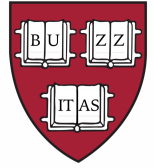


Harvard Fall Tournament XIV

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Packet 9

Tossups

1. **Patients with this disease exhibit increased volume of the adrenal gland and a shrunken hippocampus and thalamus. Increased monoamine oxidase activity is associated with this disease. This disease can be characterized by the Hamilton Rating Scale or the Beck Inventory. A mild but long-lasting form of this disease is known as (*) dysthymia. The DSM–5 recognizes five forms of this disorder, including peri-partum and seasonal forms. Drugs that treat this disorder may inhibit the reuptake of dopamine or serotonin. For 10 points, name this mental disorder characterized as an extended period of low mood.**

ANSWER: clinical **depression** (accept **major depressive disorder** or **MDD**)

<Duffy, Psychology>

2. **In a recent appearance, this character can grow gigantic and take on his original chubby appearance. In another appearance, this character can perform special moves by cosplaying as roles like a rock star or PhD. Special versions of this character can Surf and use balloons to Fly. Wearing a hat gives this character access to an exclusive (*) Z-move. Holding a Light Ball doubles this character’s power and allows its offspring to use Volt Tackle. Characters like Emolga and Pachirisu are considered “clones” of this character. When exposed to a Thunder Stone, this character evolves into Raichu. For 10 points, name this electric rodent, the mascot of Pokémon Yellow.**

ANSWER: **Pikachu**

<Duffy, Trash>

3. **This battle started with an assault down Hagerstown Turnpike by I [“first”] Corps. During this battle, Rohrbach’s bridge was taken after repeated assaults by Ambrose Burnside. This battle ended when A. P. Hill launched a counter strike from Harpers Ferry. This battle ended the military career of George McClellan. The carnage from this battle gave a (*) sunken road the nickname of “Bloody Lane.” Before this battle, Union forces found a copy of Special Order 191 wrapped around three cigars. For 10 points, name this bloodiest single day battle of the American Civil War, after which President Lincoln issued the Emancipation Proclamation.**

ANSWER: Battle of **Antietam** (or Battle of **Sharpsburg**)

<Kao/Suh, American History>

4. **This instrument plays the “Elmira” theme in Shostakovich’s tenth symphony. Brahms’s second piano concerto opens with a solo from this instrument, and he also wrote an E-flat-major trio unusually featuring it. Rondos in 6/8 time conclude each of Mozart’s four concerti for this instrument, three of which are also in E-flat major. Dennis Brain was a notable player of this instrument, which is notated in (*) F. These instruments are hand-stopped to lower their pitch, and they are often used to represent the activity of hunting. For 10 points, name these coiled brass instruments that should not be confused with a similarly named “English” instrument.**

ANSWER: French **horn** (or natural **horn**)

<Yue, Music>

5. A state is evolved with respect to this quantity by the most commonly used unitary operator in quantum physics. By Noether's ["NURH-thur's"] theorem, this quantity's symmetry implies energy conservation. This quantity remains fixed during a Galilean transformation. A constant named for this quantity is the product of resistance and capacitance in an RC circuit. This quantity experiences a namesake (*) "dilation" in special relativity. The change in velocity with respect to this quantity gives acceleration. Entropy could explain why the "arrow" of this quantity points in one direction. For 10 points, name this quantity commonly measured in seconds.

ANSWER: time

<Yue, Physics>

6. Negative sentiment against these people was stoked by the book *Actes* ["acts"] and *Monuments* by John Foxe. The Gordon Riots occurred as a backlash against a legislation supporting these people. The 1701 Act of Settlement forbade these people from becoming monarchs, while the Test Act of 1673 discriminated against these people by requiring everyone taking office to swear against the belief of (*) transubstantiation. Some of these religious people, including Robert Catesby, organized the Gunpowder Plot. For 10 points, the Papists Act of 1778 attempted to reduce discrimination against what religious group of people led by the Pope?

