## 2016 "stanford housewrite"

Edited by Stephen Liu

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## PACKET 6

## **TOSSUPS**

- 1. A warrior in this work is captured only after being buried under the bodies of his slain enemies, and as a prisoner, is forced to watch from a chair at the top of a mountain as his family is destroyed by a curse. A pair of lovers in this work enter enemy territory by disguising themselves as a werewolf and a vampire bat before using a special knife called Angrist to pry the goal of their quest from an iron crown. The first kinslaying in this work occurs when many seafaring Teleri are killed defending their swan-ships from the exodus of the (\*) Noldor. In this work, Turgon builds a hidden city in a circle of mountains, Gondolin, whose army reveals itself for the first time at the disastrous Battle of Unnumbered Tears, or Nírnaeth Arnoediad. The long-lost siblings Niniel and Túrin Turambar tragically fall in love in this work, whose title comes from a set of jewels created by the elf Fëanor. For 10 points, name this epic about Beleriand that chronicles the backstory of J. R. R. Tolkien's fantasy universe. ANSWER: The Silmarillion [accept Quenta Silmarillion; accept The Children of Húrin before "werewolf"]
- 2. A building in this city contains interlocking T-shaped water basins surrounded by gypsum panels that show nature scenes. An artifact found in this city shows an animal with pierced ears, suggesting that it represents a pet. That blue faience monkey figurine was found in this city, whose artists turned sunk relief sculpture into a dominant form, as exemplified in a relief of a royal couple playing with their daughters beneath a radiant sun. Male figures with feminine features, such as pronounced breasts and wide hips, are characteristic of art from this city, much of which depicts figures with elongated (\*) heads. This city's perimeter is marked by a set of alphabetically labeled cliffside carvings called boundary stelae. An eye is missing from the bust of a queen from this city who wears a tall blue cap-like crown. For 10 points, name this city where several depictions of Queen Nefertiti were discovered, an Egyptian site that served as the capital of Akhenaten during its namesake monotheistic period. ANSWER: Tell el-Amarna [or Akhetaten]
- 3. In one poem, this writer cautioned that "steps must be gentle" in a space where "it is all hung by an invisible white hair" that "trembles as birch limbs webbing the air." The speaker of that poem predicts that he would stumble as he leads the title figure "by the hand through much of what she would not understand." This poet wrote that "silent answers crept across the stars" in a work that claims that "compass, quadrant and sextant contrive no farther tides." The first section of his best-known work asks the addressee to "descend and of the curveship lend a myth to God." In a poem that opens, "There are no (\*) stars tonight but those of memory," this poet wrote about objects pressed "into a corner of the roof' that belonged to his "mother's mother." In another poem this author of "My Grandmother's Love Letters" wrote, "this fabulous shadow only the sea keeps," about the grave of another writer. For 10 points, name this poet of "At Melville's Tomb" and a long poem entitled *The Bridge*.

  ANSWER: Hart Crane

4. The circadian regulator CLOCK appears to perform this enzymatic process, and shows homology to the MYST family, which also has this function. This is not tumor suppression, but SV40 T antigen inactivates a protein complex with this function called p3000/CBP. In yeast, the SAGA complex and Gcn5 perform this action, which is enhanced by Trichostatin A or sodium butyrate in vivo. This action increases binding affinity with a 110-residue loop of alpha helices called a (\*) bromodomain, and can remove the positive charge of a lysine residue. HDACs reverse this action, which usually modifies the N-terminal lysines of H3 and H4 histones. By reducing the strength of DNA-histone interactions, this action makes chromatin more transcriptionally active. For 10 points, name this post-translational modification of histones by HATs, which adds to amino acids a functional group often bound to coenzyme A.

