

ANSWER: pointillism (accept word forms, accept Neo-Impressionism before mentioned, prompt on Divisionism)

<MS>

5. The general Schrödinger equation is described as "dependent" on this quantity. The partial derivative of magnetic field strength with respect to it equals the curl of the induced electric field, according to the Maxwell-Faraday law of induction. This quantity also describes a constant in the exponential term of equations describing (*) LC circuits.

Taking the derivative of velocity with respect to this quantity gives acceleration, and this quantity is unified with space in the theory of relativity. For ten points, identify this quantity from physics, typically measured in seconds.

ANSWER: time

<MS>

6. A Paul Eluard poem notes that, like an orange, the Earth is this color. This color also appears in the title of a novel whose protagonist is courted by Stephen Smith and Henry Knight; that work is about Elfride Swancourt. In another novel, Cholly rapes the protagonist Pecola Breedlove, who wishes for a body part of this color. This is the color of a hotel owned by (*) Scully in a Stephen Crane story, and Thomas Hardy and Toni Morrison wrote novels titled after this color of eye. For ten points, identify this color of a beard possessed by a fairy tale character who murdered all of his wives.

ANSWER: blue (or bleu or bleuest)

<MS>

7. One man who attempted to damage this structure later assisted his uncle in planning a failed assassination of John Paul II in the Bojinka plot. That man and Eyad Ismoil drove a yellow van into a parking garage of this structure, though Ramzi Yousef ultimately failed to do much damage. Another event taking place at this building led to the passage of the (*) PATRIOT Act, and was masterminded by Khalid Sheikh Mohammed. For ten points, identify this New York City landmark which al-Qaeda destroyed as part of the September 11th attacks.

ANSWER: World Trade Center (accept North Tower or Twin Towers; prompt on "South Tower")

<MS>

8. According to the Qur'an, God taught this figure how to fashion chain-mail. To help him build a house, Hiram of Tyre sent this man cedar trees, and this man's rebellious son was killed after his hair got caught in a tree. This man married Michal after bringing 200 foreskins to her father, though he also sent (*) Uriah the Hittite to die in battle before marrying his wife Bathsheba. This father of Absalom was presented to Samuel by his father Jesse. After picking up five stones, this figure triumphed at the Valley of Elah over a Philistine giant. For ten points, name this second king of Israel who was succeeded by Solomon and is best known for slaying Goliath.

ANSWER: David (or Dawud)

<SC>

9. The P type of these minerals is formed in peridotite, while their E type originates in eclogite. They are often covered with a gum-like skin called nyf, and bort is a variety of this mineral that occurs as rough rounded masses without distinct cleavage. This mineral is lipophilic and hydrophobic due to its strong intermolecular bonds, and its distinctively high thermal conductivity makes it desirable in industrial machines such as (*) drills and cutters. They can often be found in kimberlite, and along with graphite, this mineral is an allotrope of carbon. For ten points, name this mineral with a hardness of 10 on the Mohs Hardness Scale, the hardest naturally occurring material.

ANSWER: diamond

<HX>

10. Mysterious glowing balls spontaneously rising from this river are called Naga fireballs. The Ruak River joins this river in the Golden Triangle. The Chi and Mun Rivers flow through the Khorat Plateau before emptying into this river. This middle river of the Three Rivers of Yunnan flows over Khone Falls, which is located west of the Annamite Range. Pakse and Luongprabang are cities on this river, which receives water from (*) Tonle Sap. National capitals on this river include Vientiane and Phnom Penh. For ten points, name this Asian river which forms the border between Laos and Thailand and flows through Cambodia before reaching the South China Sea near Ho Chi Minh City.

