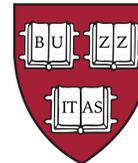


Harvard Fall Tournament IX

Edited by Will Holub-Moorman and Raynor Kuang

Questions by Will Holub-Moorman, Raynor Kuang, Sriram Pendyala, Robert Chu, Mark Arildsen, Catherine Wu, Roger Jin, and Vimal Konduri



Round 8

Tossups

1. **Celian and hyalophane are members of the barium-rich subclass of this mineral group. In geochronology, this mineral is the one most commonly used for potassium-argon and argon-argon dating methods. A monoclinic member of this mineral group is the first of the residual phases to crystallize in the (*) Bowen reaction series. Anorthosite is almost totally composed of the triclinic calcium and sodium-rich variety of this mineral; that subtype of this mineral group contains members like labradorite and andesine, and is known as its plagioclase variety. It doesn't include quartz, but this group of minerals comprise approximately 60% of the Earth's crust. For 10 points, name these most common silicate minerals.**

ANSWER: **feldspar** [prompt on "silicates" before mention]

2. **This leader's abolishment of the rating system for taxes in favor of a "Community Charge" system led to a series of poll tax riots. As Secretary of State for Education, this leader's policy of removing free milk from the lunches of schoolchildren resulted in this leader gaining the nickname (*) "milk-snatcher." This leader faced a strike by the National Union of Mineworkers in 1984 and 1985, and responded to the invasion of an island group by the government of Leopoldo Galtieri. For 10 points, name this conservative British Prime Minister from 1979 to 1990 who led Britain through the Falklands War with Argentina.**

ANSWER: Margaret **Thatcher**

3. **After one character in this play says she has come to look for work, another character responds, "Is that a good cure for overwork?" That character in this play also leaves a pair of visiting cards topped with black crosses in a mailbox to announce that he is about to die of syphilis. This play opens on (*) Christmas Eve and ends with a character slamming a door. This play's protagonist dances a tarantella in an attempt to prevent her husband from finding a letter from a bank employee that would reveal her forgery of her father's signature. For 10 points, name this play centering on Torvald and Nora Helmer, a work by Henrik Ibsen.**

ANSWER: *A **Doll's House*** [or *Et **Dukkehem***]

4. **One of these creatures named Hreidmar is the king of Nidavellir, while another named Alvis attempts to wed Thor's daughter, but is stalled by Thor using a riddle contest. By one account, these creatures are created from the blood of Brimir and the legs of Blain, alternate names for the primordial Ymir. Loki transforms into a (*) gadfly so as not to lose a bet with one of these creatures, but loses and has his mouth sewn shut by Brokkr. The self-multiplying ring Draupnir and Thor's hammer Mjollnir were created by Eitri and the Sons of Ivaldi, examples of these creatures that are very good at smithery. For 10 points, name these diminutive creatures from Norse mythology.**

ANSWER: **dwarves** [accept **dwarf**]

5. **Gabriel Faure wrote a set of six pieces for this many performers to commemorate the birthdays of his mistress's daughter in the *Dolly Suite*. Bela Bartok's *Concerto for Orchestra* features a movement with "games" between this many performers, and Mozart's *Sinfonia Concertante* features this many soloists. Johann Sebastian Bach wrote a concerto for this many (*) violins in D minor. Gustav Mahler's symphony of this number is nicknamed "Resurrection," and followed his *Titan* Symphony. There are this many beats per bar in a "cut time" time signature, and this is the number of sharps in a D major key signature. For 10 points, name this number of violins in a string quartet.**

ANSWER: **two** [or **duet**, or "Game of **Pair**s"]

6. **In one work, this thinker argued that priests convince the sick to redirect their *ressentiment* inward, and claimed that the ascetic ideal provided man with a response to the meaninglessness of suffering. That work by this thinker argues that powerlessness was equated with goodness as part of a "slave revolt in morality," and introduced his metaphor of the (*) "blond beast." Other concepts developed by this thinker include eternal recurrence and the over-man. For 10 points, name this aphoristic German author of *On the Genealogy of Morality*, *Beyond Good and Evil*, and *Thus Spake Zarathustra*, who also created a madman who declares "God is dead."**