ANSWER: histone acetylation

- 5. Colonel Trentacapilli helped suppress an attempt by a deposed ruler of this polity to retake it with a force of fewer than 300 men. After being beaten by a mob, that ruler reportedly told his executioners to fire "straight to the heart but spare the face." The Rimini Proclamation called on Italians to help this kingdom fight against the Austrians in a namesake war whose tide turned at the Battle of Occhiobello. Frederick Bianchi's victory over this kingdom at the Battle of Tolentino decided that war in favor of the Bourbons. This kingdom turned against France after the Battle of (\*) Leipzig, upon which Napoleon reportedly blamed his sister, Caroline, instead of this kingdom's ruler. The Parthenopean Republic temporarily interrupted this polity's monarchy, and Ferdinand IV unified it with a neighboring island. Joseph Bonaparte ruled this kingdom before taking the Spanish throne. For 10 points, name this kingdom ruled by Joachim Murat during the Napoleonic Wars, based in a city in southern Italy. ANSWER: Kingdom of Naples [accept Kingdom of the Two Sicilies]
- 6. The author of this work laments that it is not the princes, but the philosophers of his time who believe that philosophy should not be taught because there is no monetary value. This work notes that our understanding of the Peripatetics would be limited without the Academy of Platonists in a section that argues that we must synthesize and explore multiple philosophical schools to grasp the "light of (\*) truth." This work describes the Seraph, Cherub, and Throne to illustrate a progression through which one could become angelic, as we are stuck in the middle between the earth and the heavens. This work begins by recalling that Abdala the Sacaren was once asked what the most evocative wonder of the world was, to which he replied that man was the most marvelous of creatures. This text was originally composed with the intent of introducing its author's 900 theses. For 10 points, name this humanist speech written by Pico della Mirandola.

ANSWER: Oration on the Dignity of Man

- 7. After sending away a messenger for breaking the law, this figure heeded his warning when the messenger's head, having been severed on the edge of a shield, came back shouting the same news. This figure's first wife drowned his second while the latter was still pregnant with a child who was born by Caesarian section. That child of this man avenged his mother when he killed a bathing woman with a slingshot and a piece of cheese. Instead of killing this man, a warrior struck off the tops of three hills, upon the urging of this figure's son (\*) Cormac Cond Longas. This man died upon hearing of the death of Christ because the brain of Mesgegra was lodged in his head. This father of Furbaide was born after his mother was told that it was a good time for "begetting a king on a queen." Naoise and his brothers were killed on the orders of this king, who kept men away from Deirdre so he could marry her himself. For 10 points, name this son of Ness who ruled Ulster during the Cattle Raid of Cooley. ANSWER: Conchobar mac Nessa
- 8. These objects are the subject of the Tait flyping conjecture proven by Thistlethwaite and Menasco. Properties of these objects include the Thurston-Bennequin number, which equals writhe minus cusp number. These objects are the boundaries of Seifert surfaces. The Gordon-Luecke theorem states that two of these objects are equivalent if their complements are homeomorphic. One of these objects named for Fintushel and Stern unusually has seven exceptional slopes, so named because they produce non-hyperbolic (\*) 3-manifolds under Dehn surgery. The Jones and Alexander polynomials are examples of these objects' namesake invariants. These objects can be manipulated via the Reidemeister moves. Embedding a circle in three-dimensional Euclidean space produces one of these objects, which are generalized to higher dimensions by links. For 10 points, name these mathematical objects that include the trefoil, the figure eight, and the pretzel.

ANSWER: **knot**s [accept **link**s before mentioned]

9. An author born in this country wrote a novel in which Galileo, Mary Magdalene, and various popes watch as Caravaggio and Francisco de Quevedo play a game of tennis using a ball made from the hair of Anne Boleyn. A short story by an author from this country describes a rail company that hitches funeral chapels onto their trains for especially dangerous journeys, and occasionally stops at fake stations built in the jungle. That story is about a traveler trying to get to the city of T on an existentially unreliable train system. Sudden Death and "The Switchman" are works from this country, as well as a novel whose title character has a mysterious (\*) connection with her aunt, the old widow Consuelo. In addition to that novel about Felipe Montero, Aura, an author from this country wrote about Harriet Winslow in a novel inspired by the disappearance of Ambrose Bierce in this country. For 10 points, name this country home to the author of The Old Gringo, Carlos Fuentes.

ANSWER: Mexico

10. A character in this play invents a proverb about the Lord of the Manor killing his dogs to please complaining peasants. Characters in this play try to cover-up the four hours that passed between a rail worker's "[seizure] by a raptus" and the title event. In Act II, actors planted throughout the audience speak up to demonstrate that the police have spies everywhere. A character in this play claims to suffer from histrionomania, causing him to roleplay as a judge, a forensics expert, and a bishop. At the end of this play, that character handcuffs the journalist Maria (\*) Feletti, several policemen, and Inspector Bertozzo to the wall and states his plan to expose a series of bombings as false flag operations. This play follows the Maniac's attempts to prove that the title event was not a suicide, and was inspired by the death of Giuseppe Pinelli. For 10 points, name this play about a political dissident who was found dead after falling out of a window, written by Dario Fo.