ANSWER: Mekong River

<JD>

HALFTIME

11. This man issued the Donations of Alexandria and divorced his wife Fulvia to marry Octavia the Younger. This loser at the Battle of Mutina also was defeated at a battle near the Ambracian Gulf due to the treachery of Quintus Dellius. This man was criticized by Cicero's *Philippics* and delivered the (*) eulogy at Julius Caesar's funeral. Along with a younger counterpart, he defeated Cassius and Brutus at the Battle of Philippi, and that same counterpart later sent naval forces under Marcus Agrippa to defeat this man at the Battle of Actium. For ten points, identify this Roman general who lost to Octavian and committed suicide with his lover Cleopatra.

ANSWER: Mark Antony (or Marcus Antonius)

<JD>

12. The final part of this poem extols the "crazy shepherds of rebellion" and "vast lamb of the middle class" before mentioning a character who, in a dream, walks "dripping from a sea-journey." This poem exclaims "Old men weeping in the parks!" after asking "what sphinx of cement or aluminum bashed open their skulls," and the narrator later tells (*) Carl Solomon that he's with him in Rockland. This poem describes "angelheaded hipsters" dragging themselves through the streets. For ten points, identify this poem beginning "I saw the best minds of my generation destroyed by madness," written by Beat poet Allen Ginsberg.

ANSWER: "Howl"

<MS>

13. A character in this work describes Delly Cartwright as the friendliest person on the planet, and that same character later kills Marvel. Octavia sports green skin in this novel, and the main character in this work frequently barters in the Hob. (*) Foxface dies in this novel by eating nightlock, and the main character's sister owns pets named Lady and Buttercup. Gale Hawthorne's father was killed during a mining accident before the events of this novel, whose title event is overseen by Seneca Crane and President Snow. For ten points, name this novel in which Peeta Melark and Katniss Everdeen represent District 12 as tributes sent to the Capital to participate in a battle to the death.

Answer: *The Hunger Games*

<CC>

14. One formula approximating the mass of these objects contains an asymmetry term and is named after Bethe and Weizsacker. George Gamow proposed the liquid drop model to explain the shape of these objects. The composition of these structures relate to "magic numbers" as predicted by the shell model, though deformations must be accounted for in their (*) "island of stability." These entities were notably missing from the J.J. Thomson's "plum pudding" model and were shown to exist in an experiment in which Rutherford fired alpha particles at a piece of gold foil. For ten points, identify these structures consisting of protons and neutrons that are located at the center of an atom.

ANSWER: atomic nucleus (or nuclei, do not accept or prompt on "atom")

<MS>

15. Richard Atkinson and Richard Shiffrin developed a three-step model of these entities, and effortful processing forms ones that are durable and accessible. Encoding of these is enhanced by rehearsal, which helps to explain the serial position effect. Context-dependent types of these entities can be invoked by going into the room where they were made, and the decline of them is modeled in the (*) Ebbinghaus curve. Flashbulb types can be distorted by the misinformation effect, and the "Magical Number Seven" describes how much information can be stored in the short-term form of them. For ten points, name these entities whose loss is known as amnesia.

ANSWER: memories (accept word forms)

<HX>

16. This many flutes respond to the trumpet in Ives' *The Unanswered Question*, and John Cage's *Imaginary Landscape* of this number includes parts for 12 radios. Mahler's symphony of this number ends with a soprano solo, and Bruckner's is called the "Romantic". Mendelssohn's symphony of this number was inspired by a journey through Europe and is nicknamed "Italian", and E (*) major has this many sharps. Beethoven's fate motif contains this many notes; that motif begins his fifth symphony. For ten points, name this number, the number of strings on a violin and musicians in a quartet.

ANSWER: four

<HX>

17. In plants, this structure contains a solution called cell sap, and flowers derive their color from pigments located in these organelles, such as betalains and anthocyanins. After phagocytosis, a lysosome merges with "food" one of these organelles to begin digestion. Protists such as *Paramecium* expel excess water with the (*) "contractile" type of this organelle. A membrane called the tonoplast surrounds these structures in plants, which provide turgor pressure through osmosis. Up to 90% of a plant cell's volume can be occupied by, for ten points, what organelles that store organic compounds and water?