ANSWER: Friedrich **Nietzsche**

7. **One character created by this author makes an ill-received joke about "a local variation on the cock crow" while staying at a Somerset inn, and listens to a radio show called "Twice a Week or More" to be able to talk to Mr. Farraday more effectively. That character created by this author is forced to fire two Jewish maids at the behest of his employer, a Nazi-sympathizing (*) diplomat. This author wrote a novel in which Kathy becomes a "carer" and Tommy dies after his organs are harvested. For 10 points, name this author who described human cloning in the novel *Never Let Me Go* and wrote about a servant of Lord Darlington, the butler Stevens, in *The Remains of the Day*.**

ANSWER: Kazuo **Ishiguro**

8. **This president authorized his Attorney General Herbert Brownell to initiate a border control program called Operation Wetback. This president opposed a series of non-interventionist constitutional amendments sponsored by John W. Bricker, and introduced "domino theory" in a speech. A (*) U-2 plane flown by Gary Powers was downed over the USSR during this man's presidency, during which NASA was created. This man defeated Adlai Stevenson twice to gain the presidency, and oversaw the creation of the Interstate Highway System. For 10 points, name this president who warned about the "military-industrial complex" in his farewell address and succeeded Harry Truman.**

ANSWER: Dwight D. "Ike" **Eisenhower**

9. **This scientist was the first to show that the tetrahedral molecular geometry of carbon could account for the phenomenon of optical activity of some organic compounds. His rule gives the number of stereoisomers for a compound without an internal mirror plane as 2 to the number of its chiral carbons. In (*) osmotic pressure calculations, this man's constant equals the number of species formed by the dissociation of an ionic compound in water; that constant is symbolized lowercase *i*. This man's namesake equation gives the natural log of the equilibrium constant as proportional to inverse temperature with slope equal to the negative change in enthalpy over R. For 10 points, name this first Nobel prize winner in chemistry.**

ANSWER: Jacobus Henricus **van't Hoff**

10. **The Donner und Blitzen River flows into Malheur Lake in this state’s southeastern Harney Basin, and the Alvord Desert lies alongside a mountain named for a man who drove the Paiute tribe off it, Enoch Steen. One city in this state is home to the world’s smallest park, Mill Ends Park, as well as the International (*) Rose Test Garden. That city in this state sits next to the extinct volcano Mount Tabor, as well as Mount Hood. This state’s Willamette Valley contains its cities of Eugene, and Salem. For 10 points, name this Pacific Northwest state whose largest city is Portland.**

ANSWER: Oregon

11. **On the eve of this day, a chant which closes by noting that “all the people are in fault” precedes an extended Selichot service. According to legend, the Kohen Gadol immersed himself in the *mikveh* five times on this day. The long confession of Al Cheyt [hite] is recited on this day, and this holiday is concluded with the Ne’ila service, during which the (*) Torah ark is kept open. This holiday occurs on the tenth day of the month of Tishrei, and wearing leather shoes and having sex are banned on this holiday, which includes a 25-hour fast. For 10 points, name this Jewish Day of Atonement that occurs nine days after Rosh Hashanah.**

ANSWER: Yom Kippur

12. **One musician with this last name wrote sang about a Native American statue whose “heart was made of knotty pine” named Kaw-Liga. That musician with this last name also wrote a Cajun-influenced song which mentions “crawfish pie and fillet gumbo” and opened another with the lines “Hear that lonesome (*) whip-poor-will / He sounds too blue to fly.” A composer with this last name conducted the Boston Pops throughout the 1980s, used a repeating “F, F-sharp” theme to depict a creature terrorizing Amity Island, and included an “Imperial March” in his soundtrack to *The Empire Strikes Back*. For 10 points, name this last name shared by film composer John and country musician Hank.**

ANSWER: Williams [accept Joe Williams, Hank Williams, or John Williams]

13. **The Austrian author Franz Werfel wrote about Gabriel Bagradian’s return to a village in this modern-day country in *The Forty Days of Musa Dagh*. A novel set in this country’s city of Kars includes a performance of *The Spanish Tragedy* in which Kadife removes her headscarf. A poem describes singing to the “lords and ladies” of a city in this modern-day country “of what is past, or passing, or to come,” and opens with the line “That is (*) no country for old men.” This country is the setting of the novel *Snow*, a work by Orhan Pamuk. For 10 points, name this country, the subject of a Yeats poem about “sailing to” its city of Byzantium, which is now named Istanbul.**

