Harvard Fall Tournament X

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Round 7

Tossups

1. This man met Frank Gallucio while working as a waiter at the Harvard Inn, where he was mentored by Johnny Yale. This man employed James Belcastro during the "Pineapple Primary," which led to a political victory for his ally "Big Bill" Thompson. This man was the first American to be referred to as (*) "Public Enemy Number One," and he struggled for power with Bugs Moran, leading to the St. Valentine's Day Massacre. Eliot Ness and the Untouchables finally managed to jail this man in 1933 on charges of tax evasion. For 10 points, name this Chicago gangster, nicknamed "Scarface."

ANSWER: Alphonse Gabriel "Al" Capone

- 2. One character with this occupation is assisted by a man with a huge nose made of pasteboard and has a costume compared to a "Looking Glass." One character of this occupation is described as having a "Woeful Countenance" and fights another character with this occupation titled (*) "of the White Moon" who is revealed to be Samson Carrasco. A character described as "his wits being quite gone" decides to take up this occupation, after which he swears to protect his neighbor Aldonza Lorenzo and renames his horse Rocinante. For 10 points, what farcical occupation does Don Quixote take up after reading too many books about chivalry?

 ANSWER: knight-errant (all the characters are from the novel Don Quixote by Miguel Cervantes, so accept any answer that also includes that information)
- 3. A "Project" centering on this author has commissioned authors like Alexander McCall-Smith to rewrite this author's novels. A center dedicated to this author is located in Bath, in which this author also set a novel in which Anne Elliot ultimately marries Captain Frederick (*) Wentworth. This author wrote a novel in which the owner of Pemberley bribes George Wickham to marry after he disgracefully elopes with Lydia. This author's most famous novel begins "It is a truth universally acknowledged [...]" and ends with Darcy's marriage to Elizabeth Bennet. For 10 points, name this author of *Pride and Prejudice*.

ANSWER: Jane Austen (the novel with Anne Elliot is Persuasion)

4. One of these animals appears in the extreme bottom left corner of Bronzino's Venus, Cupid, Folly, and Time, while an infant John the Baptist holds a type of these animals in one of Raphael's Madonnas. Joseph Wright of Derby painted an experiment on one of these animals in an (*) air pump. A series of marble and bronze sculptures depicting these animals in idealized slanted, diagonal forms was assessed a customs tax; that work depicts these animals in Space and was created by Constantin Brancusi. For 10 points, name these animals, many American examples of which were sketched by John James Audubon.

ANSWER: birds (accept specific types of birds, including cockatoos or goldfinchs)

5. One poem by this man declares "don't keep asking" to the woman Leuconoe and warns "jealous time will have fled." This poet joyfully wrote "Now is the time for drinking" with reference to the death of Cleopatra. One work by this poet compares the (*) art of poetry to that of painting and argues that "even good Homer nods." This poet argued for the practice of beginning stories *in medias res*, and he stated "it is fitting and sweet to die for one's country." This poet coined the phrase "carpe diem." For 10 points, name this Roman poet who wrote the Ars Poetica and many examples of his namesake type of ode.

ANSWER: Horace (or Quintus Horatius Flaccus)

- 6. Sean Elliott hit a game-winning shot for this team in the "Memorial Day Miracle," and while playing for this team, Robert Horry hip-checked Steve Nash into the scorer's table during the 2007 playoffs. This team chose players from Wake Forest and Navy using the first overall picks in (*) 1997 and 1987, respectively. This team lost one NBA finals after a three-pointer from Ray Allen in Game 6, though they won in 2005 over the Pistons and in 2007 over the Cavaliers off the strength of players like Manu Ginobli and the coaching of Gregg Popovich. For 10 points, name this team for which Tim Duncan plays that's based in San Antonio.