ANSWER: Roman Catholics (accept Papists until mention, but warn them that it is a pejorative term)

<Suh, British History>

7. A character in this novel begs for water after eating chili because she does not realize it is spicy. That character in this novel sells a horse at inflated prices to a man fleeing Brussels. A character in this novel dies of yellow fever after being appointed governor of Coventry Island. The protagonist of this novel plays the role of Clytemnestra and throws a (*) dictionary out of a carriage window. That protagonist of this novel has trysts with Lord Steyne and Jos, who may have died in an insurance fraud. In this novel, Amelia Sedley marries George Osborne after graduating from Miss Pinkerton's Academy. For 10 points, name this novel about Becky Sharp by William Makepeace Thackeray.

ANSWER: Vanity Fair

<Suh, British Literature>

8. The attack on Pearl Harbor led the Department of the Interior to cancel this photographer's "Mural Project." This photographer depicted a San Francisco mission church in a collaboration with Mary Hunter Austin, and one of this photographer's *Parmelian Prints* depicts a landmark at "Winter Sunrise." With Fred (*) Archer, this photographer defined nine shades of gray in a Zone System, and he co-founded f/64 ["f-stop-64"]. After pulling off of Route 84 in Hernandez, this photographer captured a "Moonrise," and this photographer of "El Capitan" also created "Moon and Half Dome." For 10 points, name this American photographer of several Yosemite Park photos.

ANSWER: Ansel Adams

<Yue, Photography>

9. In this religion, animals were created from the body of a primordial hermaphroditic ox named Gavaevodata ["gav-AYE-vo-DAY-tah"]. The first human in this religion was a 15-year old hermaphrodite named Gayomart ["gah-YOH-mart"]. A sect of this religion worshipped a deity of infinite time and space named Zurvan. The dead in this religion were left to be (*) eaten by vultures on Towers of Silence, and dead souls enter either the House of Lies or House of Song after crossing the Chinvat bridge. This religion's god, Ahura Mazda, is worshipped in fire temples. For 10 points, name this early monotheistic religion that originated in Persia.

ANSWER: Zoroastrianism (or Zarathustrianism or Mazdayasna; prompt on Zurvanism until "Zurvan")

<Duffy, Religion>

10. The speaker of a poem set during this conflict sees a “yawning soldier... staring across the morning bleak with fog” and bluntly notes the title event “had failed.” Injuries from this conflict are described as “a devil’s sick of sin” and “obscene as cancer” in another poem. The speaker of a poem set during this war laments “shrill, demented choirs” and asks “what (*) passing-bells for those who die as cattle?” In addition to Siegfried Sassoon’s “Counter-Attack,” another poem set during this war describes “an ecstasy of fumbling” after a gas attack. For 10 points, name this war in which Wilfred Owen was killed in 1918.

ANSWER: World War I (or WW1; or the First World War; or the Great War)

<R. Li, British Literature>

11. A system for classifying these objects, invented by Walter Baade [“bahd”], is based on a parameter symbolized capital Z. The JWST seeks to detect the hypothetical Population III variety of these objects. In low mass types of these objects, the proton–proton chain dominates over the (*) CNO cycle. After undergoing a helium flash, one type of these objects enters the horizontal branch and uses the triple alpha process to fuse helium. The luminosity of these objects is plotted against their temperature on HR diagrams. The most massive of these objects turn into black holes. For 10 points, name these luminous plasma spheres powered by nuclear fusion.

ANSWER: stars (accept main sequence stars; anti-prompt [ask for less specific] on red, blue, super, or hypergiant; anti-prompt on red or blue dwarf; do NOT accept or prompt on “white dwarf,” “black dwarf,” or “brown dwarf”)

<K. Li, Astronomy>

12. This country’s endemic species of sunset moth was initially classified as a butterfly and erroneously thought to be from Asia. A plant native to this African country was the original source of *Vinca* alkaloids. One of this country’s official languages is the westernmost Austronesian language, and its mammal species include the Tailless Tenrec, the Fanaloka, the Fossa, and the likely extinct (*) Malagasy Hippopotamus. The Avenue of the Baobabs is in this fourth largest island in the world. This country is separated from the mainland by the Mozambique Channel. For 10 points, name this island nation that is the native habitat of the ring-tailed lemur.

