

# DRAGOON 2013

## Round 7

Questions by the University of Illinois at Urbana-Champaign

### Tossups

1. **One precursor to this organization, the AUAM, was directed by Crystal Eastman. Norman Thomas was forcibly removed as a member of this organization in 1940 even though he helped found the CLB, the predecessor of this organization. During the election of 1988, Michael Dukakis called himself a “card carrying member” of this organization. Co-founded in 1920 by its first head, Roger Baldwin, this group convinced John T. (\*) Scopes to test Tennessee’s anti-evolution law and helped secure rights of suspects in the *Gideon* and *Miranda* cases. For 10 points, name this organization that aims to “defend and preserve the individual rights and liberties.”**

ANSWER: American Civil Liberties Union

2. **One author from this country wrote about a man who brings his concubine into the family in *The Waiting Years*. Royall Tyler and Edward Seidensticker are scholars who have translated this country’s literature into English. This country’s literature is the subject of *World Within Walls*, a study by Donald Keene. A chapter named after the “bridge of dreams” ends another novel from here - that book features a protagonist who writes a poem comparing a (\*) beautiful woman’s discarded clothing to a cicada’s shell. Another author from here chronicled “hateful things” and “pleasureful things” in *The Pillow Book*. Lady Aoi is one of the wives of the protagonist of another novel set here, who is described as a “shining prince.” For 10 points, name this country whose classical literature includes *The Tale of Genji*.**

ANSWER: Japan or Nippon

3. **A François Villon poem inspired an alternative title of one figure on this work that shows an old woman with sagging breasts who is believed to be the prostitute Thaïs. In addition to *She Who Was Once the Helmet-Maker’s Beautiful Wife*, an upper half of another figure is seen clutching a woman known as *The Martyr*. That figure appears with different hand configurations two more times on this work, one of which sees him bearing the (\*) weight of the *Crouching Woman* in *I Am Beautiful*. Three figures that are copies of each other appear at the very top of this work and point their hands down drawing the viewer’s attention to a man deep in thought, believed to be Dante. For 10 points, name this work that includes sculptures like *The Three Shades* and *The Thinker*, by Auguste Rodin.**

ANSWER: *The Gates of Hell* [or *La Porte de l’Enfer*]

4. **For a control volume defined inside a boundary layer over a non-flat surface, the flux of this quantity can be determined using a von Kármán integral. The diffusion of this quantity in a fluid is represented by the numerators of the Schmidt and Prandtl numbers, which contain the kinematic viscosity. The sum over all particles of this quantity for the particle dotted with the position of the particle gives the scalar virial. In special relativity, this quantity is unified with (\*) total energy into a 4-vector. This quantity is equal to Planck’s constant divided by the de Broglie wavelength. The ideal rocket equation can be derived from its conservation. The change in this quantity is equal to the impulse. For 10 points, name this quantity which is conserved in collisions and is equal to mass times velocity.**

ANSWER: linear momentum

5. **Their arrival at Nemea caused Hypsipyle to abandon Opheltes in some grass, leading the latter to be devoured by a snake. In order to repulse the force led by them, a man was told to offer his son Menoiceus to Ares, but that son slit his own throat before he was sacrificed. One member of this group gave his daughters Argeia and Deipyle in marriage to another after seeing a pair of shields that contained a lion and a boar. They include a man who (\*) devoured the brains of Melanippos, thus revolting Athena into not giving him immortality. A son of Atalanta and a man struck down by Zeus's lightning after climbing a ladder are two of them. Including Parthenopaeus and Capaneus, this group also included Polyneices. For 10 points, identify this numerically-named group which fought a war against Thebes.**

