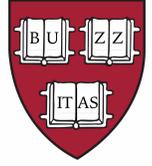


Harvard Fall Tournament XIII

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Round 10

Tossups

1. **An E-flat-minor Coltrane track named for one of these objects titles his first Blue Note album, and the symphonic movement *Rugby* is often paired with an Arthur Honegger piece depicting one of these things. A clock reading 12:43 and two candlesticks in an impossible reflection (*) are depicted above a black one of these objects in a painting, and another artwork features one on the Maidenhead bridge. One of these goes “to Sugar Hill way up in Harlem” in a Billy Strayhorn jazz standard, and a “Great Western” one appears in a J. M. W. Turner painting. For 10 points, name this vehicle whose “A” itinerant you are told to take in the title of a Duke Ellington standard.**

ANSWER: **train** (accept “Blue **Train**” or “Take the ‘A’ **Train**”; accept obvious synonyms like **locomotive**; anti-prompt [ask for less specific] on subway after “Sugar Hill” is read; prompt on railway after “Maidenhead” is read) <Yue>

2. **In one of this author’s stories, a “grub-man” is introduced to the title character despite him being “unused to dinners.” The terrified title character of another story by this author gets a daily shave and is asked “what has cast such a shadow upon” him. A captain is forcibly directed by the slave Babo in a work from his (*) *The Piazza Tales*, and he created a character who is fired from a job with Turkey and Nippers. This author wrote of a clerk in a law office who refuses to do work with the phrase “I would prefer not to.” For 10 points, name this author of “Benito Cereno” and “Bartleby the Scrivener” better known for penning *Moby-Dick*.**

ANSWER: Herman **Melville** <Yue>

3. **Georg [“GAY-org”] Sieber predicted 26 scenarios for security at one of these events, the 21st of which occurred. An operation dubbed “*Iqrit and Biram*” interrupted one of these events. William P. Brookes may have influenced Pierre de Coubertin to pioneer these events. An incident involving Hungary and the Soviet Union occurred during these events in 1956, known as (*) “Blood in the Water.” One of these events was boycotted by 66 nations due to the Soviet invasion of Afghanistan. The Black September killed 11 Israelis during one of these events in Munich in 1972. For 10 points, name these athletic competitions that began in Athens in 1896.**

ANSWER: the **Olympic** Games (or **Olympics**; accept specific iterations of the **Olympics**; prompt on water polo matches and terrorist attacks by asking “When did those events occur?”) <Suh>

4. **In the *Iliad*, Zeus tells this god that he is the most hateful to him. This god was tried for killing Halirrhothius, a son of Poseidon, in retribution for raping his daughter Alcippe [“al-see-pay”]. Cadmus had to serve this god for a period of time after killing a dragon sacred to this god. This god may be the source of the name of a hill in (*) Athens where courts often met to hear homicide cases. The bronze-beaked Stymphalian Birds were sacred to this god. Hephaestus caught his wife Aphrodite cheating with this other god, whose sons include Phobos and Deimos. For 10 points, name this Greek god of war.**

ANSWER: **Ares** (prompt on Mars; generously prompt on Areopagus, which is the name of the hill) <Suh>

5. A reddish-brown variety of this mineral that exhibits chatoyancy is known as Tiger's Eye. This mineral is extremely resistant to chemical weathering, which is why it appears at the bottom of the Goldich dissolution series, and it has the lowest crystallization temperature of any mineral on (*) Bowen's reaction series. A type of this mineral with planar deformations can be found inside craters created from meteorite impacts; that variety is called shocked. Other varieties of this mineral include citrine and amethyst. For 10 points, name this mineral with hardness 7 on Mohs scale and chemical formula silicon dioxide.

ANSWER: quartz (accept SiO₂ or silicon dioxide before mention) <Duffy>

6. An expenses scandal involving this state's supreme court led to the impeachment of four justices in August 2018. A politician from this state is currently the youngest living former senator, and a teacher's strike in this state was inspired by state senator Richard Ojeda. A convicted felon in this state ran ads railing against (*) "Cocaine Mitch" during a contentious GOP primary for Senate, and another politician from this state shot a copy of the cap-and-trade bill with a rifle during a special election to fill the late Robert Byrd's vacant seat. For 10 points, name this Appalachian state where Senator Joe Manchin narrowly won reelection against Patrick Morrissey.