ANSWER: Republic of Turkey [prompt on “the Ottoman Empire” or “the Byzantine Empire”]

14. **In this disorder, the lipocalin-type prostaglandin D mRNA is upregulated in the affected cells. This disease is usually caused by a 4-base-pair insertion in exon 11 of the relevant gene in chromosome 15. This disease results from the buildup in neurons of glycosphingolipids with sialic acid groups linked to their sugar chain. Those gangliosides accumulate in the brain of sufferers of this disease because of a defect in (*) hexosaminidase A, a lysosomal enzyme. This disease causes the appearance of a cherry red spot in the retina of its sufferers. For 10 points, name this usually fatal genetic disorder that affects French Canadian, Cajun, and Ashkenazi Jew populations.**

ANSWER: Tay-Sachs disease [accept GM2 gangliosidosis before mention; accept hexosaminidase A deficiency before mention]

15. One member of this group's diaspora eventually settled in New Mexico and helped advocate for its statehood; that man was Ben Viljoen [vil-YOAN]. One rebellion by this people against the British Empire was nicknamed the "Five Shilling Rebellion" and was led by Manie Maritz. The Natalia Republic resulted from a "Great (*) Trek" between 1835 and 1840 by these people from the Cape Colony. This group's loss of the Siege of Mafeking led them to sign the Treaty of Vereeniging to end the second of two wars they fought against the British. For 10 points, name this group of people who set up the Orange Free State and Transvaal in the late 19th century, and were descended from Dutch settlers in South Africa.

ANSWER: **Boers** [prompt on **Afrikaners**]

16. A current formed in a homopolar rotating disk is the subject of a paradox named for this law. This law is responsible for the formation of current loops in conductors near AC transformers; those loops are examples of Eddy currents. In one form, this law gives the line-integral of the electric field around a closed loop as equal to the negative time derivative of the (*) magnetic flux through a surface bounded by the loop. Lenz's law can be used to determine the direction of currents that are predicted by this law. The driving principle behind the function of electric generators is explained by this one of Maxwell's equations. For 10 points, name this law of electromagnetic induction.

ANSWER: **Faraday's** law

17. During this period, the Fuero of Teruel defined one city's Jews as the "slaves of the king," and Évora was captured by a folk hero named Gerald the Fearless. A legendary battle during this period saw the appearance of Saint James to an outnumbered side, and this period saw the rise of *taifa* kingdoms. Muhammad al-Nasir led an army of (*) Almohads that was defeated at the battle of Las Navas de Tolosa during this period, which was ended by a treaty signed with Boabdil. This period was begun by a revolt led by Pelagius at the Battle of Covadonga. For 10 points, name this period ended by the Treaty of Granada during which Muslim forces were expelled from Spain.

ANSWER: La **Reconquista**

18. The difference between two examples of this quantity comprises the TED [t-e-d] spread. A rightward shift of the IS curve raises income and this quantity, which sits on the vertical axis of the IS-LM model. When the demand for money is very sensitive to this quantity, then fiscal policy is very effective; that scenario is called a (*) liquidity trap. The Fisher Equation adds inflation to the real form of this quantity to find the nominal form of it, and the Federal Reserve targets one of these quantities used by banks for trading federal funds. For 10 points, name this quantity, which is the amount that lenders charge borrowers.

ANSWER: **interest rate** [prompt on "interest," accept nominal **interest rate** or real **interest rate**, also accept **Federal funds rate**]

19. In one painting by this artist, an angel reaches down from the upper right-hand corner and offers a palm leaf to the title figure, who is about to be stabbed by a shirtless assassin. In another painting by this artist, a man holds a horse's bit as a figure in red lies sprawled on the ground with his arms spread. On the left of a third painting by this artist, a bearded man sitting at a table with four other people (*) points at himself in response to the entry of Saint Peter and Jesus on the right, the latter of whom stretches an arm toward the title tax collector. For 10 points, name this artist of *The Conversion of Saint Paul* and *The Calling of Saint Matthew*.