 ANSWER: San Antonio Spurs (accept San Antonio by itself before it's read; before that, accept either or both
- ANSWER: San Antonio Spurs (accept San Antonio by itself before it's read; before that, accept either or both underlined parts)
- 7. Internal energy is minimized under conditions of constant particle number, volume, and this quantity. For an ideal gas undergoing an isothermal step, the change in this quantity is n R times the log of the ratio of volumes, and its change is zero for an adiabatic step. For vaporization, this quantity is equal to the (*) change in enthalpy over the boiling temperature. Boltzmann wrote this state function as his namesake constant times the log of the number of microstates, and it is symbolized uppercase S. For 10 points, name this state function that cannot decrease in any spontaneous process according to the Second Law of Thermodynamics.

 ANSWER: entropy (accept § before read)
- 8. One of these events ended by quoting 1 Maccabees, which gives that event its common name. "Pug" Ismay's question about Jesus caused one of these events to change one phrase to "in the field of human conflict." One of these events mentions a certain action taking place "with [...] growing strength in the (*) air," as well as other locales like "fields," "streets," "landing zones," and "beaches." The term "iron curtain" was coined during one of these events, while in another, the speaker offered his "blood, toil, tears, and sweat" to defeat the Nazis. For 10 points, name these addresses by the British Prime Minister during World War II.

 ANSWER: speeches by Winston Leonard Spencer-Churchill (prompt on just "speeches" by asking, "by whom?"; accept equivalents for speech like address)
- 9. Symbols of this deity include the star Sirius and the Tiet amulets. When this deity was syncretized with Serket, she wore a crown of scorpions, but normally, this deity's headdress was a throne. Four of her sons acted as the protectors of the canopic jars. This deity created the first cobra out of spittle and dust which she used to poison (*) Ra and force him to reveal his secret name. This goddess traveled to Byblos to find the coffin of her husband, and her sister Nepthys helped her re-assemble her husband after he had been carved up by Set. For 10 points, name this Egyptian goddess, the mother of Horus and the husband of Osiris.

ANSWER: <u>Isis</u> (accept <u>Sopdet</u> before "Tiet")

- 10. A general with this surname named the border that separated Italy and Yugoslavia after World War II. A knighted privateer with this surname was unaware of an existing peace treaty when he accidentally invaded Spanish Panama, and a general with this surname won the Battle of Cowpens. A man with this surname merged with (*) Andrew Carnegie's company to form U.S. Steel; that man with this surname later bailed out the U.S. during the Panic of 1907, and his namesake bank merged in 2000 with Chase Manhattan. For 10 points, give this surname shared by the pirate Henry, Revolutionary War general Daniel, and financier J.P. ANSWER: Morgan (accept any of the following: William Duthie Morgan, Henry Morgan, Daniel Morgan, J(ohn) P(ierpont) Morgan)
- 11. A 2005 outbreak of a disease caused by this virus caused worldwide shortages of star anise, which contains a precursor to a sialic acid analogue used to treat that disease. This virus has a genome divided into eight segments of negative-sense RNA. (*) Hemagglutinin and neuraminidase are used to classify the different strains of this virus that is targeted by the drugs zanamivir and oseltamivir. The strains of this orthomyxovirus contain the canonical examples of antigenic drift and shift. A 1918 pandemic resulted from the "Spanish" variety of this virus. H1N1 is an example of, for 10 points, what virus with "avian" and "swine" varieties? ANSWER: influenza (or flu)
- 12. This event is the subject of the book You Have Seen Their Faces, written partially by Erskine Caldwell. A photo taken during this event depicts two men walking down a road next to a billboard reading, "Next time, take the train," and another photograph taken during this event depicts a line of people standing in front of a (*) sign reading "There's no way like the American Way." A third photo from this period shows Florence Owens Thompson, a pea-picker in California. For 10 points, name this period during which Dorothea Lange photographed a "Migrant Mother," an economic downturn resulting from a 1929 stock market crash.

 ANSWER: Great Depression (anti-prompt [ask for less specificity] on "Dust Bowl")
- 13. One king of this name told the men who captured his killer to let him go with one hundred shillings; after that king died, the killer was instead skinned alive. That king of this name was victorious at the Battle of Jaffa and was the son of Edward the Black Prince. The second king of this name was the (*) last Plantagenet monarch and was deposed by Henry IV. Bones found under a church parking lot in 2012 belonged to the third king of this name, who may have imprisoned the Princes in the Tower. For 10 points, name this regnal name shared by three British kings, the first of whom was known as "Lionheart."