ANSWER: West Virginia <R. Li/Myers>

7. This country subsidized its gold exports at an artificially high rate in the aptly named Goldenberg scandal. The name of a rebellion that occurred in this nation may mean "get out" or "our grandfathers." A group of nationalists who agitated for this country's independence was Kapenguria Six. The Nyayo House was used as a torture facility by this country's second president Daniel (*) arap Moi. This nation's first president created the Harambee policy, which means "all pull together." This nation's Kikuyu people launched the Mau Mau rebellion against British rule. For 10 points, name this East African country led by Jomo Kenyatta.

ANSWER: Kenya <Suh>

8. In a play, this character asks "Why is there no mark engraved" on people to tell "the true ones from the false ones?" An offstage cry is heard after this character rushes into the house rationalizing that characters should not "be slain by another hand less kindly to them," and she promises to end King (*) Aegeus' ["EE-gee-us"] infertility. This "barbarian bride" provides a dress and a golden diadem, both poisoned, to Glauce ["GI-OW-s"]. This character titles a play in which she attempts to "wound [her] husband" Jason for his unfaithfulness by killing their children. For 10 points, name this title sorceress of a Euripides play.

ANSWER: Medea <Yue>

9. This psychologist examined UFOs in *Flying Saucers: A Modern Myth of Things Seen in the Skies*. This man became friends with Father Victor White after writing a work examining the Lord's Prayer's petition of "lead us not into temptation." Besides writing *Answer to Job*, this man described contrasexual pairings of men and women with the term (*) "syzygy." This man coined the term "synchronicity" to describe meaningful coincidences. The Myers-Briggs personality test is based on this man's research on introversion and extroversion. For 10 points, name this Swiss psychologist who studied archetypes and the collective unconscious.

ANSWER: Carl Gustav Jung ["yoong"] <Suh>

10. The prophet Elisha cleansed the waters of this city by casting some salt into its spring. This city was cursed so that anyone who tried to rebuild its foundation would lose their firstborn and their youngest while rebuilding the gates. Immediately after capturing this city, its conquerors failed to defeat Ai because of the treachery of Achan ["AY-ken"]. Only the prostitute (*) Rahab and her family survived this city's destruction because she had protected two men who were spying on this city. For 10 points, name this city in the Bible whose walls were destroyed by Joshua and the Israelites after they circled it for a week and blew horns at it.

ANSWER: Jericho <Suh>

11. In a 2006 video, this man is pursued by White House correspondent Helen Thomas, and he voiced the microverse scientist Zeep Xanflorp on *Rick and Morty*. A treadmill on the ISS is named for this author of *I Am America (and So Can You!)*, and his current show features a variant of his old show's notable segment (*) "The Word." This *Lord of the Rings* aficionado names the Ben and Jerry's flavor Americone Dream, and Jon Stewart occasionally emerges from under the desk of this coiner of the term "truthiness." Jon Batiste is this man's current bandleader, and his show can be seen before James Corden's. For 10 points, name this host of CBS's *The Late Show*.

ANSWER: Stephen Colbert <Yue>

12. In the Middle East, medieval artwork of this type can be classified as *naskh* or *kufic*. The Eight Principles of Yong are often used to teach the basics of this art. Wang Xizhi was the greatest artist of this form in China, where its so-called "running" and "grass" styles are popular, including among people who make this art using only (*) water. Due to Islam's prohibition on iconography, mosaics and this other art form are commonly used as decorative motifs in mosques, where it may be used to display the word "Bismillah." For 10 points, name this artform whose name comes from the Greek for "beautiful writing."

ANSWER: calligraphy (accept word forms; prompt on writing or script before mention by asking, "What is it called when that is done for primarily aesthetic purposes?") <Chu>

13. A speech at this event quoted Lord Byron's *The Corsair* by reading, "I am a slave, a favoured slave." Most of this event took place at the Wesleyan Methodist Church, but its most lasting piece of writing was drafted at the home of Mary M'Clintock. This event led to the adoption of 11 resolutions, including a ninth one supported by (*) Frederick Douglass that called for the "elective franchise." A modified version of the Declaration of Independence issued at this event included the phrase, "all men and women are created equal." For 10 points, identify this 1848 meeting at which supporters of women's rights signed the Declaration of Sentiments.