ANSWER: Seven Against Thebes

6. **Events in part 3 of this novel include the setting becoming covered in a “grey slime” and the passage of a law that effectively makes burning one's own house down a capital crime. In Part 4 of this novel, a man dies while partaking in a performance of Gluck's *Orpheus and Eurydice*. At this novel's end, a dog is shot to death by an insane man before the police storm his home. Its main character has a conversation with the journalist (\*) Raymond, who asks him if he can help him to get back to his wife in Paris. This novel's characters include Father Paneloux, who gives multiple sermons to the citizenship of Oran. Opening with the death of numerous rats, much of it revolves around Dr. Bernard Rieux, who combats the title calamity. For 10 points, name this novel by Albert Camus.**

ANSWER: *The Plague* [or *La Peste*]

7. **One commander of this battle used strong defensive tactics in the place of the *attaque à outrance* strategy embraced by his superiors. In the second phase of this battle, the aggressors launched an attack from the northwest targeting Dead Man's Hill and Hill 304. Édouard de Castelnau commanded one side during the first few days of this battle, during which time the aggressors seized Fort (\*) Douaumont. One side in this battle relied on a single road to transport supplies from Bar-le-Duc called the Voie Sacrée. Erich von Falkenhayn's goal in this battle was to “bleed France white.” For 10 points, Phillipe Pétain is renowned as the hero of what World War I battle fought from February to December 1916?**

ANSWER: Battle of Verdun

8. **This is the key of a concerto whose second movement “Romanza: Larghetto” uses muted strings throughout and was compared by the composer to a moonlit night. Heitor Villa-Lobos's first and fourth preludes for the guitar are both in this key, which is also the home key of Ralph Vaughan Williams' sixth symphony and a Mendelssohn work in which a sustained (\*) bassoon note links the first two movements. This key is the mediant of C major and the subdominant of B minor. Another symphony in this key was partially inspired by *The Song of Hiawatha*. For 10 points, name this key of Chopin's Piano Concerto No. 1, Felix Mendelssohn's violin concerto, and Dvorak's *New World Symphony*, which is the relative minor of G major and has one sharp.**

ANSWER: E minor [do not accept or prompt on “E” alone before the word “minor” in the last sentence is read, accept afterward. Do not accept “E major” at any point]

9. **In the introduction to one of his books, he cites a certain group's belief that gravity works via an imaginary string to put forward his thesis that children engage in animistic thinking. That essay considers a person who considers himself a machine and is called “Joey: A Mechanical Boy.” This thinker expounded on the theories of Leo Kanner in (\*) *The Empty Fortress*, and he interpreted a gingerbread house as oral gratification in a work that stresses the necessity of magic in the development of a child's psyche. He popularized the theory that unloving ‘refrigerator mothers’ were responsible for autism. For 10 points, name this psychologist who analyzed fairy tales in Freudian terms in the study *The Uses of Enchantment*.**

ANSWER: Bruno Bettelheim

10. Peter Medawar proposed that aging occurs due to the accumulation of *these* over time. According to one paper by King and Jukes and another paper by Kimura, neutral examples of *them* become the most widespread among a population. This process was found to occur in *E. coli* regardless of whether or not they were exposed to the T1 phage in the fluctuation test performed by (\*) Luria and Delbrück. They can be classified as nonsense if they generate a premature stop codon, and they are divided into point or frameshift types. Favorable ones lead to increased survival via natural selection. For 10 points, name these random events in which the genetic code of an organism undergoes a spontaneous change.

ANSWER: mutations

11. One absent-minded speaker created by this poet notices “All animals are smothered in their lairs” whose loneliness “includes me unawares.” This poet of “Desert Places” wrote “I shall laugh the worst laugh I ever laughed / I’m cursed” in a work whose speaker declares “But the world’s evil. I won’t have grief so if I can change it.” In that work set on a (\*) staircase, a man threatens to take a woman by force after Amy scolds him for his indifference to the death of their child. The speaker of another of his poems states “my little horse must think it queer to stop without a farmhouse near.” For 10 points, name this poet of “Home Burial” who also wrote “Stopping By Woods on a Snowy Evening” and “Mending Wall.”