ANSWER: vacuoles

<BZ>

18. One of this woman's sons accidentally killed his father with a stingray-tipped spear and was named Telegonus. This inhabitant of Aeaea purified the Argonauts for the murder of Absyrtus, and her rejection by Glaucus led her to concoct a potion that turned Scylla into a monster. After being confronted with a sword, she swore by the gods not to take a certain hero's manhood. (*) Hermes gave his great-grandson moly to protect him from this woman, who had laced her food with a transforming potion. For ten points, name this witch who turned Odysseus' men into swine.

ANSWER: Circe (or Kirke)

<BZ>

19. This novel's protagonist goes to an opium den after leaving Lady Narborough's party early. The central object of this novel is observed to be "sweating with blood" after the protagonist smells the nitric acid used by chemist Alan Campbell to dispose of a body. This novel's protagonist is responsible for the suicide of actress (*) Sibyl Vane, and led down the road of debauchery by a "little yellow book" given to him by Henry Wotton. For ten points, identify this novel in which a portrait painted by Basil Hallward ages instead of the title character, a work by Oscar Wilde.

ANSWER: *The Picture of Dorian Gray*

<MS>

20. Ban Chao was a general during this dynasty, which faced the Rebellion of the Seven States. Its emperor Wudi defeated the Xiongnu Confederation, and this dynasty was founded when Liu Bang defeated the state of Chu. The Red Eyebrow Rebellion helped depose Wang Mang's Xin Dynasty and restore rule to this dynasty, which also faced a Taoist revolt called the (*) Yellow Turban Rebellion. It was preceded by the Qin Dynasty and followed by the Three Kingdoms, and this dynasty might have contacted its contemporary Roman Empire via the Silk Road. For ten points, identify this dynasty named after China's majority ethnic group.

ANSWER: Han Dynasty

<JD>

End of regulation, only proceed if tied

21. This man first won his seat after a primary victory over Buz Lukens, and trounced the Constitution Party's James Condit in the 2012 election. Kansas' Tom Huelskamp voted against this politician, instead supporting Jim Jordan, and he gained leadership of his party by beating Roy Blunt to succeed Tom DeLay. A recent (*) coup attempt against this man was called off 30 minutes beforehand, after 25 votes were not reached. Eric Cantor attacked this man's fiscal cliff deal, even though he is the highest-ranking Republican in government. For ten points, name this Ohioan, newly re-elected Speaker of the House.

ANSWER: John Boehner

<DA>

22. He's not Theodore Roosevelt, but this man's negotiations with Britain over a canal in Nicaragua led to the Clayton-Bulwer treaty. This man employed the "Flying Artillery" tactic to lead his troops to victory at the Battle of Palo Alto, although he may be better known for defeating an army more than three times his size at the Battle of (*) Buena Vista during the Mexican-American War. This man ran as a Whig and defeated Lewis Cass and Martin van Buren in the 1848 presidential election. For ten points, name this President nicknamed "Old Rough-and-Ready" who was succeeded by Millard Fillmore.

ANSWER: Zachary Taylor

<HG>

BONUSES

1. Bonus: Zeus spoke through the rustlings of the oak trees at one of these in Dodona. For ten points each:

[10] Name these places or people through which the gods communicated when consulted. The most famous example of these was the one at Delphi dedicated to Apollo.

ANSWER: **oracles** (do not accept or prompt on “prophets”)

[10] Apollo established the Oracle of Delphi after killing this serpent, which had been pursuing his mother Leto. The predecessor to the Olympic Games were held to commemorate the killing of this creature.

ANSWER: **Python** [the Pythian games preceded the Olympic games]

[10] This man seized the Pythoness’ tripod after she refused to answer his inquiry at first, since he had been stained by his murder of Iphitus. The Oracle eventually told him to serve Omphale as a slave to atone for the murder.