ANSWER: Seneca Falls Convention <Chu>

14. This variable is the first value reported on an ABG. A key enzyme that maintains this value is inhibited by a drug used to treat glaucoma and idiopathic intracranial hypertension, called acetazolamide ["a-SET-ah-ZOL-ah-MIDE"]. Central chemoreceptors in the medulla help maintain this value. This value is equal to 6.1 plus a logarithmic term with 0.0307 appearing in the denominator in a modification of the (*) Henderson-Hasselbalch equation. Carbonic anhydrase keeps this value close to 7.4 to prevent protein denaturation. The bicarbonate buffer system balances, for 10 points, what measure for which acids have a low value?

ANSWER: pH (or power of hydrogen; do NOT accept or prompt on "acidity"; accept basicity and word forms) <Mukherjee>

15. A "young sinner" in an A.E. Housman poem is sent to prison because of the color of this object. Sunlight is woven into this object in the T. S. Eliot poem "La Figlia Che Piange," and Ezra Pound's poem "The River-Merchant's Wife: A Letter" opens with a description of this object being "straight." The narrator examines a set of blue eyes after using this object to (*) strangle his lover in Robert Browning's poem "Porphyria's Lover." A piece of this object is stolen by the Baron in a poem that ends with that object becoming a constellation. For 10 points, describe this sort of object cut from Belinda's head in *The Rape of the Lock*.

ANSWER: hair (accept locks; prompt on head until mention) <Cohen/Suh>

16. In 2017, Yin and colleagues used a compound featuring six of this ion in the first rewritable paper. The carbon in this ion is unusually nucleophilic making its addition to carbonyls a classic demonstration of *Umpolung* [“OOM-puh-lung”]. This anion is featured in a compound used to combat thallium poisoning, and its functional group is in a namesake polymer used to make (*) non-latex laboratory gloves. This compound is used in Prussian blue, and when this anion is bonded to hydrogen, it comprises a compound that smells like bitter almonds. For 10 points, name this anion consisting of a carbon triple bonded to a nitrogen.

ANSWER: cyanide ion (accept nitrile after “non-latex;” accept CN- until last line) <K. Li/Yue>

17. This instrument doubles the strings at the start of Brahms’ third symphony finale, and a solo for it begins C-B with mordent-G-E-B-A. This instrument and the side drum begin the “Game of Pairs” in Bartok’s *Concerto for Orchestra*. This instrument is second only to violin in number of Vivaldi concertos written for it, and Mozart’s concerto for it is in B-flat major. This instrument states the melody first in (*) Paul Dukas’ *The Sorcerer’s Apprentice*. A solo on the high end of this instrument’s range begins *The Rite of Spring*, and it represents the grandfather in *Peter and the Wolf*. For 10 points, name this low-range double-reed woodwind instrument.

ANSWER: bassoon <Yue>

18. After a young lady in this work complains about a character’s name, that character responds by claiming “half the chaps who get into the Bankruptcy Court” are named after him. A character ends this play by telling his aunt that he’s “now realized for the first time in his life” this play’s title concept. That character in this play was deserted as a baby at (*) Victoria Station, causing Lady Bracknell to initially oppose his courtship of her daughter. In this play, Algernon [“AL-ger-non”] and Jack both pretend to be the titular character while they pursue relationships with Gwendolyn and Cecily. For 10 points, name this Oscar Wilde play.

ANSWER: *The Importance of Being Earnest* <R. Li>

19. The Drude model concerns these particles, and a model by Arnold Sommerfeld gives the zero-temperature pressure of a gas of them. Excitons form from these particles, which were fired at a nickel target in the Davisson-Germer experiment. The Stern-Gerlach experiment demonstrated these particles’ spin angular momentum, and the work function gives their binding energies. Because they are (*) fermions, these particles obey the Pauli exclusion principle. These particles are ejected in the photoelectric effect, and their antiparticle is the positron. For 10 points, name these negatively charged particles.

ANSWER: electrons <Yue>

20. A duke discovered under a pile of corpses at this battle spent the next 25 years in captivity writing hundreds of poems. The Duke of Brabant arrived late to this battle and died while fighting in improvised armor. One side in this battle copied a tactic used by the Ottomans at the battle of Nicopolis. The prisoners of the losing side were (*) massacred after Ysembart stole the victor’s crown from a baggage train. The Treaty of Troyes signed after this battle led to the marriage of Charles VI’s daughter to Henry V. For 10 points, name this Hundred Years’ War battle during which English longbows resoundingly defeated the French on a muddy field.