ANSWER: Robert Frost

12. Before joining Boston, Luis Tiant pitched 4 straight shutouts for this team in 1968, and in 1993, a boat crash killed their pitcher Steve Olin. A catcher for this team debuted as the first Brazilian baseball player, Yan Gomes. The San Francisco Giants traded the first person to win the Cy Young in both leagues to this AL club, Gaylord Perry. A pitcher for this team in the 1940s was the fire-balling “Bullet” (\*) Bob Feller. This team won the playoff series that featured the famous “Bug Game.” The Atlanta Braves defeated this team in the 1995 World Series despite the efforts of Jim Thome and Manny Ramirez. Different pitchers for this team won AL Cy Young awards in 2007 and 2008. For 10 points, name this AL Central team that traded both Cliff Lee and C.C. Sabathia.

ANSWER: Cleveland Indians [accept either]

13. One theologian from what is now this country described the experience of *baqa* in his book *The Jewels of Wisdom* and argued that the soul disappears through an act of *fana* in *The Meccan Revolutions*. Another Islamic theologian from here argued that the universe is eternal in his refutation of al-Ghazali, *The Incoherence of the Incoherence*. This country, which was the birthplace of (\*) ibn al-‘Arabi and ibn Rushd, is home to a mosque with red and white voussoirs in its arcade. A palatial complex in this country is home to such features as the “Court of the Myrtles” and the “Court of the Lions.” *Moriscos* were Muslims in this country who were expelled during the Reconquista. For 10 points, name this country, where one can find Seville and Cordoba.

ANSWER: Spain [or España]

14. Butler and Marcy of San Francisco State University pioneered the study of these objects. The presence of one of these objects creates an additional Römer delay in the frequency of a pulsar. Types of these objects characterized by gas have been detected by the OGLE project. Examples of these objects with large masses and extremely short periods are characterized as (\*) “hot.” Common ways of detecting these entities include gravitational microlensing and using photometry in conjunction with a transit. The Kepler mission seeks to find these objects. Types of these entities that may feature liquid water on them lie in a “habitable zone.” For 10 points, name these bodies that orbit a star that isn’t the Sun.

ANSWER: extra-solar planets [or exoplanets, accept “Jupiters,” “Jovian exoplanets,” and similar answers due to the “hot” clue]

15. This leader described his own policy with the slogan “bread or the club.” During an interview with James Creelman, this man promised that he would retire from politics after a certain date and allow others to run for his office. His advisors were led by the finance minister Jose Yves Limantour and were known as the (\*) *cientificos*. This man won the Battle of Tecoac during the Tuxtepec Revolution, letting him overthrow Sebastian Lerdo de Tejada. He was the target of the Plan of San Luis Potosí, which called for an end to his 26-year term as president and was written by his former opponent in the 1910 election, Francisco Madero. For 10 points, name this dictator who was overthrown by the Mexican Revolution.

ANSWER: Porfirio Diaz

16. Robert Graves restored this novel and dubbed it the “real” version. Late in this work, the valet Littimer proves to be a model prisoner after he is jailed for embezzlement. The prison keeper in this book employed the one-legged Mr. Tungay. A rescue attempt during a storm at Yarmouth causes the death of two characters in the novel, causing the protagonist to go to (\*) Switzerland. This novel’s title character is sent to the Salem House after biting Edward Murdstone shortly after befriending James Steerforth. In this novel, Uriah Heep blackmails his way into a law partnership with Mr. Wickfield, and Heep tries to guilt Agnes Wickfield into marrying him. For 10 points, name this semi-autobiographical novel by Charles Dickens.