ANSWER: Richard (accept Richard followed by any numbers one to three)

14. The Y Wladfa settlements in this country's Chubut Province are home to many of its Welsh-speakers. The Valdes Peninsula is located on the east coast of this country, and the Los Glaciares National Park is in its Santa Cruz Province. With its western neighbor, this country shares peaks like (*) Mount Fitz Roy along an ill-defined border in the Southern Patagonian Icefield. The city of Ushuaia in this country lies on the Beagle Channel and serves as the capital of this country's portion of Tierra del Fuego. For 10 points, name this second-largest South American country located east of Chile, with capital at Buenos Aires.

ANSWER: Argentina (accept Argentine Republic; accept República Argentina)

15. The second leader of this religion wrote the book *The Secret of Divine Civilization*. This religion's founder announced he was "He whom God shall make manifest" at the Garden of Ridvan and later wrote *The Seven Valleys*. The Ten Year Crusade was launched to promote this religion by its (*) "Guardian," Shoghi Effendi. This religion uses a nine-pointed star as a symbol and its primary text is the Book of Certitude. The founder of this religion was a follower of the Bab, and this religion is centered at the Universal House of Justice in Haifa, Israel. For 10 points, name this Middle Eastern religion founded by Baha'ullah.

ANSWER: Baha'i faith

16. A percent change for this quantity appears in the denominator of the sacrifice ratio. This quantity can create shoeleather costs and menu costs, and its "built-in" type is included in Robert Gordon's triangle model of it. By the (*) Fisher equation, this quantity is the difference between real and nominal interest rates, and the Phillips Curve plots this quantity versus unemployment. An increase in this quantity occurred alongside economic "stagnation" in the 1970s. For 10 points, name this economic quantity and phenomenon whose "hyper" variety leads to a massive increase in prices and devaluing of money.

ANSWER: inflation rate (prompt on anything relating to an increase in prices or the price level)

17. Though not a violin sonata, the first work of this type by Leos Janacek ["YAH-nah-check"] was inspired by Leo Tolstoy's novella "The Kreutzer Sonata." A C-minor six chord at the beginning of one of these pieces by Mozart gives it its namesake "Dissonance," while the DSCH motif begins another example of this work dedicated "to the victims of fascism and war," the (*) eighth by Shostakovich. A high E held by the violin represents imminent deafness in Smetana's work of this type called "From My Life," and Dvorak's residence in Iowa inspired an "American" one of these pieces. For 10 points, name this type of work written for two violins, a viola, and a cello.

ANSWER: string quartet

18. The differential rotation of these objects can be described by the Oort's A and B constants. Equations named after Faber-Jackson and Tully-Fisher relate the (*) stellar velocity dispersion of these objects to their luminosity. Vera Rubin's study of the rotation curves of these objects provided a strong piece of evidence for the existence of dark matter, and the tuning fork organizes these objects on a diagram. Lenticular examples of these objects are intermediate in classification between the elliptical and spiral types. For 10 points, name these large astronomical collections of billions of stars, examples of which include the Milky Way.

ANSWER: galaxy (or galaxies)

- 19. This author used the metaphor of an "undiscovered continent" to refer to the mind, and wrote several letters to an unidentified "Master." This poet asked "if my Verse is alive" in a letter to Thomas Wentworth Higginson. This poet complained that "They shut me up in Prose" and (*) "I felt a Funeral, in my Brain" in separate poems, and this poet asked "Who are you?" after declaring "I'm Nobody!" This poet claimed to have "heard a Fly buzz when I died," and in one poem she described riding in a carriage with the title concept. For 10 points, name this author of "Because I could not stop for Death", the reclusive "Belle of Amherst." ANSWER: Emily Dickinson
- 20. This language was developed as a replacement for another language that was a simplified version of BCPL. A common standard of this language is its "99" version, and an object-oriented variant of this language was written by Bjarne Stroustrup. Most of (*) UNIX is written in assembly and this language, and the "Objective" variety of this language is used by Apple. The K&R was a guide written for this language, which was developed by Dennis Ritchie. Descendants of this language include its "sharp" and "plus plus" variants. For 10 points, give this programming language named after a single letter.