ANSWER: Michelangelo Merisi da **Caravaggio**

20. One poem by this author describes “a turbulence of forms / delightful with indefinable flowering,” and opens with the declaration “unto thee i / burn incense.” Another poem by this author ends three of its stanzas with three different sequences of the words “stars,” “rain,” “sun,” and “moon.” This author described a season “when the world is mud-luscious” and a “queer old (*) balloonman” in his poem “in just-” and wrote how “someones married their everyones” in another poem. For 10 points, name this poet of “anyone lived in a pretty how town,” an American poet who used unusual punctuation in many of his works.

ANSWER: e. e. cummings [or Edward Estlin Cummings]

21. During one election, this president’s opposition forged a letter from him to a Massachusetts union supposedly voicing his support for Chinese immigration. Prior to George W. Bush, this target of the Morey Letter was the last Republican to gain the office without winning California, and is still the only sitting member of the House of Representatives to win a presidential election. This president ordered the investigation of the (*) Star Route Frauds, and the metal detector was invented to treat him following an event in which a man shouted “I am a Stalwart!” before shooting this president in a train station. For 10 points, name this president succeeded by Chester A. Arthur following his assassination by Charles Guiteau.

ANSWER: James Abram Garfield

Bonuses

1. This principle stems from the fact that the position and momentum operators in quantum mechanics do not commute. For 10 points each:

[10] Name this principle stated which asserts that the more precisely the position of a particle is known, the less precisely its momentum can be known, and vice-versa.

ANSWER: **Heisenberg uncertainty** principle [accept either or both underlined parts]

[10] Although position and momentum are one set complementary variables with an uncertainty relation, energy and this quantity are another set. The dilation of this general quantity is a consequence of special relativity.

ANSWER: **lifetime** of a state

[10] Along with Born and Jordan in 1925, Heisenberg developed this mathematical formalism of quantum mechanics, which treated operators like position and momentum as time-dependent, and states as time-independent.

ANSWER: **matrix mechanics**

2. Answer the following about the fifth century travels of the Chinese monk Faxian, for 10 points each:

[10] Starting in 399 BCE, Faxian walked from his birthplace of Wuyang to India, the north of which was controlled by this empire. This empire was dissolved following an invasion by the White Huns, and was ruled by Samudra and founded by Chandra.

ANSWER: **Gupta** Empire

[10] Faxian visited this capital of the Gupta Empire, which was also the birthplace of Ashoka.

ANSWER: **Pataliputra**

[10] Faxian also visited the modern-day Nepalese city of Lumbini, which is the birthplace of this creator of the Four Noble Truths, who was the first to achieve *nirvana*.

ANSWER: Siddhartha **Gautama** [accept Gautama **Buddha**]

3. Shoes, shoes, shoes. For 10 points:

[10] In 2008, Al-Baghdadia TV correspondent Muntadhar al-Zaidi threw his shoes at this US President at a press conference, shouting "This is a farewell kiss from the Iraqi people, you dog!"

ANSWER: **George Walker Bush** [Do not accept or prompt on **George Herbert Walker Bush**. Accept **Bush 2** or **Bush 43**, or, grudgingly, **Dubya**.]

[10] In April, Hillary Clinton narrowly avoided a shoe thrown at her during a speech in front of the Institute of Scrap Recycling Industries in this Clark County city, which is also home to McCarran International Airport.

ANSWER: **Las Vegas**, Nevada [accept **Paradise**, Nevada]

[10] Shoes started flying in this politician's direction last fall when his approval ratings dropped to below 10%. As a result, police purchased \$16,000 worth of nets to protect this president of Taiwan.

ANSWER: **Ma** Ying-jeou

4. For 10 points each, name these Greek figures who committed the sins of thinking themselves equal to the gods:

[10] By one account, these deadly singers entered into a singing contest with the Muses and lost. Odysseus tied himself to a mast to listen to their song.

ANSWER: **Sirens**

[10] This hero defeated the Chimera, but was crippled after he attempted to take himself to Mount Olympus upon Pegasus.