ANSWER: **Heracles** (or **Hercules**)

<BZ>

2. Bonus: A derivative of this compound has been linked to Reye’s syndrome. For ten points each:

[10] Identify this beta hydroxy acid known for its abilities to ease pain and exfoliate the skin. This compound can be extracted from the bark of the white willow tree.

ANSWER: **salicylic acid** (accept **2-hydroxybenzoic acid** but do not reveal the answer if teams do not say it; do not accept “aspirin”)

[10] A derivative of salicylic acid is the main component of this commonly used anti-inflammatory and pain-relieving drug. In children, Reye’s syndrome has been associated with the intake of this drug.

ANSWER: **aspirin** (accept **acetylsalicylic acid**)

[10] This conjugated, aromatic hydrocarbon is the main structural component of a molecule of salicylic acid. In the absence of functional groups, it has the formula C₆H₆.

ANSWER: **benzene** (accept **cyclohexa-1,3,5-triene** or **1,3,5 cyclohexatriene**)

<EnC>

3. Bonus: This play’s character of Tituba is accused of leading a dance in the woods. For ten points each:

[10] Identify this play, set during the Salem Witch Trials, which sees John Proctor hang after he refuses to confess. It is an allegory for the McCarthy communist hunts of the day.

ANSWER: *The* **Crucible**

[10] This character, the husband of Martha, also denies being a witch and ends up dying by being pressed to death. His last words are “more weight.”

ANSWER: **Giles Corey** (accept either)

[10] This author of *The Crucible* also wrote a play in which Willy Loman kills himself so that his family can benefit from the insurance money, *Death of a Salesman*.

ANSWER: Arthur **Miller**

<MiP>

4. Bonus: It distinguishes between the concepts of “present-at-handness” and “ready-to-handness” using the example of a hammer. For ten points each:

[10] Name this philosophical work, which uses phenomenological ontology to analyze the concept of Dasein, which describes the awareness of human consciousness.

ANSWER: Being and Time (or Sein und Zeit)

[10] This German philosopher joined the Nazi party soon after writing *Being and Time*. His other works include *Kant and the Problem of Metaphysics* and *On the Way to Language*.

ANSWER: Martin Heidegger

[10] This French philosopher read Heidegger’s *Being and Time* while a prisoner of war in World War II, and was inspired by it to write *Being and Nothingness*. He discussed the idea of “bad faith” in *Existentialism is a Humanism*.

ANSWER: Jean-Paul Sartre

<HX>

5. Bonus: The first mixtape released by this artist after he changed his stage name was *T.R.U. REALigion*. For ten points each:

[10] Identify this rapper, who appeared in “No Lie” along with Drake where he says that he is “smoking on that gas.” His current stage name is derived from his trademark jewelry, and he formed *Playaz Circle* with his friend Dolla Boy.

ANSWER: 2 chainz (accept Tauheed Epps or Tity Boi)

[10] 2 chainz raps alongside this performer in “Birthday Song”. He famously interrupted Taylor Swift at the Video Music Awards and to note that “Beyonce had one of the best videos of all time”.

ANSWER: Kanye West (accept either underlined name)

[10] Kanye West released this popular song in 2005 in his album *Late Registration*, in which he repeats “nothin ever promised tomorrow today” after the title line.

ANSWER: Heard ‘Em Say

<MiP+IK>

6. Bonus: Many composers have been inspired by childhood. For ten points each:

[10] Debussy dedicated this work for solo piano to his daughter, intending it to evoke images of her toys. Its movements include “Jimbo’s Lullaby” and “Golliwogg’s Cakewalk”.

ANSWER: Children’s Corner

[10] This German composer included *Hasche-Mann* and *Traumerei* in his *Kinderszenen*, or *Scenes from Childhood*. He also composed the *Rhenish Symphony*, and his wife, Clara, was a notable pianist.