ANSWER: Battle of Agincourt <Sayphraraj>

21. **Loss of pericytes results in uncontrolled growth of these structures in retinopathy. Inhibition of the TIE ["TIE"] pathway has been explored as a therapy for cancer because it, along with VEGF ["VEG-eff"], regulates angiogenesis, the development of new ones of these structures. In these structures, buildup of (*) plaques can lead to atherosclerosis and stroke in the long term. By releasing nitric oxide, these structures cause smooth muscles cells to relax, inducing vasodilation. These structures shuttle endocrine hormones and erythrocytes around the body. For 10 points, name these structures which include capillaries, arteries, and veins.**

ANSWER: **blood vessels** (anti-prompt [ask for less specific] on veins or arteries or capillaries before mention)
<Qiu>

Bonuses

1. This bonus is about bones. For 10 points each, answer some questions about these calcium packed organs.

[10] Name these bones that surround the spinal cord and are separated by cushioning discs of cartilage. Humans have 33 of these bones which come in cervical ["SUR-vik-uhl"], thoracic ["thor-AS-ick"], lumbar, and sacral varieties.

ANSWER: **vertebrae** (accept word forms; prompt on back bone)

[10] Vertebrae and the pelvis are bones that commonly break in patients with this disease which can develop when osteoblasts overproduce RANKL ["RANK-EL"], resulting in depletion of bone density.

ANSWER: **osteoporosis**

[10] This hormone also causes bone density to drop. This hormone is secreted by their namesake gland in response to low blood calcium levels.

ANSWER: **parathyroid** hormone (accept **PTH**) <K. Li>

2. For 10 points each, answer the following about repeated names in Greek mythology.

[10] According to some accounts, Pirithous was killed by this dog of King Aedoneus, who shared its name with the more famous canine guardian of the Greek underworld usually depicted with three heads.

ANSWER: **Cerberus**

[10] Two Greek heroes with this shared name fought in the Trojan War, and both met unhappy endings. One committed suicide in shame, and the other drowned after boasting of surviving a shipwreck.

ANSWER: **Ajax** (accept Telamonian **Ajax**; accept Locrian **Ajax**; accept other epitaphs preceding **Ajax**)

[10] Zeus abducted Ganymede to be his cupbearer from this locale in Anatolia, which shares its name with the mountain on Crete where Zeus was born.

ANSWER: Mount **Ida** (accept Phrygian **Ida**) <Suh>

3. A George Stubbs painting shows one of these animals attacking a horse. For 10 points each:

[10] Name this animal. Patience and Fortitude are the names of two statues of this animal that stand in front of the New York Public Library.

ANSWER: **lions**

[10] This Naïve artist painted a lion standing over a woman lying next to a guitar in *The Hungry Lion Throws Itself on the Antelope*. He also painted *The Sleeping Gypsy*.

ANSWER: Henri **Rousseau** (or Henri Julien Félix **Rousseau**)

[10] Rousseau's last completed work shows a nude woman in a forest and is named for one of these nocturnal events. Surrealism was inspired by the visions seen during these events and their analysis by Sigmund Freud.

ANSWER: **dreams** <Chu>

4. In a novel partially titled for this color, a narrator is owned by Master Stork and told, "you're nothing but a counterfeit." For 10 points each:

[10] Give this color. An Orhan Pamuk novel titled *My Name is [this color]* is initially narrated by the murdered calligrapher Elegant Effendi, and features a section in which this color acts as a narrator.

ANSWER: **red** (accept *My Name is Red*)

[10] Orhan Pamuk is a Nobel-Prize-winning author from this country. He set his novel *Snow* in this country's city of Kars, and he set *My Name is Red* in Istanbul, during the Ottoman Empire.

ANSWER: Republic of **Turkey**

[10] In *Snow*, Kadife leads a group of girls named for these items. Kadife plans a symbolic action involving one of these items during a production of *The Spanish Tragedy*.

ANSWER: **head-scarf** (accept **hijab**; do NOT accept or prompt on just "scarf") <Yue>

5. The last king of this dynasty had a particularly sadistic consort who would make people walk across an oily bronze cylinder placed above a fiery furnace. For 10 points each:

[10] Name this earliest Chinese dynasty to be supported by archaeological evidence. This dynasty utilized oracle bones for divination purposes.