ANSWER: Madagascar

<CGH, Geography>

13. One of this author’s characters joins a traveling troupe led by Joe Bonecrusher while pretending to be a homosexual man. That character falls in love with Tao Chi’en and is named Eliza Sommers. A novel by this author features the Red Lantern brothel and begins with the arrival of the dog Barrabbas. In that novel, a character stops speaking for (*) nine years after the green-haired Rosa the Beautiful dies from drinking poison intended for her father. The Tres Marias hacienda is restored by the protagonist of that novel, who marries the clairvoyant Clara. For 10 points, name this author who wrote about the Del Valle and Trueba families in *The House of the Spirits*.

ANSWER: Isabel Allende [*Writer’s note*: The first two clues refer to Allende’s *Daughter of Fortune*.]

<Gioia, World Literature>

14. Henri Pirenne posited that the expansion of people of this broad ethnic origin caused economic stagnation in western Europe during the Carolingian dynasty. Heraclius’ gains at the Battle of Nineveh were quickly erased with the rise of people of this ethnic origin. These people fought on both sides of the Battle of Badr [“BAH-dur”] and conquered the (*) Sassanid Empire. Middle Age authors called these people “Saracens.” A period of rapid military conquest by these people was started by the Rashidun Caliphate. For 10 points, name these Middle Eastern people who adopted Islam when it developed on their namesake peninsula.

ANSWER: Arabs (or Arabic people; prompt on Moors; prompt on Saracens until mention; prompt on Muslims even though they are not really an ethnic group; do NOT accept or prompt on “Turks”)

<Suh, Ancient History>

15. **Loss of one copy of the LFY ["L-F-Y"] gene in these organisms may have caused the development of a specialized “mostly male” organ. The most basal genus of these organisms evolved during the Early Cretaceous period and is known as Amborella. To reduce the chance of inbreeding, these organisms may exhibit self-incompatibility. Embryos of these organisms are nourished by an (*) endocarp that forms after double fertilization. That process begins when pollen from the male stamen meets the female pistil. These organisms disseminate their seeds via fruits. For 10 points, name this group of flowering plants contrasted with gymnosperms.**
ANSWER: **angiosperms** (or *Angiospermae* or *Magnoliophyta*; accept **flowering plants** before mention; prompt on just plants or *Plantae* before “Amborella”)
<Duffy, Biology>

16. **A character with this last name remembers giving his brother wildflowers and wins a fistfight by tripping his nephew. A woman with this last name admits her husband was “never in the paper,” but declares “attention must be paid.” A man with this last name imitates his math teacher’s lisp and deems his father “a (*) phony little fake” after he gives his mistress some stockings. Flute music accompanies the reveries of a character with this last name, who insists that his neighbor Charley is not “well liked” and fatally crashes his car for the life insurance money. For 10 points, identify this surname of Linda, Biff, and Willy from Arthur Miller’s *Death of a Salesman*.**
ANSWER: **Loman** [*Writer’s note*: The first character clued is Uncle Ben.]
<R. Li, American Literature>

17. **William Paterson’s failed attempt to create a colony in the future site of this structure ended after losing his wife and child to illness. Another failed effort to build this structure created a political scandal that involved Gustav Eiffel and Ferdinand de Lesseps. This structure’s ownership changed hands via two treaties signed by Omar Torrijos ["toh-REE-hohs"]. (*) Walter Reed’s research on yellow fever was critical to the completion of this structure. The Hay–Bunau-Varilla Treaty created a “Zone” surrounding this structure, where John McCain was born. For 10 points, name this man-made waterway connecting the Pacific and Atlantic Oceans in the namesake country.**
ANSWER: **Panama Canal** (or *Canal de Panamá*)
<Suh, World History>