ANSWER: Accidental Death of an Anarchist [or Morte accidentale di un anarchico]

- 11. This man falsified his age on the documents recording his marriage in order to hide the fact that he was over 20 years older than his 14-year-old bride. This man may have used the Maitland Plan as the blueprint for a military campaign in which he made multiple unsuccessful requests for aid from the British admiral William Bowles. This general concealed his forces behind a convent, then executed a surprise pincer movement on the way to defeating Antonio Zabala at the Battle of San Lorenzo, his first action as commander of the Regiment of Mounted Grenadiers. At the (\*) Yatasto relay, this man replaced Manuel Belgrano as General of the Army of the North. This man, who led a force of several thousand soldiers across the Andes in early 1817, then won the battles of Chacabuco and Maipú to secure the independence of Chile. For 10 points, name this Argentine hero and revolutionary who served as Protector of Peru until meeting with Simón Bolívar at the Guayaquil Conference.

  ANSWER: José Francisco de San Martin y Matorras
- 12. The first movement of this symphony uses a sudden sustained A-flat note when merging its allegro moderato section into a poco adagio section, which signals a departure from the symphony's home key into the new key of D-flat major. The maestoso section of this symphony's finale begins with a grand C major chord before transitioning into a march theme that incorporates the Dies Irae theme. That march theme was used for the film Babe and is played over the gentle trickling of the piano played four-hands. This symphony was dedicated in the memory of (\*) Franz Liszt and was written in only two movements, though it can be clearly divided into the traditional four sections. This C minor symphony's nickname derives from its incorporation of a large instrument that makes frequent use of low pedal notes in the second half of both movements. For 10 points, name this final numbered symphony of Camille Saint-Saens, usually named for a keyboard instrument.

  ANSWER: Organ Symphony [accept Camille Saint-Saens' Symphony No. 3]
- 13. This scientist is the first alphabetical namesake of the equation "shear strength equals cohesion plus normal stress times the tangent of the angle of internal friction," which is a failure criterion he co-names with Mohr. Electron tunneling into a quantum dot capacitor causes an increase in differential resistance at low voltage bias in this scientist's namesake blockade. The first-order contribution of vacuum polarization effects to an interaction named for this scientist is called the (\*) Uehling potential; that interaction named for this scientist is generalized to massive scalar fields by the Yukawa potential. The divergence of the magnetic vector potential equals zero in this scientist's namesake gauge condition. For 10 points, identify this physicist whose namesake law governs the electrostatic interaction of point charges.

ANSWER: Charles-Augustin de <u>Coulomb</u> [accept Mohr-<u>Coulomb</u> failure criterion, <u>Coulomb</u> blockade, <u>Coulomb</u> potential, <u>Coulomb</u> gauge, or <u>Coulomb</u>'s law]

14. This language is the only one in its family to split original labiovelars into velars when adjacent to high back vowels, dentals before some front vowels, and labials otherwise. The early history of this language saw a chain shift of the low-mid, high-mid, and high back unrounded vowels towards a new high front rounded vowel. This is the only Indo-European language to exhibit the triple reflex, the realization of the three laryngeals interconsonantally as three different vowels. One phoneme in the (\*) classical variety of this language had a realization that is disputed between [dz] and [zd], while the more recent history of this language's vowel system has seen a series of mergers into the high front vowel. This language was divided until the late twentieth century into demotiki ["thee"-MOW-tee-tsee] and Katharevousa varieties, the first of which evolved from Koine. For 10 points, name this European language, first attested in the Linear B script, that once included Attic and Ionic varieties. ANSWER: Greek