ANSWER: Robert Schumann

[10] This French composer depicted such children’s activities as “Blind Man’s Bluff” and “Soap bubbles” in his piano duet, *Jeux d’enfants*. He also included the habanera “Love is a rebellious bird” in his *Carmen*.

ANSWER: Georges Bizet

<HX>

7. Bonus: Name these places home to industrial disasters, for ten points each:

[10] In 1984, a gas leak at a UCIL plant spilled methyl isocyanate into this city in India’s province of Madhya Pradesh, killing thousands.

ANSWER: Bhopal

[10] A 1919 explosion at a distillery caused a molasses flood that killed 21 people in this largest Massachusetts city.

ANSWER: Boston

[10] This Pennsylvania island was the location of a nuclear power plant that suffered a partial nuclear meltdown in 1979. Though there were no casualties, radioactive gases did escape from the plant.

ANSWER: Three Mile Island

<MS>

8. Bonus: It's a primitive data type in Java, but a subtype of integers in Python that maps to 0 and 1. For ten points each:
 [10] Identify this data type important in fields of algebra and logic named for it. The only values it can store are true and false.

ANSWER: **boolean**

[10] This boolean operator, a logical disjunction, is represented by two vertical lines in Java and C++. It returns true if at least one of its operands is true.

ANSWER: logical "**or**"

[10] In Java and C++, this symbol can be used to negate a boolean variable, turning false to true and vice versa. When followed by an equals sign, it means "not equal".

ANSWER: **exclamation** mark

<HX>

9. Bonus: This work's protagonist visits six asteroids after leaving his own. For ten points each:

[10] Identify this novel by Antoine de Saint-Exupéry, whose title character asks the narrator to draw him a sheep after they meet in the Sahara desert.

ANSWER: *The **Little Prince*** (or *Le **Petit Prince***)

[10] The Little Prince left his home after a falling-out with one of these objects which he loved. In a Shakespeare play, Juliet notes that one of these flowers "by any other name would smell as sweet."

ANSWER: a **rose**

[10] The narrator of *The Little Prince* decided as a child to give up art after everyone he met could not correctly identify a drawing of these two animals, one of which is digesting the other.

ANSWER: a **boa** constrictor and an **elephant** (accept **snake** for boa, prompt if only one animal is given)

<MS>

10. Bonus: This man took his highest post following the 2005 death of John Paul II. For ten points each:

[10] Identify this German, who recently retired his position as pope. His conversations with Jürgen Habermas were published as *The Dialectics of Secularization*.

ANSWER: Pope **Benedict XVI** (or Joseph Aloisius **Ratzinger**)

[10] Paolo Gabriele was sentenced to 18 months in jail for leaking secret documents to Italian journalists. He was able to access so many of the secret documents because he had this close job to the Pope.

ANSWER: **butler** (or **majordomo**)

[10] The documents in the "Vatileaks" Scandal were particularly bad for Tarcisio Bertone, who holds this position in the Vatican, in charge of its internal politics and diplomatic activities.

ANSWER: Cardinal **Secretary of State**

<DA>

11. Bonus: Identify some Central American countries, for ten points each:

[10] This country that lies at the southern end of the Gulf of Fonseca and contains the largest lake in Central America as well as a lake named after its capital, Managua.

ANSWER: Republic of **Nicaragua**

[10] This country contains the Great Blue Hole as well as a namesake barrier reef that is the second longest in the world. It is the only officially English-speaking country in Central America and the only one not to border the Pacific Ocean.

ANSWER: **Belize**

[10] The Darién Gap lies at one end of this country, while at its other end its highest point, Volcán Barú, lies in the Cordillera de Talamanca.

ANSWER: Republic of **Panama**

<JD>

12. Bonus: It was first discovered by Hertz while observing a spark gap. For ten points each:

[10] Identify this effect from physics, in which photons of sufficiently high energy are able to dislodge electrons from a plate.