18. **Charles Mack has proposed that this work is actually an allegory praising the patron of its artist. The main figure of this work is very similar to the personification of Truth in *Calumny of Apelles* ["uh-PELL-lees"]. Falling rose petals in this painting may suggest that one of the depicted figures is actually Chloris. The setting of this painting is probably (*) Cythera or Cyprus. On the left side of this painting, Zephyr and Aura blow at the title figure, while on the right side, the Hora of Spring hands a cloak to the title figure. For 10 points, name this Sandro Botticelli painting depicting the goddess of love standing nude on a seashell.**
ANSWER: *The Birth of Venus* (accept *Nascita di Venere*)
<Suh, Painting>

19. **Leaders of this region hold a daily council at the Well of Urd. The center of this region is home to the Splendour Plain of Ida. This region contains 12 kingdoms ruled by 12 kings and is home to temples dedicated to 12 gods and goddesses, known as Gladsheim and Vingólf. An unnamed giant and the stallion Svadilfari ["SVAH-dil-far-ee"] almost constructed the walls of this region in one season until Svadilfari was (*) distracted by a trickster god in the form of a mare. This location is connected to heaven by a rainbow bridge known as the Bifrost. Valhalla is a location within this region. For 10 points, name this realm of the gods in Norse mythology.**
ANSWER: **Asgardr** (prompt on Plain of Ida until mention)
<Duffy, Mythology>

20. A cofactor with this element at its center is found in an enzyme that can artificially catalyze alkene cyclopropanation. Frances Arnold performed directed evolution on cytochromes, which contain this element. This element is combined with hydrogen peroxide in a reagent that can catalytically oxidize wastewater. That reagent is (*) Fenton's reagent. A mixture of aluminum and the oxide of this element undergoes the thermite reaction. Impurities are removed from the "pig" variety of this metal during the Bessemer process which produces steel. For 10 points, name this element found in hemoglobin that helps red blood cells carry oxygen.

ANSWER: iron (accept Fe)

<K. Li, Chemistry>

21. This poet opened a poem about a French Carthusian Monastery with a description of the Alps. The speaker of another poem by this author tells the addressee that "Time, not Corydon, hath conquer'd thee." That poem begins with the line "How changed is here each spot man makes or fills." This poet wrote a poem that describes an entity that "lay like the folds of a bright girdle furled," and he elegized (*) Arthur Hugh Clough in another. In a poem, this author describes an "eternal note of sadness" that the speaker hears at a location "where ignorant armies clash by night." For 10 points, name this poet of "Thyrsis" and "Dover Beach."

ANSWER: Matthew Arnold

<Gioia, British Literature>

Bonuses

1. Gustav Mahler mourned the deaths of these people in his setting of poems by Friedrich Rückert, and “Of Foreign Lands and Peoples” begins a piano suite depicting them. For 10 points each:

[m] Name these people, the subject of a Robert Schumann piano suite featuring the movement “Träumerei,” or “Dreaming.”

ANSWER: **children** (accept synonyms; accept *Scenes from Childhood* or *Kinderszenen*; accept *Kindertotenlieder*)

[h] In a John Singleton Copley painting, a child holds a gold chain tied to one of these animals. Henry Pelham is that painting’s title “boy.”

ANSWER: a **squirrel** (accept *Boy with a Flying Squirrel*)

[e] In 2017, the *Fearless Girl* sculpture was installed facing another bronze sculpture depicting a *Charging* one of these animals. That sculpture of this animal, a popular tourist attraction, is considered to be a symbol of Wall Street.

ANSWER: a **bull**

<Yue, Other Arts>

2. This experiment showed that bacteria were subject to natural selection. For 10 points each:

[h] Name this experiment in which the two namesake scientists observed that experimental replicates varied as to how many bacteria developed resistance to bacteriophages. This experiment showed that mutations developed in the absence of selective force.

ANSWER: **Luria–Delbrück** experiment (prompt on just Luria or Delbrück)

[e] The selective force in the Luria–Delbrück experiment, the T1 phage, was contained in agar in one of these shallow cylindrical containers.

ANSWER: **Petri dish**

[m] The T1 phage replicates exclusively through this mechanism. Viral genetic material is not integrated into host DNA during this type of replication which is contrasted with the lysogenic cycle.