- 15. In the essay "On the Morning After the Sixties," Joan Didion recalls her "real joy" upon discovering that the most important sentence of this novel is a postscript. A famous quote from this novel is spoken in a "tone of scathing contempt" by a "manager's boy." In this novel, a "cipher" written in the margins of a copy of "An Inquiry into Some Points of Seamanship" is eventually revealed to be Cyrillic. In the last paragraph of this novel, a character sits "in the pose of a meditating Buddha." In the first chapter, that character notes, "this has also been one of the (\*) dark places of this earth" while looking at the Thames. The protagonist of this novel sees a painting of a blindfolded woman with a torch while he waits for his boat to be repaired at the Central Station. In this novel, "All Europe" is said to have contributed to the making of a character who advocates the extermination of "all the brutes." For 10 points, name this novel in which Kurtz speaks of "the horror, the horror," before dying. ANSWER: Heart of Darkness
- 16. Brain tumors can be treated using a form of neutron capture therapy that utilizes one of this element's isotopes referred to as its "enriched" version. One atom of this element is present in an acid that is typically encountered adjoined to diethyl ether. It is theorized that the "wurtzite" modification of this element's nitride may exceed the hardness of diamond. The "styx number" is a method to aid in counting electrons in bonds involving this element. An acid containing one atom of this element is (\*) coupled with aryl- or vinyl-halides in a reaction that is catalyzed by palladium. A compound consisting of this element and three hydrogens is added to an alkene as part of a two-part process that creates alcohols in an anti-Markovnikov manner. This element's hydride can take on closo-, nido-, and arachno- configurations. This element can only bond with six electrons, thereby violating the octet rule. For 10 points, identify this element with atomic number five.

  ANSWER: boron
- 17. A book about these buildings featuring photographs taken by Ralph Savage was written by James Talmage in response to a blackmail attempt that involved the publication of a book featuring inferior photographs of these buildings taken by Gisbert Bossard under the direction of the con artist Max Florence. Each of these buildings has at least one room with large mirrors on opposite walls, as well as a room containing an object supported by twelve bronze oxen, modeled after the description of the Molten Sea in 1 Kings and 2 Chronicles. A (\*) Hosanna shout takes place during the dedication of these buildings. Only people possessing a namesake "recommend" and wearing a namesake "garment" may enter these buildings, which contain Sealing Rooms for performing celestial marriages and basins for conducting posthumous baptisms. For 10 points, name these sacred buildings of the Church of Jesus Christ of Latter Day Saints.

  ANSWER: Mormon temples [accept equivalents for "Mormon," such as Latter Day Saints before mention; prompt
- on "temples"]

  18. At the request of Sister Mary of the Divine Heart, this pope consecrated the entire world to the Sacred Heart
- of Jesus by issuing the Annum sacrum. He reportedly carried around a hipflask of wine fortified with cocaine, a product invented by Angelo Mariani. With his theologian brother Giuseppe, this former Bishop of Perugia promoted Thomism, assisted by his advisor Tommaso Maria Zigliara. He opened the Vatican Secret Archives to researchers, including Ludwig von Pastor. Known as the "Rosary Pope" for his championing of the rosary prayer, this man was the first pope to establish Mary as (\*) Mediatrix. Among this pope's 85 encyclicals, more than any other pope, are the anti-Masonic Humanum genus and a manifesto on teaching scripture, Providentissimus Deus. This man also issued an encyclical on the "Rights and Duties of Capital and Labor," emphasizing the rights of the working class. For 10 points, name this successor of Pius IX who issued Rerum novarum and reigned until 1903. ANSWER: Leo XIII [accept Vincenzo Gioacchino Raffaele Luigi Pecci; accept Rosary Pope early]
- 19. Essays written in response to this event include "The Decline and Fall of the Spectacle-Commodity Economy" by Situationist leader Guy Debord, as well as a New York Times op-ed by Thomas Pynchon called "A Journey into the Mind of" the location where this event took place. An indirect cause of this event was the passage of Proposition 14, which repealed the Rumford Fair Housing Act. An official report on this event was headed by former CIA Director John A. McCone, and identified a "spiral of failure" that was tied to (\*) unemployment and lack of education. The phrase "Thin Blue Line" was coined by William H. Parker, the chief of police who called participants in this event "monkeys in the zoo." Sam Yorty asked DJ Magnificent Montague to stop using the slogan "Burn, Baby, Burn" after it became associated with this event, which began when California Highway Patrol officers arrested Marquette Frye for drunk driving. For 10 points, name these 1965 race riots in Los Angeles.

  ANSWER: Watts riots [accept Los Angeles Riots of 1965 until end of question; prompt thereafter]

20. This painter showed Dante lurking in the right background of a watercolor in which the purple-robed Rachel looks at her reflection in a pool of water while the green-robed Leah picks flowers from a branch. A series of 23 caricatures about this artist and "His Circle" were drawn by Max Beerbohm. A work by this artist shows an angel with pink wings next to a stack of books, on top of which is a potted white lily. In that work, Joachim prunes a vine in the background while Anne sits embroidering with her daughter. In an Annunciation scene, this artist of *The Girlhood of* (\*) *Mary Virgin* gave both Gabriel and Mary plain white robes, with Mary sitting on her bed and looking as if she has just woken up. This artist of *Ecce Ancilla Domini!* placed a sonnet at the top right of a painting showing a woman who has taken a bite out of a pomegranate. For 10 points, name this Pre-Raphaelite painter of *Proserpine* who was inspired by the death of his wife, Elizabeth Siddal, to paint *Beata Beatrix*.