ANSWER: **photoelectric** effect

[10] This scientist won the Nobel Prize for his work on the photoelectric effect. He also developed the theories of special and general relativity.

ANSWER: Albert **Einstein**

[10] For a given material, this is the energy photons must have to knock an electron loose. It is usually symbolized phi.

ANSWER: **work function** (do not accept or prompt on just **work**)

<MS>

[NOTE TO MODERATOR: do not mention “Castile” when giving out the answer to the first part of the bonus]

13. Bonus: She and her husband agreed to finance Christopher Columbus’s voyages. For ten points each:

[10] Identify this Spanish queen who expelled the Jews with the Alhambra decree and united much of the Iberian peninsula by marrying Ferdinand.

ANSWER: **Isabella** I of Castile (or **Isabel** I of Castile)

[10] The 1469 marriage of Ferdinand and Isabella formed the Kingdom of Spain by uniting the lands of these two Spanish kingdoms.

ANSWER: Kingdom of **Aragon** and Kingdom of **Castile** (prompt if only one is given; accept in either order)

[10] In the Kingdom of Spain, Jews and Muslims who decided to stay and convert to Christianity were given these names. Either the name for converted Muslims or the name for converted Jews is acceptable.

ANSWER: **Moriscos** or **Marranos** (prompt on “conversos”) (Moriscos were converted Muslims and Marranos were converted Jews)

<BZ>

14. Bonus: This poem’s title bird was “not born for death.” For ten points each:

[10] Identify this poem, which ends by asking “do I wake or do I sleep?” after describing a “light-winged Dryad of the trees.”

ANSWER: “**Ode to a Nightingale**”

[10] This British poet penned the lines “Beauty is truth/truth beauty” in his poem “Ode on a Grecian Urn” in addition to writing “Ode to a Nightingale”.

ANSWER: John **Keats**

[10] Keats also wrote this poem, which begins with the line “A thing of beauty is a joy forever” and references the title shepherd from Greek myth.

ANSWER: “**Endymion**”

<MM>

15. Bonus: Answer the following about Tibetan Buddhism, for ten points each:

[10] Tibetan Buddhism is an offshoot of this “Great Vehicle” branch of Buddhism, which is often contrasted with the Theravada school.

ANSWER: **Mahayana** Buddhism

[10] This highest-ranking lama leads the Yellow-hat Buddhists. The current holder of this position is Tenzin Gyatso, who used to lead the Tibetan government-in-exile.

ANSWER: **Dalai** Lama

[10] This second-in-command to the Dalai Lama lives in the Tashilhunpo Monastery. The current holder of this position is disputed, as Gedhun Nyima, handpicked by the Dalai Lama, has been in Chinese custody since 1995.

ANSWER: **Panchen** Lama

<MS>

16. Bonus: He signed the Goldwater-Nichols Act after the Packard Commission investigated the Department of Defense. For ten points each:

[10] Name this Republican president who firmly advocated supply-side economics. He was an actor and a governor of California before becoming president.

ANSWER: Ronald Wilson **Reagan**

[10] Codenamed Operation Urgent Fury, the invasion of this Caribbean island was launched by Reagan in order to protect American students and topple a Communist government set up after the deposition of Maurice Bishop.

ANSWER: invasion of **Grenada**

[10] In March of 1981, this man shot President Reagan in order to impress the actress Jodie Foster. His acquittal due to insanity angered many Americans and led to the Insanity Defense Reform Act of 1984.

ANSWER: John Warnock **Hinckley**, Jr.

<KT>

17. Bonus: Poems of this type include “If I could tell you” and “Do not go gentle into that good night.” For ten points each:

[10] Identify this nineteen-line poetic form, which consists of five tercets in ABA form and an ABAA quatrain. The last two lines are repeated multiple times throughout.