ANSWER: **lytic** cycle (accept lysis)

<K. Li, Biology>

3. Artifacts from these people have been discovered in the Petrossa Treasure hoard in modern-day Romania. For 10 points each:

[m] Name these Germanic peoples. Two branches of them were influential in the fall of the Western Roman Empire.

ANSWER: **Goths**

[e] The Visigoths allied with the Roman Empire to fight this brother of Bleda at the Battle of Catalaunian Plains. This “Scourge of God” promised Pope Leo I to not attack Rome.

ANSWER: **Attila** the Hun

[h] The Visigothic king at the Battle of Catalaunian Plains had this name. Another man of this name known as the “Great” killed Odoacer [“oh-doh-EY-ser”] to become the king of the Ostrogoths.

ANSWER: **Theodoric** (accept Theodoric I or Theodoric the Great)

<Suh, Ancient History>

4. A stanza form named for this author consists of three eleven-syllable lines and a five-syllable continuation of the third line. For 10 points each:

[h] Name this poet translated by Anne Carson in the collection *If Not, Winter*. This author of the line “Lift high the roofbeam... you carpenters” wrote a “Hymn” addressed to a “deathless” and “artfully adorned” figure.

ANSWER: **Sappho** of Lesbos

[m] This Roman poet took inspiration from Sappho’s “Ode to Anactoria” to write his fifty-first numbered poem. This writer of a poem ending “hail and farewell” often addressed his poems to Lesbia, who was named for Sappho.

ANSWER: **Catullus** (or Gaius Valerius **Catullus**)

[e] Horace used Sapphic meter to write his *Odes*, including one that ends “[this Latin phrase], trusting tomorrow as little as possible.” This Latin phrase is usually translated as “seize the day.”

ANSWER: ***carpe diem***

<Yue, World Literature>

5. One of this director’s films chronicles handyman Keller Dover’s desperate attempts to locate his abducted daughter. For 10 points each:

[h] Name this critically acclaimed French-Canadian director of *Prisoners*. In his 2016 film *Arrival*, linguist Louise Banks experiences time all at once after decoding an alien language.

ANSWER: Denis **Villeneuve**

[e] Dover is played by this actor, who played P. T. Barnum in *The Greatest Showman*. He currently shares the Guinness World Record for “longest career as a live-action Marvel superhero” for his portrayal of Wolverine in the *X-Men* series.

ANSWER: Hugh **Jackman**

[m] Jackman appeared alongside Christian Bale in *The Prestige*, whose characters Robert Angier and Alfred Borden are rival members with this profession.

ANSWER: **magician** (accept reasonable equivalents such as **illusionist** or **conjurer**)

<R. Li, Trash>

6. For 10 points each, answer the following about the Hindu god Hanuman [“**HAH-noo-mun**”].

[e] Hanuman is often depicted as a divine one of these animals. Scholars speculate that Hanuman’s depiction in the form of this animal may have influenced portrayals of the Chinese character Sun Wukong.

ANSWER: **monkey**

[m] Hanuman is one of the main characters of this Hindu epic, in which he helps the title character rescue his bride, Sita, from King Ravana of Lanka.

ANSWER: ***Ramayana***

[h] *Description acceptable*. In the *Ramayana*, Hanuman is sent to a Himalayan mountain to retrieve an herb that will save Rama’s dying brother. Because Hanuman isn’t sure which herb is needed, he takes *this action* to ensure that he can return in time with the correct herb.

ANSWER: he **brings** the whole **mountain** (accept descriptive equivalents; do NOT accept or prompt on answers implying Hanuman altered the mountain in any way, like “shrinking” or “splitting” it; prompt on answers that mention he **grew in size** by asking “To do what?”; prompt on **bringing all of the herbs** by asking “How was he able to bring all of the herbs?”)

<Duffy, Mythology>

7. This character repeats the mantra, “You were sick, but now you are well again. And there’s work to be done.” in the novel *Timequake*, and he is the narrator of the novel *Galápagos*. For 10 points each:

[h] Name this fictional character, the favorite author of Eliot Rosewater. This character’s novel *Now It Can Be Told* causes Dwayne Hoover to believe he is the only person in the universe with free will in another novel.