ANSWER: David Copperfield

17. In a section about pessimists as victims, this book contends that the spread of Hinduism is tied to the diet of Indians, which mostly consisted of rice. Book 4, which is named after Sanctus Januarius, introduces the idea of *amor fati*, or the love of fate. It ends with a collection of songs written by Prince Vogelfrei, a freethinker who illustrates its central ideas. It uses the parable of a man with a (\*) lantern who comes to the marketplace stating “I seek God! I seek God!” to illustrate a certain fate. This book, which takes its title from a phrase describing the Provençal art of crafting poetry, presents a demon that tells a man that he must live his same life repeatedly to exemplify the idea of eternal recurrence. For 10 points, name this book, the first of its author’s to state “God is Dead,” written by Nietzsche.

ANSWER: *The Gay Science* or *Die fröhliche Wissenschaft*

18. The deeds of this ruler are chronicled in the second book of Widukind of Corveys’ Three Books of Annals. At his greatest military victory, this ruler was assisted by Burchard III and Conrad the Red. He appointed his youngest brother Bruno as both Archbishop of Cologne and Duke of Lotharingia, and this man later faced a rebellion by his son (\*) Liudolf. Adelaide requested this ruler to attack Berengar II of Italy in exchange for this man’s hand in marriage. This ruler stopped the westward expansion of the Magyars at the Battle of Lechfeld, and was crowned by Pope John XII as Emperor. For 10 points, name this son of Henry the Fowler, the founder of the Holy Roman Empire.

ANSWER: Otto the Great or Otto I

19. Marcantonio Michiel claims that one painting by this artist was finished by Sebastiano del Piombo. In that painting, an old man in a cloak holds a scroll with a crescent moon on it as he talks to a man wearing a turban. One of his paintings depicts the Constanzo coat of arms on the base of a throne; in that painting, Mary sits with a red blanket on a throne between (\*) Saint Liberalis and Saint Francis of Assisi. This painter of *The Three Philosophers* and the *Castelfranco Madonna* also created a painting in which a semi-nude mother in the lower right suckles her child and a single lightning bolt illuminates the stormy sky in the background. For 10 points, name this Italian painter of the *Sleeping Venus* and *The Tempest*.

ANSWER: Giorgione [or Giorgio Barbarelli da Castelfranco]

20. Due to steric hindrance, this property is lacked by LDA and a compound named for Hünig, making them useful for creating enolates. When a molecule with this property reacts with a carbonyl alpha to a stereocenter, the product stereochemistry can be determined using the Felkin-Anh model. Compounds with this property can be used to open aziridines and epoxides. Stereochemical (\*) inversion occurs in a reaction mechanism describing how a compound with this property displaces a leaving group in a single step. Compounds with this property, which often correlates with basic strength, participate in namesake bimolecular substitution reactions. For 10 points, name this property measuring the ability of a molecule to donate electron pairs in a chemical reaction, contrasted with electrophilicity.

ANSWER: nucleophilicity [accept word forms like “nucleophiles”]

21. This institution commissioned postmodern architect Robert Stern to design a building which is largely composed of a giant blue cone. A movie theatre designed by Cesar Pelli and a bank designed by Robert Venturi comprise a city that was sponsored by this corporation; that city is a classic example of New Urbanism and is the planned town of Celebration. The namesake of this company lends his name to a building across from the (\*) Dorothy Chandler Pavilion. Yasuhisa Toyota designed the acoustics for that building, whose "stainless steel curved exterior" caused nearby buildings in Los Angeles to heat up. For 10 points, Frank Gehry designed a concert hall named after what man?

ANSWER: Walt Disney company

## Bonuses

1. He included the line “Capua’s Joys Beware!” as an accompaniment to a painting that depicts a black cloud of snow above a group of Salassian Men. For 10 points each:

[10] Name this artist of *Aeneas and the Sibyl at Lake Avernus* and *Hannibal Crossing the Alps*.

ANSWER: J.M.W. Turner

[10] This artwork by Turner shows a group of scattered bodies within sea waves. As usual, it is adorned with its author’s enigmatic poetry, which begins “Aloft all hands, strike the top-masts and belay.”