ANSWER: **villanelle**

[10] This literary character writes a villanelle ending “Are you not weary of ardent ways? / Tell no more of enchanted days” in one novel. In another, he is the Telemachus to Leopold Bloom’s Ulysses.

ANSWER: **Stephen Dedalus** (accept either)

[10] Stephen Dedalus is the protagonist of *A Portrait of the Artist as a Young Man*, written by this Irish author of *Ulysses*, *Finnegans Wake*, and the short story collection *Dubliners*.

ANSWER: James **Joyce**

<MS>

18. Bonus: Answer the following about applications of barycentric coordinates, for ten points each:

[10] Coordinates proportional to the sides of the reference triangle mark the location of this point, where all three angle bisectors of a triangle concur.

ANSWER: **incenter** (do not accept other centers like circumcenter, orthocenter, or centroid, prompt on center)

[10] An easy method of determining perpendicularity can be proven by setting the orthocenter’s coordinates all equal to this smallest whole number. It is the number of elements in the empty set.

ANSWER: **zero**

[10] Barycentrics provide an easy equation for this conic section. The angle bisector from A meets the perpendicular bisector of BC on this figure, which contains all three vertices of a triangle.

ANSWER: **circumcircle** (don’t accept incircle or nine-point circle)

<MS>

19. Bonus: Answer the following about American photographers, for ten points each:

[10] This photographer developed the zone system with Fred Archer, and took many pictures in Yosemite National Park. His works include *Moonrise*, *Hernandez New Mexico* and *Moon and Half Dome*.

ANSWER: Ansel Easton **Adams**

[10] This man took several pictures of his wife, Georgia O’Keeffe, as well as capturing immigrants entering a ship in his *The Steerage*.

ANSWER: Alfred **Stieglitz**

[10] Joe Rosenthal is most famous for his World War II photograph of six US soldiers atop Mt. Suribachi during the battle for this island.

ANSWER: **Iwo Jima**

<KT>

20. Bonus: It begins with prophase and ends with cytokinesis. For ten points each:

[10] Name this process of cell division used by eukaryotes. Unlike meiosis, it results in two diploid cells that each contain a full set of chromosomes.

ANSWER: **mitosis**

[10] Mitosis is preceded by this period of the cell cycle. It is split into the G1 phase, in which cells perform their usual functions, the S phase, in which DNA is replicated, and the G2 phase, in which cells grow to prepare for mitosis.

ANSWER: **interphase**

[10] CDKs are protein kinases dependent on these molecules, which control the progression of mitosis and the cell cycle by increasing or decreasing their concentration in the cell.

ANSWER: **cyclins**

<BZ>

21. Bonus: Answer some questions about the wars between Persia and Greece, for ten points each:

[10] The Persian army was halted for a short time at these “Hot Gates” by a group of Greek soldiers supported by three hundred Spartans under the command of Leonidas.

ANSWER: **Thermopylae**

[10] This Persian king led the forces at Thermopylae, where he sent his Immortals against the Spartans.

ANSWER: **Xerxes I**

[10] This Athenian general planned to block the straits of Artemisium and later led the Athenian fleet at Salamis.

ANSWER: **Themistocles**

<CC>

22. Bonus: This battle marked the end of the Hundred Days. For ten points each:

[10] Identify this battle, after which Napoleon was exiled to St. Helena for good. It was preceded by a brief battle at Quatre Bras, and the Lion’s Mound marks the location of William II’s wounding during it.

ANSWER: Battle of **Waterloo**

[10] Along with Blucher, this British general commanded the Allied army that defeated Napoleon at Waterloo. While Prime Minister, he helped pass the Roman Catholic Relief Act of 1829.

ANSWER: Duke of **Wellington** (or Arthur **Wellesley**)

[10] Wellington also had a fantastic victory at Assaye during the second of the wars between Britain and this Indian empire. Kanhoji Angre was a great naval leader of this polity, which was founded by Shivaji.

ANSWER: **Maratha** Empire

<MS>