ANSWER: **Kilgore Trout** (accept either underlined name)

[m] In this novel, Eliot Rosewater raves to protagonist Billy Pilgrim about Kilgore Trout. Billy becomes “unstuck in time” after being abducted by Tralfamadorians in this novel.

ANSWER: ***Slaughterhouse-Five***, or *The Children’s Crusade: A Duty-Dance with Death*

[e] This author of *Cat’s Cradle* employed the science-fiction writer Kilgore Trout as his literary alter ego in *Slaughterhouse-Five*.

ANSWER: Kurt **Vonnegut**, Jr.

<Yue, American Literature>

8. One work in this series depicts a mutilated man impaled by a tree in a pose modeled on the Belvedere Torso. For 10 points each:

[h] Name this series that contains the work *This is worse*. After the 46th work in this series, entries begin to depict the effects of the famine that resulted from the title occurrence.

ANSWER: ***The Disasters of War*** (or *Los desastres de la guerra*)

[m] *The Disasters of War* is a set of 82 prints created by this artist. This artist also created a set of images about follies that existed within his country’s society, *The Caprices*.

ANSWER: Francisco **Goya** (or Francisco Jose de **Goya** y Lucientes)

[e] Francisco Goya was an artist from this country, where he depicted events during Napoleon’s invasion in the Peninsular War.

ANSWER: **Spain** (or Kingdom of **Spain**; or Reino de **España**)

<Gioia, Painting>

9. The behavior of this thermodynamic cycle forms a rectangle on a TS diagram. For 10 points each:

[m] Name this thermodynamic cycle in which there is no net generation of entropy. This thermodynamic cycle sets the upper limit on the efficiency of a thermodynamic engine.

ANSWER: **Carnot** [“car-NO”] cycle (or **Carnot** engine)

[h] The two vertical lines on the TS diagram of the Carnot cycle represent thermodynamic processes described by this word. This type of process is both reversible and adiabatic.

ANSWER: **isentropic**

[e] The efficiency of a Carnot cycle is equal to one minus the ratio of two values for this thermodynamic quantity. The SI unit for this quantity is the kelvin.

ANSWER: absolute **temperature**

<K. Li, Chemistry>

10. Frank Jackson's epiphenomenalism is a "property" variant of this philosophical position, which was defended with the idea that "animal spirits" are located in the pineal gland in one work. For 10 points each:

[m] Name this philosophical position explained using the example of a piece of beeswax in the "clear and distinct" argument in that same work.

ANSWER: mind-body **dualism**

[e] This man discussed the mind-body problem and proposed the position of dualism to resolve it in *Meditations on First Philosophy*. He famously declared that "I think, therefore I am" in his *Discourses on Method*.

ANSWER: René **Descartes**

[h] This philosopher declared that "consciousness makes the mind-body problem really intractable" in one of his essays, which influenced Jackson's epiphenomenalism. That essay asks, "What is it Like to Be a Bat?"

ANSWER: Thomas **Nagel**

<Yue, Philosophy>

11. Because of this policy, the Oder–Niesse line was finally recognized after the Treaty of Moscow and the Treaty of Warsaw. For 10 points each:

[h] Name this policy, which Egon Bahr dubbed "Change through Rapprochement," that led to the formal recognition of a country that had been antagonized by the Hallstein Doctrine.

ANSWER: *Neue Ostpolitik*

[e] *Ostpolitik* was formulated by Willy Brandt, a chancellor of this country that was later reunited with its eastern neighbor in 1990 after the fall of the Berlin Wall.

ANSWER: **West Germany** (or the **Federal Republic of Germany** or **FRG**; accept ***Bundesrepublik Deutschland*** or **BRD**; prompt on Germany; do NOT accept or prompt on "East Germany")

[m] In 1989, many East Germans emigrated to West Germany along the "Trabi Trail," a route named for a particularly shoddy brand of these things dubbed the Trabant. The Yugo was another kind of this object.