ANSWER: Dante Gabriel Rossetti

## **BONUSES**

1. This piece was adapted into a jazz trombone showpiece by Tommy Dorsey. For 10 points each

[10] Name this piece sung by a foreign visitor to Novgorod and overheard by a protagonist who later marries the Sea-King's daughter. It follows similarly named songs performed by a Varangian and a Venetian.

ANSWER: "Song of the Indian Guest" [or "Song of India"]

[10] The "Song of the Indian Guest" appears in this composer's opera *Sadko*. In his opera *The Tale of Tsar Saltan*, Prince Gvidon's transformation into an insect is accompanied by the "Flight of the Bumblebee."

ANSWER: Nikolai Rimsky-Korsakov

[10] The title character of this other Rimsky-Korsakov opera is the subject of a wooing contest between Lel and Mizgir. In a tragic ending, she melts and dies after declaring her love for Mizgir.

ANSWER: The **Snow Maiden**: A Spring Fairy Tale [or **Snegúrochka**: Vesennyaya Skazka]

2. In a painting subtitled *If Life Were Life There Would Be No Death*, this painter showed his neighbor Kenneth Harper in a red coat and red cap, juxtaposing his leathery skin with his characteristic swirling details. For 10 points each:

[10] Name this magic realist painter of *The Vermonter* who was commissioned by Albert Lewin to paint *The Picture of Dorian Gray* for the 1945 film. His paintings typically feature a wide spectrum of dark colors.

ANSWER: Ivan Albright

[10] Ivan Albright did part of his training at this institution. This American institution's museum is home to Edward Hopper's *Nighthawks* and Georges Seurat's *A Sunday Afternoon on the Island of La Grande Jatte*.

ANSWER: Art Institute of Chicago [accept AIC]

[10] This other painting by Hopper was the first that the MoMA ever acquired. This work shows the title Victorian building standing out against a blue sky, and inspired the settings of both *Psycho* and *Days of Heaven*.

ANSWER: House by the Railroad

3. One of this poet's speakers states, "I am calling, I am feeling around for you in the darkness" in a work in which he implores, "Don't leave me behind by myself, to be locked in all alone." For 10 points each:

[10] Name this Peruvian poet of "The Big People," who may be more famous for writing "The Black Heralds" and the collection *Trilce*.

ANSWER: César Vallejo

[10] In "Black Stone on a White Stone," Vallejo wrote that he will die on a Thursday in this city "with a rainstorm." Charles Baudelaire, who lived in this city, wrote that it "changes more quickly, alas, than the human heart."

ANSWER: Paris

[10] This poet translated Vallejo's "The Big People," and also wrote about "two Indian ponies" whose eyes "darken with kindness" in "A Blessing." His poem about lying in a hammock on a farm ends, "I have wasted my life."

ANSWER: James Wright

4. Answer the following about soccer tactics, for 10 points each:

[10] In the early 1970s, coaches from this country developed the "Total Football" philosophy, which required every outfield player to be able to play every position. This country's national team finished 3rd at the 2014 World Cup. ANSWER: the **Netherlands** [or **Holland**]

[10] The "sweeper" variant of this position is best exemplified by Bayern Munich's Manuel Neuer. The player who fills this position wears a different colored shirt than his or her teammates and is allowed to use hands.

ANSWER: goalkeeper [or goalie]

[10] Current Liverpool manager Jurgen Klopp is best known for utilizing this tactic. With a name derived from German, this tactic involves running at the opposition until they make a mistake and lose the ball.

ANSWER: gegenpressing

- 5. The pushpaka vimana, the chariot used by Ravana to abduct Sita, has this ability. For 10 points each:
  - [10] Name this ability that Kay Kavus tried to obtain by dangling pieces of meat above eagles chained to his throne. ANSWER: the ability to **fly** [accept word forms]
  - [10] Kay Kavus held this title, also held by Jamshid, who owned a magic cup that held the elixir of immortality and could observe any location in the universe.