ANSWER: **Bellerophon**

[10] This king pretended to be Zeus by riding his chariot over a brass bridge to imitate the sound of thunder, and was correspondingly struck down by Zeus.

ANSWER: **Salmoneus**

5. The arrival of A. P. Hill's division from Harper's Ferry at this battle allowed one side to push back the forces of Ambrose Burnside For 10 points each:

[10] Name this bloodiest single-day battle in American history, which took place in Maryland and saw Union forces repeatedly attack the Sunken Road.

ANSWER: Battle of **Antietam** [accept Battle of **Sharpsburg**]

[10] This Confederate general at Antietam was nicknamed "Old War Horse" by Robert Lee following the battle, and was later critically wounded at the Battle of the Wilderness.

ANSWER: James **Longstreet**

[10] In this later Union campaign, Ulysses S. Grant ordered his troops to build trench lines around Richmond, cutting off the title Virginian city's supply lines to Robert E. Lee.

ANSWER: Siege of **Petersburg** [or the **Richmond-Petersburg** Campaign]

6. Answer the following about wolves in literature, for 10 points each:

[10] This Jack London creation is bought from Grey Beaver by Beauty Smith for a few bottles of whiskey, after which he is nearly killed by a bulldog in a dogfight.

ANSWER: **White Fang**

[10] A talking wolf named Maugrim is the head of Secret Police for the White Witch in this author's *The Lion, The Witch, and the Wardrobe*, one of his seven *Chronicles of Narnia*.

ANSWER: Clive Staples **Lewis**

[10] In this author's novel *The Crossing*, a boy captures a pregnant female wolf and attempts to return it to Mexico. That work is the second installment of this author's Border Trilogy, which closes with *Cities of the Plain*.

ANSWER: Cormac **McCarthy**

7. This man's little theorem states that for a prime p and a whole number a , a to the power p is congruent to $a \pmod{p}$. For 10 points each:

[10] Name this 17th century French lawyer who also names a "last theorem" that was proven by Andrew Wiles in 1995.

ANSWER: Pierre de **Fermat**

[10] The Fermat primality test is based on Fermat's little theorem. However, the test is imperfect since these composite numbers pass the primality test for all values of base a less than themselves.

ANSWER: **Carmichael** numbers

[10] Fermat's method of infinite descent can be used to prove Lagrange's theorem that every positive integer can be written as the sum of this many perfect squares. Later, Appel and Haken proved that no more than this many colors are required to color the regions of a map so no two adjacent regions share the same color.

ANSWER: **four**

8. Visitors to this place probably don't know that it's a "deterrence machine set up in order to rejuvenate in reverse the fiction of the real," according to the philosopher Jean Baudrillard. For 10 points each:

[10] Instead, they're probably just at this California theme park to ride Pirates of the Caribbean, walk down Main Street, U.S.A., and take photos with Mickey Mouse.

ANSWER: **Disneyland** Park

[10] As depicted in his documentary *Exit Through the Gift Shop*, this British artist caused a stir by hanging an inflatable doll resembling a Guantanamo Bay prisoner next to Disneyland's Big Thunder Mountain Railroad.

ANSWER: **Banksy**

[10] In the hopes of attracting younger tourists, this African nation recently offered to build a Disneyland franchise. This former British colony is currently led by Robert Mugabe.

ANSWER: **Zimbabwe**

9. A coronation anthem by this composer notes that the title figure and “Nathan the Prophet anointed Solomon King.” For 10 points each:

[10] Name this composer of *Zadok the Priest*, who wrote a five-movement work to celebrate the Treaty of Aix-la-Chapelle, his *Music for the Royal Fireworks*.

ANSWER: George Friedrich **Handel**

[10] Handel frequently incorporated his Opus 4 and 7 sets of concertos for this instrument into his concerti grossi. His concerto in F major for this instrument is nicknamed “The Cuckoo and the Nightingale” for its imitation of birdsong.

ANSWER: pipe **organ**

[10] Handel is best known for his *Messiah*, which contains this famous chorus during which the audience traditionally stands. This chorus contains the repeated phrase “And he shall reign for ever and ever.”