ANSWER: C (do not accept or prompt on variants like "C++" or "C sharp")

21. The person responsible for this event lived in the Soviet Union for three years prior and had attempted to shoot Edwin Walker. James Tague was the only bystander of this event who was injured, and John Connolly may have been the true primary target of this event. Claiming (*) "I want them to see what they have done," one figure in this event refused to change a pink Chanel suit after it. Frame 313 of the Zapruder film captured the central moment of this event, and theories around it like "the lone gunman" and "the grassy knoll" were investigated by the Warren Commission. For 10 points, name this event that led to Lyndon B. Johnson becoming president.

ANSWER: assassination of John Fitzgerald Kennedy (accept JFK instead of "Kennedy"; accept obvious equivalents to "assassination" like "killing")

Bonuses

- 1. Extant classes within this phylum include Echinoidea, Crinoidea, and Asteroidea. For 10 points each:
- [10] Name this class of deuterostomes ["dew-ter-o-stomes"] characterized by their radial symmetry and water vascular systems. Some examples of these organisms, such as sea cucumbers and sea urchins, are considered delicacies in Asian cuisine.

ANSWER: Echinodermata (or echinoderms)

[10] The first known examples of echinoderms appeared during this geologic period. Trilobites, mollusks, and crustaceans also appeared during this geologic period's namesake "explosion."

ANSWER: Cambrian period

[10] Outbreaks of this coral-eating echinoderm can quickly devastate coral reef habitats, especially since it has few natural predators. The sharp, venomous spines that cover this organism's upper surface give rise to this organism's name.

ANSWER: crown-of-thorns starfish (accept Acanthaster planci; prompt on "starfish")

2. Early on in his life, this man was commended for his bravery during the Battle of Madras. For 10 points each:

[10] Name this British army officer who captured Chandernagore and the French capital of Pondicherry in the Carnatic Wars. This man had the epithet of India appended to his name for his service.

ANSWER: Robert Clive

[10] Robert Clive's victories in the Carnatic Wars paved the way for this British company to establish hegemony in the Indies, beating out similarly named Dutch and French competitors.

ANSWER: British East India Company

[10] After capturing Fort William in Calcutta, Clive and his forces discovered this event in which 146 British prisoners of war were crammed into a 14 by 18 foot dungeon.

ANSWER: The Black Hole of Calcutta

- 3. Answer the following questions about periodic properties, for 10 points each:
- [10] This property tends to decrease down a group and increase left to right across a row. Differences in this property between atoms lead to the polarity of some chemical bonds, and it is measured in Paulings.

ANSWER: electronegativity (accept word forms; do not accept "electron affinity")

[10] Members of this group of elements tend to have the largest atomic radii and smallest ionization energies within their rows. Elements within this group tend to have violent and explosive reactions with water.

ANSWER: alkali metals (prompt on "Group I" or "Group 1"; do not accept "alkaline" or "alkaline earth")

[10] The poor shielding ability of electrons in the 4f subshell leads to this phenomenon. This phenomenon's name comes from the fact that the decrease in atomic radii is greater than expected.

ANSWER: lanthanide contraction (prompt on partial name)

- 4. The National Gallery in Washington has the only painting by this man outside of Germany. For 10 points each:
- [10] Name this German Renaissance painter best known for painting the Isenheim Altarpiece. He continued painting in a distinctly medieval style well into the 16th century.

ANSWER: Matthias Grünewald

[10] Another famous Renaissance altarpiece is the Ghent altarpiece, a work by this man. This artist painted a creepily-old looking infant Christ in *Madonna of the Chancellor Rolin*.

ANSWER: Jan van Evck

[10] Most famously though, van Eyck created this depiction of a married couple standing before the viewer and presumptive artist.