ANSWER: **Shang** dynasty (or **Yin** dynasty)

[10] The Zhou dynasty succeeded the Shang, and the first half of its “Eastern” period is known by this name. The seasonal name for this period is taken from the title of the official chronicle of the Lu dynasty.

ANSWER: **Spring and Autumn** Period (accept *Spring and Autumn Annals*; accept *Chun qiu shi chi*)

[10] This philosopher who lived during the Spring and Autumn Period influenced many others such as Mencius. This man’s aphorisms were collected in the *Analects*.

ANSWER: **Confucius** (or **Kongzi**) <Suh>

6. The Great British show about this activity has signature, technical, and showstopper challenges, and the “blind” version of this process is used to make pie. For 10 points each:

[10] Name this activity in which food is cooked in an oven. People make breads, cakes, and cookies by doing this activity.

ANSWER: **baking** (accept word forms)

[10] Examples of this type of baked good include croissants, Danishes, and éclairs. The dough used to make this type of baked good comes in filo [“FEE-low”], shortcrust, and puff types.

ANSWER: **pastry** (or **pastries**; or **patisserie**)

[10] Croissants, Danishes, and puff pastry all have this property, meaning that they are made by alternating layers of dough and solid fat. The fat melts during baking, causing the layers of dough to rise and become flaky.

ANSWER: **laminations** (or **laminated** dough) <Murton>

7. This work ends with a march of the fictional *Davidsbündler* against the Philistines. For 10 points each,

[10] Name this collection of 21 short piano pieces based off of an A-S-C-H theme by Robert Schumann, including “Chopin” and “Pantalon et Colombine.”

ANSWER: **Carnaval**

[10] Two other carnivals are depicted in popular concert overtures by Antonín Dvořák [“DVOR-jock”] and Bedřich Smetana, two composers from this country. Smetana’s overture notably depicts a carnival in Prague.

ANSWER: **Czech Republic** (accept **Czechoslovakia**)

[10] In Saint-Saëns’s *Carnival of the Animals*, an *Andantino grazioso* movement in 6/4 time depicts one of these animals and is for cello and two pianos. One of these animals “of Tuonela” titles a Jean Sibelius work.

ANSWER: **swan** <Yue>

8. A philosopher from this country employed many pseudonyms in writing his works, which included Victor Eremita, Judge William, and Johannes de Silentio. For 10 points each:

[10] Name this home of the early existentialist philosopher Soren Kierkegaard. He finished his work *Either/Or* in its city of Copenhagen.

ANSWER: **Denmark**

[10] Kierkegaard wrote this work, which discusses Abraham’s sacrifice of Isaac. In this work, Abraham is described as a “knight of faith,” which is contrasted with the “knight of infinite resignation.”

ANSWER: **Fear and Trembling**

[10] Kierkegaard argued that Abraham’s sacrifice could be justified through this concept. The first problem of *Fear and Trembling* asks whether this concept exists.

ANSWER: **teleological suspension of the ethical** (accept word forms of teleological such as **teleologic**) <Huang>

9. For 10 points each, answer the following about animals from Aesop's fables.

[10] This animal protagonist of an Aesop fable toils all summer to save up food, while the grasshopper sings and frolics around.

ANSWER: **ant**

[10] In another Aesop fable, one of these animals is woken by a mouse but spares his life. Later, the mouse returns the favor by freeing this animal after it gets caught in a net by gnawing on the ropes.

ANSWER: **lion**

[10] A rather dark Aesop fable tells of one of these animals choking his sleeping snake friend to death for being crooked and deceitful.

ANSWER: **crab** <Suh>

10. The widow of one US soldier killed in this country, La David Johnson, had a contentious phone call with Donald Trump that she then reported to her congresswoman, Frederica Wilson. For 10 points each:

[10] Name this Saharan country in which the Tongo Tongo Ambush took place, the site of a sizable US intervention against Islamist groups.

ANSWER: **Niger** (do NOT accept or otherwise reveal "Nigeria")

[10] The primary target of US forces in Niger is this Islamist group with a name translating as "Western Education is fake." It declared itself the "Saharan Province" of the Islamic State in 2016.

ANSWER: **Boko Haram**

[10] Boko Haram is also active in this country led by Muhammadu Buhari, where the city of Lagos is the center of the Nollywood film industry.

ANSWER: **Nigeria** <Myers>

11. This number can be generalized for any two commensurable real numbers by evaluating Thomae's function at their ratio and multiplying by the denominator. For 10 points each:

[10] Identify this number, which is equal to 1 if two integers are relatively prime. For any two integers, this number is defined as the largest positive integer that divides both of them.