ANSWER: “**Hallelujah**” Chorus

10. In an apocryphal story about this play’s premiere, this play made a pregnant woman so scared that she suffered a miscarriage and died in the theater. For 10 points each:

[10] Name this play in which the ghost of a murdered woman convinces the Furies to track down a character hiding in the Oracle at Delphi, and which ends with Athena’s vote determining that character’s acquittal.

ANSWER: *The **Eumenides*** [or *The **Kindly Ones***]

[10] *The Eumenides* is the third and final play in Aeschylus’ *Oresteia*, which begins with this play about the title king’s return and murder by his wife, Clytemnestra.

ANSWER: **Agamemnon**

[10] Agamemnon is returning from the Trojan War, which is recounted in this epic by Homer.

ANSWER: *The **Iliad***

11. Bernardo Rossellino brought this architect’s design for the Rucellai Palace to completion. For 10 points each:

[10] Name this Renaissance architect responsible for designing the facade of the Santa Maria Novella.

ANSWER: Leon Battista **Alberti**

[10] The Santa Maria Novella is in this city, which also features a cathedral with a brick dome designed by Filippo Brunelleschi.

ANSWER: **Florence** [or **Firenze**]

[10] Florence is also home to the Galleria dell’ Accademia, which houses this sculptor’s enormous *David*.

ANSWER: **Michelangelo Buonarotti** [accept either]

12. In this play, after Bagot accuses him of conspiring to kill the Duke of Gloucester, the Duke of Aumerle throws down his gage, which causes five more people to throw down their gages. For 10 points each:

[10] Name this play, whose title character is murdered by Piers Exton after being sent to the dungeons of Pomfret by his successor.

ANSWER: **Richard II**

[10] In another history by Shakespeare, Henry V delivers a notable speech before a battle on this holiday, declaring “We few, we happy few, we band of brothers.”

ANSWER: **St. Crispin’s Day**

[10] This other play by Shakespeare isn’t considered a history, but it does deal with historical events, namely the title dictator’s assassination by Brutus and Cassius.

ANSWER: **Julius Caesar**

13. One crucial document during this process was the Two Plus Four Treaty, which was signed by—surprise!—six countries. For 10 points each:

[10] Name this event that led to the dissolution of the Stasi. The first step in this process was conducted by so-called “Mauerspechte” who dismantled the Berlin Wall.

ANSWER: the **reunification** of East and West **Germany** [accept **Deutsche Wiedervereinigung**]

[10] The Berlin Wall now contains a famous mural of this politician kissing Leonid Brezhnev. This leader successfully campaigned for East Germany’s entry into the UN and resigned three weeks before the fall of the Berlin Wall.

ANSWER: Erich **Honecker**

[10] Honecker was less fond of another Soviet politician, Mikhail Gorbachev, which sprang in part from Honecker’s dislike of this reformist economic movement paired with *glasnost*, which has a name coming from the Russian for “restructuring.”

ANSWER: **perestroika**

14. This artist developed an “accidental painting technique” in which he poured different-colored paints onto wood and allowed them to mix. For 10 points each:

[10] Name this artist, better known for producing one of the largest murals in the world, *The March of Humanity*, on the exterior of his namesake Polyforum. This Stalinist also painted a *Portrait of the Bourgeoisie*, which he didn’t get to finish because he tried to kill Leon Trotsky.

ANSWER: David Alfaro **Siqueiros**

[10] This other muralist included a portrait of Vladimir Lenin in his *Man at the Crossroads*, and created the *Detroit Industry* murals for the Detroit Institute of Arts.

ANSWER: Diego **Rivera**

[10] Both Siqueiros and Rivera were artists from this North American country, whose other key artists include Jose Clemente Orozco.

ANSWER: **Mexico**

15. Answer these questions about scientists who have won the Nobel Prize in Medicine, for 10 points each:

[10] In 1933, Thomas Hunt Morgan won the Nobel Prize for discovering the “role played by the chromosome in heredity” by studying these organisms, which have four pairs of chromosomes.

ANSWER: **fruit flies** [accept **Drosophila** or **D. melanogaster**]

[10] This pair of scientists, along with Maurice Wilkins, received the Nobel Prize in 1962 for discovering the structure of DNA.