ANSWER: **cars** (or **automobiles**)

<L. Li, European History>

12. For 10 points each, answer some questions about harmonic oscillators.

[e] Harmonic oscillators are defined as obeying a potential described by this term. Any smooth potential with a minimum can be Taylor approximated into a function of this type, which takes the shape of a parabola.

ANSWER: **quadratic**

[m] While the restorative force in a simple harmonic oscillator is proportional to displacement, frictional damping forces, such as air resistance, are often modeled as proportional to this vector quantity.

ANSWER: **velocity** (prompt on v)

[h] Wavefunctions of the 1D quantum harmonic oscillator can be determined by applying these operators to a known energy eigenstate. These operators are also known as raising and lowering operators.

ANSWER: **ladder** operators (accept **creation** AND **annihilation** operators)

<K. Li, Physics>

13. Andrew Jackson Myrick stirred the anger of these people by saying, “So far as I am concerned, if they are hungry, let them eat grass or their own dung.” For 10 points each:

[m] Name these Native American people who won the Fetterman Fight and gained recognition in the Fort Laramie Treaty. Notable leaders of these people included Crazy Horse.

ANSWER: **Sioux** [“soo”] (accept the following: **Lakota**, **Dakota**, **Nakota**, **Santee**, or **Yanktonai**)

[h] During this man’s presidency, 38 Sioux men were sentenced to death in the largest mass execution in history on American soil. Earlier, this man also refused Zachary Taylor’s offer to become governor of Oregon.

ANSWER: Abraham **Lincoln**

[e] The Sioux achieved a notable victory against the US army at the Battle of the Little Bighorn, where forces under this American commander made a “Last Stand” before being annihilated.

ANSWER: George **Custer** (or George Armstrong **Custer**)

<Suh, American History>

14. In a poem, this man is told to “pipe a tune to dance to” by a speaker who has “been to Ludlow fair / And left [his] necktie God knows where.” For 10 points each:

[h] Name this man, who is told by that poem’s speaker that “Mithridates, he died old” despite several poisoning attempts.

ANSWER: **Terence**

[m] “Terence, this is stupid stuff” is included in this English poet’s collection *A Shropshire Lad*, which also contains poems like “Is my team ploughing” and “When I was one-and-twenty.”

ANSWER: A.E. **Housman** (or Alfred Edward **Housman**)

[e] Another poem from *A Shropshire Lad* is titled for someone with this profession “Dying Young.” That poem begins by recounting “the time [the addressee] won [his] town the race.”

ANSWER: an **athlete** (accept a **runner**)

<Yue, British Literature>

15. Given an M/D/1 [“M-D-one”] queue with utilization less than one, the number of people served during a “busy period” is characterized by this mathematician’s namesake distribution. For 10 points each:

[h] Name this French mathematician. He co-names a theorem with Eduard Heine stating that a subset of Euclidean space is compact if and only if it is closed and bounded.

ANSWER: Émile **Borel** (or Félix Édouard Justin Émile **Borel**)

[m] The Borel algebra on a topological space X is the smallest algebra named for this Greek letter that contains all open subsets of X. This Greek letter squared is commonly used to denote variance.

ANSWER: **sigma**

[e] If a random variable is always equal to a constant, its variance has this value. The probability that a continuous random variable is equal to any particular real number is given by this value, the smallest possible probability.

ANSWER: **zero**

<R. Li, Math>

16. Singing and revolutions go hand-in-hand. For 10 points each:

[m] The Singing Revolution was named after spontaneous singing demonstrations at the Tallinn Song Festival Grounds. The revolution led to the independence of the Baltic states from the Soviet Union, which was led at the time by this man.

ANSWER: Mikhail **Gorbachev**

[e] The traditional Spanish folk song “La Cucaracha” became famous during a revolution in this country that saw the fall of Porfirio Díaz’s government and the assassinations of Emiliano Zapata and Pancho Villa.

ANSWER: **Mexico**

[h] A signal to begin this revolution was the airing of the song “And After the Farewell,” an entry at the Eurovision Song Contest of 1974. Samuel Huntington claimed this event caused the “third wave” of democratization.