ANSWER: *The* Slave Ship

[10] This other British artist was known for his less mysterious but equally awe-inspiring paintings such as his depiction of a massive palace with dinner tables endlessly running into the background in *Belshazzar’s Feast*.

ANSWER: John Martin

2. Lucius is a pleb living in Ancient Rome. Answer the following about his life, for 10 points each:

[10] Lucius is jealous of his neighbor Septimus, a senator who owns one of these giant estates in southern Italy. These estates were primarily worked by slaves and were the ancestors of *haciendas* in the New World.

ANSWER: latifundia or latifundium

[10] Fortunately, Lucius’s ancestors managed to squeeze in some rights for him during the secession of the plebs back in the 5th century BC. That secession crisis eventually led to this numerically-named legislation which formed the foundation of Roman law.

ANSWER: the Twelve Tables

[10] Lucius is considering running for this annual office, which represented the plebians and served to protect their interests. Tiberius and Gaius Gracchus tried to shoehorn reforms through while they held this office.

ANSWER: tribune

3. He argued that meetings in coffee houses, public squares and other places in the marketplace constituted the title entity in the past. For 10 points each:

[10] Name this German sociologist who authored *The Structural Transformation of the Public Sphere*.

ANSWER: Jürgen Habermas

[10] Habermas is one of the foremost thinkers of this field of social science which studies the relationship between the social sciences and society, and how the objects of knowledge between the two arise. Horkheimer defined this discipline as a study of society in a way that transcends work-progress relationships.

ANSWER: critical theory [no other answer is acceptable, prompt on “critical” studies. ]

[10] Habermas’s thought on truth was inspired by this school of U.S. thought started by William James, which seeks essential methods to understanding truth and knowledge.

ANSWER: pragmatism

4. The author of this story worked with Robert Silverberg to expand it into a novel. For 10 points each:

[10] Name this story in which the planet of Lagash is constantly illuminated by six suns, except for one night every 2,000 years.

ANSWER: “Nightfall”

[10] “Nightfall,” which has been called the best science fiction short story ever, was written by this author of the *Foundation* and *Galactic Empire* series.

ANSWER: Isaac Asimov

[10] “Nightfall” won the 1965 edition of this award for “Best Short Story.” Along with the Hugo awards, it is one the two prestigious awards for speculative fiction.

ANSWER: Nebula Awards

5. These substances lack long range order. For 10 points each:

[10] Name these non-crystalline solids that include glass. They are named for the fact that they don't have a shape.

ANSWER: **amorphous** solids

[10] This amorphous solid consists of quartz or some similar silicate being struck by lightning. Lechatelierite is one example of these.

ANSWER: **fulgurite**

[10] The Silver-Indium-Antimony-Tellurium material is one of these substances that uses its namesake phenomena as a basis for random access memory. Essentially, amorphous patches are etched into the crystalline form of these substances to store information.

ANSWER: **phase change** material

6. Answer the following about European ethnic minorities, for 10 points each:

[10] Long-running tensions between Serbs and Albanians still plague this former region of Serbia, which was the target of ethnic cleansing operations in the 90s and is still struggling for international recognition since declaring independence in 2008.

ANSWER: **Kosovo**

[10] These people inhabit the northern reaches of Scandinavia, where many of them still make their living by herding reindeer, though most are no longer nomads.

ANSWER: **Sami** (grudgingly accept **Lapps** or **Laplanders**)

[10] These people are concentrated in the Swiss canton of Graubünden, and speak a namesake language which joins French, German, and Italian as one of the national languages of Switzerland.

ANSWER: **Romansh**

7. This organization grew out of Michael Davitt's "New Departure" outlook, which he had previously implemented on a smaller scale in County Mayo. For 10 points each:

[10] Name this organization co-founded by Davitt in 1879, which sought to help poor Irish tenant farmers by agitating for an end to unjust evictions among other things.

ANSWER: Irish National **Land League**

[10] Davitt convinced this other Irish patriot to serve as president of the Land League. He was the leading advocate of Irish home rule in the 1880s until his affair with Kitty O'Shea brought about his downfall.