ANSWER: James **Watson** and Francis **Crick** [prompt on partial answer]

[10] In 1931, this scientist won the Nobel Prize for his research on cytochrome and its role in respiration, especially in sea urchin eggs post fertilization. Sir Hans Krebs, who received the award for discovering the citric acid cycle, worked in this scientist’s lab.

ANSWER: Otto Heinrich **Warburg**

16. This denomination believes that Ali, rather than Abu Bakr, was the proper successor caliph to Muhammad. For 10 points each:

[10] Name this second-largest denomination of Islam, after Sunni.

ANSWER: **Shi’a** Islam [or **Shiite**, or **Shi’i**]

[10] In Sunni Islam, this title refers to those who lead prayer, but in Shi’a Islam this term has a heightened role more akin to political and religious leader. The Twelver sect of Shi’a Islam holds that there were, as the name suggests, twelve of these.

ANSWER: **imam**

[10] Twelvers believe that the twelfth, or Hidden Imam, Muhammad al-Mahdi, is still alive, and was concealed by Allah from mankind in an event known by this name. This event is split into “Minor” and “Major” sections.

ANSWER: The **Occultation** [or **Ghaybah**]

17. Two minor characters in this novel contemplate getting married to each other while picking mushrooms, and the title character of this novel sneaks back into her house to bring birthday presents to her son. For 10 points each:

[10] Name this novel in which the title character’s husband initially rejects her request for a divorce on the advice of a French psychic, then grants it to her, at which point she decides not to divorce and moves to Italy with another man.

ANSWER: ***Anna Karenina***

[10] *Anna Karenina* is a work by this Russian author.

ANSWER: Leo **Tolstoy**

[10] Tolstoy also wrote a novella depicting the “death” of this judge, who dies after falling off a ladder while hanging curtains.

ANSWER: **Ivan Ilych** Golvin [accept either underlined part, accept *The **Death of Ivan Ilych***]

18. This action is central to the “Plank of Carneades” thought experiment, in which one sailor does this to another. For 10 points each:

[10] Name this action which an observer must decide whether to do to a “fat man” to save five people in Judith Jarvis Thomson’s modification of the Trolley Problem.

ANSWER: **kill** them [accept equivalents, like **murder**, or even things like **push them off a high place**, because that occurs in both scenarios]

[10] Judith Jarvis Thomson is best known for writing a “defense” of this practice in which she asked the reader to imagine a sick violinist plugged into their circulatory system.

ANSWER: **abortion** [accept “A **Defense of Abortion**”]

[10] While Thomson claims that it’s ethically OK to unplug said violinist, Peter Singer has claimed that utilitarianism demands that we let him stay plugged in. Singer himself best known for arguing for the rights of these beings, which explains why he’s a vegetarian.

ANSWER: **animals**

19. 100,000 of this city’s dock workers went on strike in 1889, demanding their namesake “tanner” pay. For 10 points each:

[10] Name this city, which earlier was the location of a trading post named the Steelyard. A group of 110 “worshipful” trade associations based in this city are called “livery companies.”

ANSWER: **London**

[10] The Steelyard was the London outpost of this group of North European merchant guilds and trading cities. Its capital was at Lübeck.

ANSWER: The **Hanseatic** League

[10] The Hanseatic League also had many outposts in this modern-day country, including one at Gdansk under the control of the Teutonic Knights.

ANSWER: Republic of **Poland** [accept Rzeczpospolita **Polska**]

20. Examples of these mixtures include aerosols and emulsions. For 10 points each:

[10] Name these mixtures composed of microscopic insoluble particles of one substance dispersed into another.

Flocculation is a process of destabilization and, ultimately, separation of these mixtures.

ANSWER: **colloids**

[10] This effect explains why flour particles dispersed throughout water form a blue colloid. It is similar to Rayleigh scattering in that higher-frequency light is preferentially scattered.

ANSWER: **Tyndall** effect

[10] This electrokinetic potential is formally the potential of a slipping plane in the vicinity of a charged particle, taken relative to a point in the bulk fluid away from the particle. Its value is a key indicator of the stability of a colloidal dispersion.

ANSWER: **zeta potential**