ANSWER: **Carnation Revolution** (or **25 April**)

<Suh, World History>

17. This politician’s frequent gaffes have inspired a portmanteau referring to the cartoon character Condorito. For 10 points each:

[h] Name this politician who abruptly interrupted a 2013 Oval Office meeting with President Obama by sitting behind his desk. In response to recent civil unrest in his country, this politician declared “we are at war.”

ANSWER: Sebastián **Piñera**

[e] Piñera currently serves as the president of this country, where a proposed increase in metro fares has sparked violent protests in its capital of Santiago.

ANSWER: **Chile**

[m] Michelle Bachelet, a former president of Chile and this organization’s High Commissioner for Human Rights, has called for open dialogue and independent investigations in response to turmoil in Chile.

ANSWER: the **United Nations** (or **UN**)

<R. Li, Current Events>

18. This instrument holds an A throughout the beginning of Edgar Varèse’s piece *Tuning Up* because it is often used to tune the orchestra. For 10 points each:

[e] Name this high double-reed woodwind instrument, pitched a fifth higher than the related *cor anglais*, or English horn.

ANSWER: **oboe**

[h] The most notable concerto for oboe is likely this composer’s C-major Oboe Concerto. This composer of a B-flat bassoon concerto and a G-major flute concerto wrote a tenth serenade for 12 winds and double bass.

ANSWER: Wolfgang Amadeus **Mozart**

[m] The oboe represents a quail in the wind cadenza at the end of the second movement of this symphony. That movement is subtitled “Scene by the Brook.”

ANSWER: **Pastoral Symphony** (or Ludwig van **Beethoven**’s Symphony No. **6** or his **sixth** symphony)

<Yue, Music>

19. In one play, two of these characters spare a man that had previously called them “God-less tricks” because “he works with his hands like [these characters].” For 10 points each:

[m] Name these characters that partially title a play featuring the characters Marius and Sulla. Alquist gives the new names Adam and Eve to two of these characters, Primus and Helena, at the end of that Karel Čapek [“**CHA-peck**”] play.

ANSWER: **robots** (accept *Rossum’s Universal **Robots***)

[e] *R.U.R.* is a play by Karel Čapek written in this language. Čapek’s play *The Makropulos Affair* in this language is primarily set in the capital city of Prague.

ANSWER: **Czech**

[h] This other Czech playwright wrote about Hugo Pludek attending the title event at the Liquidation Office in his play *The Garden Party*.

ANSWER: Václav [“**VAHTS-lahv**”] **Havel**

<Yue, European Literature>

20. For 10 points each, answer these questions about prostitutes in the Bible.

[m] According to Genesis, this son of Jacob sleeps with his daughter-in-law Tamar, who disguises herself as a prostitute. This man is also the namesake of the southern successor kingdom of Israel with its capital at Jerusalem.

ANSWER: **Judah** (or **Yehuda**; accept Kingdom of **Judah**)

[e] The prostitute Rahab hid two Israelite spies sent to stake out this city. After this city’s walls came tumbling down, Joshua spared the lives of Rahab and her family in gratitude.

ANSWER: **Jericho**

[h] This prophet was ordered by God to take the prostitute Gomer as his wife in order to symbolize Israel’s unfaithful relationship to God.

ANSWER: **Hosea**

<Suh, Religion>

21. The slew rate of these devices is the rate at which the output voltage changes. For 10 points each:

[h] Name these devices whose operational variety outputs a voltage much larger than the difference between the input voltages. The strength of these devices is measured by their gain.

ANSWER: **amplifier**

[m] Amplifiers commonly use this type of feedback in order to control the output of the device. In this type of feedback, the output tends to prevent the device from producing more output.

ANSWER: **negative** feedback

[e] Slew rate can also refer to how fast these devices can rotate to a different point in the sky. These instruments can be based on the Earth like the Keck in Hawaii or in space like the Hubble.

ANSWER: **telescope**

<K. Li, Physics>