ANSWER: shah [or king of Persia; accept king of Iran]

[10] This figure imprisoned and blinded Kay Kavus, prompting the hero Rostam to undergo seven trials in the realm of Mazanderan in order to rescue him. In the final trial, Rostam defeated this figure in battle and cut out his liver.

ANSWER: White Demon

- 6. Answer the following about the Iroquois confederacy, for 10 points each:
  - [10] Most historians credit the Iroquois' relative longevity to its strategy of signing treaties with both of these colonial powers and then playing them against each other. These two nations were the primary belligerents of the Seven Year War's North American theater.

ANSWER: <u>France</u> and Great <u>Britain</u> [accept New <u>France</u> or <u>French</u> Empire instead of "France"; accept <u>England</u> or <u>British</u> America or <u>British</u> Empire instead of "Great Britain"]

[10] The Iroquois used belts made out of these objects to record treaties made between tribes and with colonial powers. Eastern Woodlands tribes used strings of these objects for gift exchanges.

ANSWER: wampum belts [or clam shell beads; prompt on "shells"]

[10] This Iroquois leader convinced most of the confederacy to join the British side during the American Revolution. This member of the Mohawk tribe, whose sister Molly married the British official William Johnson, was nicknamed "monster" by the patriot side.

ANSWER: Joseph **Brant** [or **Thayendanegea**]

- 7. After this action occurs, the narrator compares the protagonist to "a Greenwich Villager who had left her spectacles at home." For 10 points each:
  - [10] Name this action that the protagonist of a short story claims she plans to do, in order to attract the attention of Eau Claire's eligible boys. The protagonist avenges this action by removing two objects from her cousin's head and leaving them on Warren McIntyre's front porch.

ANSWER: <u>Bernice</u> <u>bob</u>bing her hair [accept any answer suggesting that <u>Bernice</u> gets a <u>haircut</u>; or "<u>Bernice Bobs</u> Her Hair"]

[10] This author of "Bernice Bobs Her Hair" also wrote novels like *Tender is the Night*.

ANSWER: F. Scott Fitzgerald [or Francis Scott Key Fitzgerald]

[10] "Bernice Bobs Her Hair" begins at a party thrown at one of these locations. In Fitzgerald's story "Winter Dreams," Dexter works at one of these locations as a teenager.

ANSWER: golf club [or golf course; accept country club]

- 8. One psychologist with this surname developed a namesake sex-role inventory that measures masculinity and femininity, and also introduced gender schema theory. For 10 points each:
  - [10] Give this surname also shared by a man who defended the ganzfield experiment, which tested an individual's level of ESP.

ANSWER: **Bem** [accept Sandra **Bem** or Daryl **Bem**]

[10] Daryl Bem developed self-perception theory partly to explain this phenomenon in which people experience discomfort when they hold two conflicting ideas. This phenomenon was introduced by Leon Festinger.

ANSWER: cognitive dissonance

[10] Leon Festinger used cognitive dissonance to explain the findings in this work, in which he investigated a UFO cult that believed the world was going to end but had to deal with the fact that it actually didn't.

ANSWER: When Prophecy Fails

- 9. In one scene, this character attempts to pray in a cathedral while a demonic choir chants the "Dies irae" at her. For 10 points each:
  - [10] Name this character whose brother Valentine dies in a duel after he finds out she is pregnant. At the end of the play she appears in, she rises into heaven as a divine voice declares "she is saved!"

ANSWER: **Gretchen** [or **Margaret**]

[10] Gretchen appears in this German writer's version of the Faust tragedy. He wrote *The Sorrows of Young Werther*.

ANSWER: Johann Wolfgang von Goethe

[10] Gretchen first reveals to the audience that she is pregnant in a scene taking place at one of these locations. Gretchen walks to one of these locations with her friend Lisbeth, who mocks another unmarried pregnant girl without realizing that Gretchen is herself pregnant.

ANSWER: a well [or a fountain]

- 10. The Peel and Woodhead commissions put forth several different plans for administering this polity, none of which were adopted. For 10 points each:
  - [10] Name this polity where the Cement Incident sparked a period of unrest that turned into a full-fledged revolt after the death of Sheikh Izz ad-Din al-Qassam, the leader of a non-Serbian guerrilla force called the Black Hand. ANSWER: **Mandatory Palestine** [or **British Palestine**; accept answers indicating that **Palestine** is under a **mandate** and/or under **British** control; prompt on "Palestine"]
  - [10] Leaders of this Zionist paramilitary organization active in Mandatory Palestine included Ze'ev Jabotinsky and Menachem Begin. Along with Lehi, it carried out the Deir Yashin massacre during the civil war of 1947-48.