ANSWER: **greatest common divisor** (or **gcd**; or **greatest common factor**; or **gcf**)

[10] This mathematician's namesake algorithm can be used to find the greatest common divisor of two integers. A theorem named for this man and Leonhard Euler ["**OY-ler**"] asserts that every even perfect number is equal to the product of a power of 2 with a Mersenne prime.

ANSWER: **Euclid**

[10] In number theory, this adjective denotes a namesake "remainder" theorem with widespread applications in cryptography. This adjective partly names a thought experiment in which a computer is able to translate a certain language without truly understanding it.

ANSWER: **Chinese** <R. Li>

12. After Lord Melbourne resigned, Arthur Wellesley, Duke of Wellington declined this monarch's request to become Prime Minister. For 10 points each:

[10] Name this last monarch of the House of Hanover who was also the Empress of India beginning in 1876.

ANSWER: Queen **Victoria** of the United Kingdom

[10] During this event, Victoria refused to dismiss certain female officials from her court, many of whom were the wives of leading Whig politicians.

ANSWER: **Bedchamber** Crisis

[10] This politician unsuccessfully asked Victoria to dismiss some of her Ladies of the Bedchamber. He also repealed the Corn Laws in response to the Irish Potato Famine and established London's Metropolitan police force.

ANSWER: Robert **Peel** <Suh>

13. (**NOTE TO MODERATOR:** do NOT announce alternate answerline to second bonus part unless first given)

In one poem, the speaker's face is described as "a featureless, fine... linen" of these people. For 10 points each:

[10] Name this ethnicity that the speaker of another poem "may be a bit of" due to "my weird luck / And my Taroc pack." That speaker describes "the language obscene / An engine, an engine / Chuffing me off like" one of these people.

ANSWER: **Jewish** people (accept **Jews**)

[10] That aforementioned poem describes this title man, "in black with a Meinkampf look" who has "a stake in [his] fat black heart." The speaker declares "you bastard, I'm through" with this man at the end of that poem.

ANSWER: **Daddy** (accept but do NOT reveal Sylvia **Plath's father**, prompting on partial answer)

[10] This American poet wrote "Lady Lazarus" and "Daddy." Her friend Anne Sexton infamously called this poet's suicide a "good career move."

ANSWER: Sylvia **Plath** <Yue>

14. Vangelis, the composer of the scores for *Chariots of Fire* and *Blade Runner*, is from this country. For 10 points each:

[10] Name this European country. Modern Instagram photographs of its city of Santorini often showcase three brilliantly blue domes residing next to the coastside, though you can also take selfies at Athens.

ANSWER: **Greece** (or the **Hellenic Republic**)

[10] Speaking of the color blue, painter El Greco depicted a stormy blue sky in his "view" of this Spanish city, where he resided most of his life.

ANSWER: **Toledo**, Spain (accept *View of Toledo*)

[10] Rounding out this bonus on non-ancient Greek art, name this Greek director who depicted a romance-mandatory dystopia in his film *The Lobster*. He earlier depicted a troublesome family in *Dogtooth*.

ANSWER: Yorgos **Lanthimos** <Kuang>

15. This property's inversion amounts to a point reflection, and it is negative for a pion. For 10 points each:

[10] Name this property. This property, the "*P*" in *CP*-symmetry, is violated by the weak interaction. A property with the same name denotes whether a number is even or odd.

ANSWER: **parity**

[10] This female Chinese scientist conducted the 1956 experiment proposed by Lee and Yang that observed parity violation in cobalt-60 atom decay, establishing parity violation in the weak interaction.

ANSWER: Chien-Shiung **Wu**

[10] The winners of the 1979 Nobel Prize in Physics derived a theory that combined the weak interaction with this other fundamental force, whose namesake "spectrum" of radiation ranges from radio waves to gamma rays.

ANSWER: **electromagnetic** interaction (or **electromagnetism**) <Yue>

16. One of this woman's Swiss ancestors was the first teacher for the deaf in Zurich. For 10 points each:

[10] Name this American woman, the first deaf-blind person to earn a bachelor of arts degree. She graduated from Radcliffe College, then the sister school of Harvard, in 1904.

ANSWER: Helen **Keller**

[10] Keller's lifelong teacher and companion was this blind woman. A memorable scene in the film *The Miracle Worker* depicts this woman teaching the word "water" to Keller.