ANSWER: <u>Arnolfini Portrait</u> (accept synonyms like "Painting" for "Portrait"; accept <u>Arnolfini Wedding</u> and synonyms like "Marriage" for "Wedding"; accept basically anything mentioning Arnolfini and his wife getting hitched)

- **5.** Name these things related to literary barons of the skies, for 10 points each:
- [10] The narrator of this French children's book by Antoine de Saint-Exupéry is a pilot. After he crashes his plane in the desert, he meets the title royal character, who lives on an asteroid and falls in love with a rose.

ANSWER: The Little Prince

[10] This World War II pilot constantly invents excuses to get out of combat, which leads to him learning about a "catch-22" in the Joseph Heller novel he appears in.

ANSWER: Yossarian

[10] The title character of this Michael Ondaatje novel is revealed as a Hungarian count, who suffers burns after the plane he's flying catches fire.

ANSWER: The **English Patient**

- 6. Investigations of this man on charges of rape were accused of being politically motivated. For 10 points each:
- [10] Name this man whose creation of a whistleblowing website and later collaboration with Chelsea Manning started a series of events that led to him seeking asylum from Ecuador.

ANSWER: Julian Assange

[10] This former chief counterterrorism adviser to Barack Obama helped to craft the American drone program. Now the Director of the CIA, his emails are the latest prominent leak from Assange's website, WikiLeaks.

ANSWER: John (Owen) Brennan

[10] This Moscow resident blew the whistle on the NSA's dragnet surveillance programs. He did not make use of WikiLeaks when he released his information to journalist Glenn Greenwald.

ANSWER: Edward Snowden

- 7. David Hume proposed the problem of induction in this field. For 10 points each:
- [10] Name this field of study in philosophy primarily concerned with knowledge.

ANSWER: **Epistemology**

[10] This man, among others, defined knowledge as a "justified true belief." This philosopher wrote the *Nicomachean Ethics*, was taught by Plato, and in turn tutored Alexander the Great.

ANSWER: **Aristotle**

[10] This man debunked the justified true belief definition of knowledge by providing two counter-examples where justified true beliefs end up being correct by coincidence instead of by logical deduction.

ANSWER: Edmund Gettier (accept Gettier problem)

8. In honor of Ocean Bowl, name these things related to the science of the ocean, for 10 points each:

[10] Ocean life is particularly threatened by these toxic metals that accumulate in the food chain. These metals are typically listed as including cadmium, mercury, lead, chromium, and arsenic.

ANSWER: **heavy** metals

[10] The Coriolis Force leads to the rotation of ocean currents and the formation of these vortices. Major examples of these rotating systems include the ones in the Indian Ocean and the North Atlantic.

ANSWER: gyres

[10] The tidal forces of a body lead to this limit which for the Earth is about six million miles. Closer than this limit, satellites disintegrate as they are torn apart by tidal forces.

ANSWER: Roche limit

9. As commander of Fort de Buade, this man was criticized for importing brandy to sell to local Native Americans. For 10 points each:

[10] Name this explorer and governor of the Louisiana territory. He established a fort named for the comte de Pontchartrain and the French word for "strait."

ANSWER: Antoine Laumet de la Mothe, sieur de Cadillac (accept either or both underlined parts)

[10] Cadillac founded Fort Pontchartrain, which would eventually become this largest city in Michigan and home to many automobile manufacturers.

ANSWER: Detroit

[10] Detroit was unsuccessfully besieged during this conflict. This war's namesake was an Ottawa tribe chieftain, and the British general Jeffrey Amherst villainously gave smallpox-infected blankets away during it.

ANSWER: **Pontiac's** War/Rebellion/Conspiracy (accept anything with **Pontiac**, basically)

10. One of this author's poems coined the term "Dark, Satanic Mills." For 10 points each:

[10] Name this English poet of "And did those feet in ancient time," as well as more famous poems like "The Tyger" and "The Lamb."

ANSWER: William Blake

[10] Blake included "The Lamb" as a "Song of Innocence" in one poetry collection, contrasting it with "The Tyger," which was a "Song of [this phenomenon]."

ANSWER: Songs of <u>Experience</u> (accept Songs of Innocence and <u>Experience</u> Showing the Two Contrary States of the Human Soul)

[10] A notebook extensively used by Blake later came to be owned by a poet of this surname. A poet of this surname wrote "The Blessed Damozel," while his sister wrote the poem "Goblin Market."