ANSWER: Irgun

[10] In response to the British Operation Agatha, Irgun bombed one of these places called the King David in 1946. Paul Rusesabagina sheltered over 1,200 people in another of these places during the Rwandan Civil War.

**ANSWER:** hotels

- 11. This composition was dedicated "to the victims of fascism and war." For 10 points each:
  - [10] Name this chamber work with five movements, all played *attaca*, that makes frequent use of the DSCH motif. It was inspired by the composer's stay in Dresden, where he was writing the score for the film *Five Days*, *Five Nights*.

ANSWER: Shostakovich String Quartet No. 8, Op. 110 [prompt on partial answer]

[10] Shostakovich's Eighth String Quartet was premiered in this Soviet city. Shostakovich composed a symphony nicknamed for this city that uses a snare drum ostinato in its "Invasion" theme.

ANSWER: <u>Leningrad</u> [accept <u>Leningrad</u> Symphony; accept <u>St. Petersburg</u>]

[10] This Russian string quartet premiered Shostakovich's Eighth and twelve of his other quartets. It was founded in 1922 by Moscow Conservatory graduates and eventually disbanded in 1990.

ANSWER: **Beethoven** Quartet

- 12. The "lesser" form of this practice is so named because it occurs only in one's own thoughts. For 10 points each:
  - [10] Name this practice that is the only sin Allah does not forgive, because it involves worshipping anyone or anything other than Him.

ANSWER: shirk

- [10] *Shirk* therefore represents this kind of religious stance, which affirms the existence of more than one deity. ANSWER: **polytheism**
- [10] Muhammad ibn Abd al-Wahhab campaigned vigorously against both *shirk* and this other practice, which he defined as any change in Islam that had taken place since the time of the *salaf*, the first three generations of Muslims. The Arabic word for this practice simply means "innovation," leaving it open to varying interpretations. ANSWER: **bid'ah**

- 13. Bell's theorem states that no theory with local hidden variables can explain this phenomenon. For 10 points each: [10] Name this phenomenon in which particles can stay correlated despite being separated by a spacelike interval. ANSWER: quantum **entanglement** 
  - [10] Measurement of a quantum system entangles it with the environment, which is referred to as the loss of this property. Eigenstates of the annihilation operator have this property, which is equivalent to minimum uncertainty. ANSWER: decoherence
  - [10] In this quantum optics technique, vacuum fluctuations in a nonlinear crystal occasionally split an incident photon into a pair of entangled photons with combined energy and momentum equal to that of the original photon. ANSWER: **spontaneous parametric downconversion** [or **SPDC**; or **parametric fluorescence**; or **parametric scattering**]
- 14. William Blake wrote that the reason this man "wrote in fetters when he wrote of Angels & God, and at liberty when of Devils & Hell, is because he was a true Poet and of the Devil's party without knowing it." For 10 points each: [10] Name this poet who wrote about flames that emit "no light, but rather darkness visible" in his *Paradise Lost*. ANSWER: John **Milton** 
  - [10] Paradise Lost ends with Adam and Eve performing this loving gesture as they, "with wandering steps and slow, through Eden took their solitary way." Thomas Cole's Expulsion from the Garden of Eden shows them doing this. ANSWER: holding hands [accept "hand in hand" and other equivalents]
  - [10] In this poem, Milton's speaker asks "loathed Melancholy" to "in dark Cimmerian desert ever dwell." This poem ends, "Mirth with thee, I mean to live," while its companion poem ends, "And I with thee will choose to live." ANSWER: *L'Allegro*
- 15. Questions over what the duties of Epidamnos were as one of *these things* with respect to both Corinth and Corcyra, which itself bore this relationship to Corinth, was a major spark for the Peloponnesian War. For 10 points each: [10] Name these city-states that grew from settlements founded by citizens of older city-states, usually on the Greek mainland. Syracuse bore this relationship to Corinth.