ANSWER: Charles Stewart **Parnell**

[10] This earlier Irish patriot, known as "The Emancipator," was the primary leader of the Catholic Emancipation movement in the early 19th century.

ANSWER: Daniel **O'Connell**

8. For a gas of  $N$  indistinguishable particles, this quantity for the whole gas is equal to this quantity for a single particle raised to the  $N$  divided by  $N$  factorial. For 10 points each:

[10] Name this quantity equal to the sum over  $j$  states of the degeneracy of state  $j$  times the exponential of minus the energy of state  $j$  times thermodynamic beta.

ANSWER: **partition function** [prompt on "Q" or "Z"]

[10] The partition function is a normalization constant for this fundamental distribution from statistical mechanics. This distribution was later extended to the specific case of speeds of gas particles by another scientist who also names a set of relations between the second derivatives of the thermodynamic potentials.

ANSWER: **Boltzmann** distribution [accept Maxwell-**Boltzmann** distribution]

[10] The average velocity of a particle in a Maxwellian gas is equal to this value. The third law of thermodynamics describes what happens when temperature approaches this value.

ANSWER: **zero** [accept "absolute **zero**" or "**zero** Kelvin" or "**zero** Rankine"]

9. They included Mucilinda, a being that protected the Buddha from the elements during his time of meditation under the Bodhi tree. For 10 points each:

[10] Name these figures, which also included Kauliya, who dwelt in the Yamuna River.

ANSWER: nagas or snakes

[10] In China, the evil nagas eventually became conflated with these mythical creatures, who controlled the elements as well. This member of the zodiac is the first on the hierarchy of scales.

ANSWER: dragons

[10] This figure from Taoist tradition had four “dragon kings” as part of his retinue. He would hold yearly meetings of the gods to redistribute various domains to ones who had behaved.

ANSWER: Jade Emperor or Yu Huang

10. It ends with its female lead collapsing, begging for forgiveness from her husband after she states that losing her baby has caused her to re-evaluate her life. For 10 points each:

[10] Name this play which begins with Jimmy Porter vacuously insulting his wife Alison and their friend Cliff.

ANSWER: Look Back in Anger

[10] *Look Back in Anger* was written by John Osborne, who was a member of this movement along with John Braine and Kingsley Amis.

ANSWER: Angry Young Men

[10] In addition to the "Angry Young Men," *Look Back in Anger* is often held to be part of this literary style, which portrays the gritty nature of lower class lifestyles. A play by Arnold Wesker probably inspired its name.

ANSWER: kitchen sink realism [or kitchen sink drama]

11. Grover Cleveland was the mayor of this city before becoming a governor. For 10 points each:

[10] Name this city where Leon Czolgosz and Charles Guiteau shot separate presidents.

ANSWER: Buffalo, New York

[10] Czolgosz shot this Ohio-born US President in 1901. He defeated the Populist William Jennings Bryan in 1896.

ANSWER: William McKinley

[10] As McKinley's first Vice President, this New Jersey man is credited with being the first VP to actively advise the president and preside over the Senate.

ANSWER: Garret Hobart

12. Hemispherical capacitors are common instrumental components in one form of spectroscopy involving these particles. For 10 points each:

[10] Name these particles which are emitted from a surface in XPS, which uses the photoelectric effect to measure their binding energy, which is specific to the particular atom and orbital they were ejected from.

ANSWER: electrons

[10] This technique is complementary to XPS. In it, electrons are ejected from an atom due to an internal reorganization caused to fill a vacancy in the core shell. The ejected electrons are given a 3-letter tag such as KLL to denote the three subshells involved.

ANSWER: Auger electron spectroscopy [pronounced “oh-zhay”, accept AES, accept “Auger effect” since anyone who gives that answer knows what’s going on]

[10] The Auger effect competes with this process, in which an electron is excited to a higher energy state, then undergoes a singlet-to-singlet transition back to the ground state, emitting a photon of typically larger wavelength than the photon used to excite the electron.