ANSWER: Anne **Sullivan**

[10] Keller was an active member of this labor union. In a 1916 interview, Keller claimed that she became a member of this union because she thought the Socialist Party was "sinking into the political bog."

ANSWER: **Industrial Workers of the World** (or **IWW**; or "**Wobblies**") <Suh>

17. For 10 points each, answer these questions about Biblical people who were raised from the dead.

[10] On at least two separate occasions in the Bible, the son of one of this type of *people* was revived, once by Elisha and once by Jesus. These women had lost their husbands and lived alone with their sons.

ANSWER: **widows** (prompt on mothers)

[10] This man resurrected Dorcas, who may have been a widow. He also once converted 3,000 people with a sermon, and he was once chided for being of little faith.

ANSWER: **Peter** (or **Simon**; accept **Cephas**)

[10] Jesus raised the daughter of this ruler of a Jewish synagogue. On his way to revive her, a sick woman in the crowd touched Jesus' cloak and was healed of her sickness, after which Jesus asked, "Who touched me?"

ANSWER: **Jairus** ["JYE-rus"] <Suh>

18. In the first scene of the play she appears in, this character tells another that "You always end with a jade's trick." For 10 points each:

[10] Name this Shakespeare character that is called "my dear Lady Disdain!" and a "rare parrot-teacher" by a character she later marries despite her comparing marriage to getting "overmastered with a piece of valiant dust."

ANSWER: **Beatrice**

[10] Beatrice and Benedick get married in *Much Ado About Nothing*, a Shakespeare play in this genre contrasted with tragedies and histories. These plays often feature humorous misunderstandings and end with marriages.

ANSWER: **comedies**

[10] Beatrice tells a disguised Benedick that he is "the Prince's jester, a very dull fool" while Don Pedro woos Hero in Claudio's place at one of these events. Romeo first sees Juliet at one of them.

ANSWER: masked **balls** (accept **masquerades** and specific types of **balls**; accept **dances**) <Yue>

19. This site was first discovered by R. D. Banerji in 1919. For 10 points each:

[10] Identify this ancient settlement where a bronze statuette of a "dancing girl" was discovered. This site and Harappa contain some of the world's oldest flush toilets.

ANSWER: **Mohenjo-daro**

[10] Mohenjo-daro and Harappa are well known settlements of this ancient civilization primarily located in modern-day Pakistan and India.

ANSWER: **Indus** Valley Civilization

[10] The Indus Valley Civilization highly valued lapis lazuli, which has been mined in this present day country's Sar-i Sang mines for millennia.

ANSWER: **Afghanistan** <Suh>

20. A major goal in the field of organic chemistry is to develop reactions that are enantioselective

["en-AN-tee-oh-se-LEK-tiv"], meaning only one enantiomer ["en-AN-tee-oh-mer"] of a product with this property is produced. For 10 points each:

[10] Name this property of compounds that are not superimposable on their mirror images. This word comes from the Greek word for "hand."

ANSWER: **chirality** (accept word forms; prompt on anything including mirror like "mirror image")

[10] Many chiral compounds have an asymmetric atom of this element at a chiral center. This element commonly forms four bonds with tetrahedral geometry and is the basis for all organic chemistry.

ANSWER: **carbon**

[10] Unfortunately, enantioselective synthesis of this drug would not have eliminated its harmful effects because the body readily interconverts the teratogenic ["teh-rah-toh-GEN-ic"] (*S*)-enantiomer and the sedative (*R*)-enantiomer *in vivo*.

ANSWER: **thalidomide** (accept **Contergan**) <K. Li>

21. For 10 points each, answer some questions about photochemistry:

[10] Photochemical reactions are initiated by energy delivered by these massless particles. These particles travel at the speed of light and are absorbed by the reactants in a photochemical reaction.

ANSWER: **photons**

[10] This protein complex involved in photosynthesis absorbs light most strongly at 700 nanometers. This protein complex contains phylloquinone and ferredoxin.

ANSWER: **photosystem I** (or **PS I**; do NOT accept “photosystem II”)

[10] In the atmosphere, a photochemical reaction involving these greenhouse gasses converts ozone into molecular oxygen through a free radical mechanism. These chemicals were phased out following the Montreal Protocol.

ANSWER: **chlorofluorocarbons** (or **CFC**) <K. Li>