  ANSWER: **colony** [accept word forms]
  - [10] This region, covering most of the coast of southern Italy and Sicily, was the site of heavy colonization by the Greek city-states, including the founding of Tarentum by Spartans. Its name literally means "Great Greece." ANSWER: Magna Graecia
  - [10] According to legend, this city was founded after Protis, a Phocaean sailor, arrived at a banquet held by the king for the suitors of his daughter Gyptis. Gyptis chose Protis, and they founded this western Mediterranean city. ANSWER: Massalia [accept Massilia; accept Marseilles]
- 16. This event is the subject of Douglas Erwin's "Murder on the Orient Express" hypothesis. For 10 points each: [10] Name this event that occurred about 250 million years ago due to some combination of volcanic eruptions in the Siberian Traps, oceanic anoxia, an explosion in the population of the microbe *Methanosarcina*, and other factors. ANSWER: **Permian**-Triassic **extinction** [accept **Great Dying**]
  - [10] The Permian extinction was bad news for 80-plus percent of all species on Earth, but good news for organisms like this one, a dicynodont therapsid that became the dominant terrestrial vertebrate during the Early Triassic period. ANSWER: *Lystrosaurus*
  - [10] Lystrosaurus fossils have been found all over areas that used to be part of this supercontinent, which was one of the two major components of Pangaea along with Laurasia.

ANSWER: Gondwanaland

17. Answer the following about mathematically representing the rates of enzymatic reactions, for 10 points each:

[10] In this model for enzyme kinetics, the reaction rate v equals Vmax times substrate concentration over a namesake constant plus substrate concentration. This model is named for the German biochemist and Canadian physician who developed it.

ANSWER: Michaelis-Menten kinetics

[10] Michaelis-Menten kinetics can be derived with the use of this assumption, which sets the rate of change of the concentration of a reaction intermediate to zero.

ANSWER: <u>steady-state</u> approximation [or <u>stationary-state</u> approximation; accept <u>quasi-</u> or <u>pseudo-steady-state</u> approximation]

[10] Michaelis-Menten kinetics cannot be used to model systems that exhibit this behavior. Hemoglobin demonstrates this behavior in oxygen binding, while myoglobin does not.

ANSWER: **cooperativity** [or **cooperative binding**]

18. This concept opposes political order and creates often uncontrollable chaos, and one may overcome it by becoming strong like a lion and cunning like a fox. For 10 points each:

[10] Name this concept that may be tamed like a woman if one possesses enough virtu, which is the quality of being able to accomplish great things.

ANSWER: **fortuna** [accept **fortune**]

[10] Virtu and fortuna are discussed at length in *The Prince*, a work written for the Medici family by this Italian political theorist.

ANSWER: Niccolo Machiavelli

[10] This philosopher pinpointed Machiavelli as the first modern thinker in his ancients-modern dichotomy. This philosopher analyzed the relationship between *The Prince* and *Discourses on Livy* in his *Thoughts on Machiavelli*.

ANSWER: Leo Strauss

19. The bloodless 3 September 1843 Revolution transformed this man's autocratic rule into a constitutional monarchy, and he later failed to push the Megali Idea and enter his country into the Crimean War. For 10 points each:

[10] Name this first king of a modern independent Greece. He had an affair with the English aristocrat Jane Digby despite being married to Amalia of Oldenburg.

ANSWER: Otto of Greece [accept Otho or Othon]

[10] Otto's father Ludwig I was also a lover of Jane Digby, and was the king of this German region. "Mad King" Ludwig of the Wittelsbach dynasty built Neuschwanstein Castle in this region.

ANSWER: Kingdom of **Bavaria** 

[10] Jane Digby eventually settled down in Damascus, where she became a close friend of this Englishman. He was nicknamed "Ruffian Dick" for his prowess in combat and kept pet monkeys in order to learn their language.

ANSWER: Richard Francis Burton

20. The alpha variety of these compounds have both the amine and carboxylic acid functional groups attached to the same first carbon atom. For 10 points each:

[10] Name this class of compounds, often containing a side chain, which include the 23 monomers that form proteins.

ANSWER: amino acids

[10] One enzyme involved in the biosynthesis of amino acids is this one, which effects its namesake reactivity on an aromatic substrate. A lack of activity in this enzyme is the cause of PKU.

ANSWER: phenylalanine hydroxylase [or PAH]

[10] Phenylalanine hydroxylase is responsible for the synthesis of this amino acid, which is converted to L-dopa in the pathway for catecholamine synthesis. When found in namesake receptor proteins, its R group can be phosphorylated.

ANSWER: tyrosine