ANSWER: Rosetti (accept Dante Gabriel Rossetti or Christina Rossetti)

11. Answer the following about Pritzker Prize-winning architects, for 10 points each:

[10] This 1989 winner's Stata Center at MIT consists of jumbled façades that appear to be at imminent risk of collapse. He designed the Experience Music Project in Seattle, and frequently uses curved sheets of metal.

ANSWER: Frank (Owen) Gehry (accept Frank Owen Goldberg)

[10] In 2004, the Pritzker was awarded to this Baghdad-born architect, the first woman to win the prize. Her superfuturistic design for a Tokyo stadium to host the 2020 Olympics was likened to a bicycle helmet by critics. ANSWER: Zaha (Mohammad) <u>Hadid</u>

[10] Hadid also designed one of these buildings in Guangzhou, China. Her predecessor as Pritzker winner, Jørn Utzon, is most famous for designing one of these buildings with sail-like roofs in the Sydney harbor.

ANSWER: opera house (prompt on things like "theater," "concert hall," or "performing arts center")

- 12. This actress was creepily recreated with CGI in a Galaxy chocolate commercial. For 10 points each:
- [10] Name this screen legend who rose to stardom in *Roman Holiday*. She also sang about the "Rain in Spain" in *My Fair Lady*.

ANSWER: Audrey Hepburn (prompt on just "Hepburn")

[10] Audrey Hepburn's best known role was as Holly Golightly in this film. Hepburn's iconic Givenchy "little black dress" was created for this film.

ANSWER: Breakfast at Tiffany's

[10] In the film, Hepburn plays the guitar and sings this theme song for *Breakfast at Tiffany's*. Andy Griffin later recorded this song that describes the title entity as a "dream maker" and "heart breaker."

ANSWER: "Moon River"

- 13. When critics voiced their doubts about this album actually being jazz, its artist said, "It's music, and I like it." For 10 points each:
- [10] Name this album, the first track from which is an adaptation of the Adagio from Joaquin Rodrigo's Concierto de Aranjuez.

ANSWER: **Sketches of Spain**

[10] This other album by the artist of *Sketches of Spain* featured John Coltrane and Cannonball Adderley on saxophone. This seminal jazz album includes the tracks "Freddy Freeloader" and "So What."

ANSWER: Kind of Blue

[10] Sketches of Spain and Kind of Blue are both albums by this jazz trumpeter.

ANSWER: Miles Dewey **Davis** III

- 14. The epigraph of this poem quotes the Sibyl of Cumae as saying "I want to die," and dedicates the poem to "the best blacksmith." For 10 points each:
- [10] Name this long Modernist poem whose sections include "The Burial of the Dead" and "A Game of Chess." It ends by quoting a Sanskrit mantra.

ANSWER: The Waste Land

[10] The Waste Land is a poem by this Anglo-American. This poet considered his conversion to Anglicanism in the poem Ash Wednesday.

ANSWER: T(homas) S(tearns) Eliot

[10] Eliot also wrote this poem told from the perspective of an old man considering World War I. The speaker claims not to have been at the "hot gates," and the poem ends "Thoughts of a dry brain in a dry season."

ANSWER: "Gerontion"

- 15. Part of this event included building a "Democracy Wall" where people could post criticisms of the government. For 10 points each:
- [10] Name this period of political liberalization in 1956 in which the title objects were allowed to "bloom." It turned out to be a great way to expose dissidents, who were targeted in the crackdowns following this campaign.

ANSWER: Hundred Flowers Campaign (accept baihua yundong)

[10] This initiative, begun shortly after the Hundred Flowers Campaign, hoped to industrialize the country through such measures as backyard furnaces. Instead, it led to the largest famine in human history.

ANSWER: Great Leap Forward (accept da vue jin)

[10] The Hundred Flowers Campaign and the Great Leap Forward occurred during the rule of this Chinese Communist leader.

ANSWER: Mao Zedong (accept Mao Tse-tung; accept Chairman Mao)

- 16. This location is part of the larger realm of Niflheim. For 10 points each:
- [10] Name this realm, the Norse underworld. It shares its name with the Norse goddess who rules it, and is derived from the same root and pronunciation as the modern English world for Judeo-Christian underworld.

ANSWER: Helheim (I don't really know how you would tell the difference, but accept hell)

[10] In one story the goddess Hel refuses to let this god of light leave Hel unless all the living and dead cry for him. This god had died after Loki tricked the blind Hoder into killing this god with mistletoe.

ANSWER: **Baldr** (or **Balder** or **Baldur**)

[10] Keeping with the theme of the reanimated dead, these Norse creatures were animated corpses capable of growing in size and often guarding treasure. Corpse doors were used to lure them back to their graves.

ANSWER: draugr (or draugar)

- 17. One of the primary belligerents in this nation's war for independence was the secret organization Filiki Eteria. For 10 points each:
- [10] Name this nation whose 1821 war for independence was led by Alexander Ypsilantis ["IP-silantis"] and was supported by Russia, Great Britain, and France.

ANSWER: Greece

[10] Greece sought independence from this Turkish empire. Following Greece's independence and other subsequent territorial losses, this empire was called the "sick man of Europe."

ANSWER: Ottoman Empire

[10] After receiving independence, Otto I from this royal family was named King of Greece. Other members of this royal family include Maximillian II, king of Bavaria, and Ludwig II, the Fairy Tale King.

ANSWER: Wittelsbach

- 18. At the end of this novel, "you" are abruptly whisked into a happy ending with Ludmilla. For 10 points each:
- [10] Name this novel that begins after the protagonist discovers he has only the first chapter of the title book. This novel notably makes use of the second person.

ANSWER: If on a winter's night a traveler

[10] If on a winter's night a traveler is a novel by this Italian, who also wrote a character literally split in two by a cannonball in *The Cloven Viscount*.

ANSWER: Italo Calvino

[10] Previously a chemist before becoming a writer, Calvino also wrote this collection of science-based short stories. It's narrated by "Qfwfq" and is sort of succeeded by the collection *t zero*.

ANSWER: Cosmicomics

- 19. Einstein proposed slit and box thought experiments to try and disprove this principle. For 10 points each:
- [10] Name this principle that formally states that the product of the standard deviation of position and the standard deviation of momentum must be greater than or equal to h-bar over two.

ANSWER: Heisenberg uncertainty principle (accept either or both "Heisenberg" or "uncertainty")

[10] The Heisenberg uncertainty principle is frequently confused with an effect wherein a person performing this action affects the result obtained. A bias named after this action occurs when people only look for the results they want.

ANSWER: observation (accept word forms like observe or observer)

[10] This other limitation on quantum mechanics states that it cannot reproduce the predictions of a hidden-variable theory that is exclusively local. An October 2015 paper received experimental results reinforcing this theorem.

ANSWER: Bell's theorem (accept Bell's inequality)

- 20. He was put in a pit by his brothers and sold as a slave to Ishmaelite traders. For 10 points each:
- [10] Name this son of Jacob who interprets dreams and becomes an Egyptian official. His father makes him a notable coat of many colors.

ANSWER: <u>Joseph</u> (or <u>Yosef</u>)

[10] This fourth son of Jacob and half-brother of Joseph suggested selling him into slavery. The word Jew and the name of a historical kingdom of Jews derive this figure's name.

ANSWER: Judah (or Yehudah)

[10] This third son of Jacob is the ancestor of his namesake priestly tribe. His descendents are granted that honor after refusing to worship the Golden Calf.

ANSWER: Levi

- 21. Answer the following about fertilization, for 10 points each:
- [10] The union of sperm and egg creates one of these diploid structures. This cell divides rapidly into blastomeres during an event known as cleavage.

ANSWER: zvgote

[10] Most of these organelles in the zygote originate from the mother, which is why their associated DNA is always inherited matrilineally. This organelle is known as "the powerhouse of the cell."

ANSWER: mitochondrion (or mitochondria)

[10] Sperm cells contain this specialized organelle. It is filled with specialized enzymes that break down the zona pellucida during its namesake "reaction."

ANSWER: acrosome