ANSWER: fluorescence



13. In this show, Riff, the leader of the Jets warns “Take it slow and Daddy-O” in “Cool.” For 10 points each:

[10] Name this musical with music by Leonard Bernstein and lyrics by Stephen Sondheim, an adaptation of *Romeo and Juliet* set in Hell’s Kitchen.

ANSWER: West Side Story

[10] The original production of West Side Story was directed and choreographed by this American dancer who also did *Fiddler on the Roof* and *Fancy Free*. He studied chemistry at NYU but left after a year, and thus avoided ending up on the wrong side of unstable.

ANSWER: Jerome Robbins [or Jerome Rabinowitz]

[10] Robbins had previously collaborated with Bernstein on this musical, which was itself an adaptation of his earlier ballet ‘Fancy Free.’ In this musical, three sailors are given 24 hours of shore leave in New York, which they spend on fun and romance.

ANSWER: On the Town

14. As it opens, a man in front of a firing squad recalls laying eyes upon a block of ice for the first time. For 10 points each:

[10] Name this novel by Gabriel Garcia Marquez, which is set in the town of Macondo.

ANSWER: 100 Years of Solitude [or Cien Años de Soledad]

[10] Many of the children of Colonel Aureliano Buendia are assassinated by government officials. The assassination targets are easily identified by this kind of marking on their face.

ANSWER: Ash Wednesday cross on the forehead

[10] This woman, who lives to be 130 years old, marries Jose Arcadio Buendia. She appears throughout all of the generations that span *100 Years of Solitude*.

ANSWER: Ursula Iguaran [accept either.]

15. Hartry Field attempted to argue against it by supposing that the theory of Newtonian gravitation is entirely nominal in such books as *Science Without Numbers* and *Realism, Mathematics and Modality*. For 10 points each:

[10] Identify this argument, named for its formulators, that states mathematical entities are real due to their necessity in explaining science.

ANSWER: Quine-Putnam indispensability thesis [Accept: indispensability thesis]

[10] Quine may be better known for writing this article, which critiqued the analytic-synthetic distinction.

ANSWER: “Two Dogmas of Empiricism”

[10] Putnam is also known for writing “The Meaning of ‘Meaning’”, which introduced the Twin Earth thought experiment, in which a Twin Earth has this entity replaced with something named “XYZ.”

ANSWER: the chemical formula for water

16. Unlike similar collagen II containing tissues, this material also contains the collagen found in bone, collagen I. For 10 points each

[10] Identify this type of tissue which is found in parts of the body that receive large amounts of stress, such as the menisci and the intervertebral discs. It is tougher than similar elastic and hyaline tissues.

ANSWER: fibrocartilage [Prompt on cartilage]

[10] A fibrocartilage callus begins to form a few weeks after one of these events occur. These injuries are generally followed by a hematoma, and the fibrocartilage callus goes through ossification to heal.

ANSWER : bone fracture [Accept anything involving breaking a bone and any specific kind of fracture such as compound fracture]

[10] When a bone heals, some of the newly formed bone is removed by osteoclasts, which releases this cation along with phosphate into the bloodstream. Low amounts of this in the diet helps cause osteoporosis.

ANSWER: calcium [Accept Ca<sup>2+</sup>]

17. This novel describes how Josef Stalin's son Yakov got into a fight with some Brits about how they use the latrine, which leads him to later get electrocuted. For 10 points each:

[10] Name this novel, which traces the tumultuous lives of Tomas and Tereza, who endure the Soviet invasion of their country.

ANSWER: *The Unbearable Lightness of Being* [or *Nesnesitelná lehkost bytí*]

[10] This Czech author wrote *The Unbearable Lightness of Being*.

ANSWER: Milan Kundera

[10] This other Czech author wrote about a soldier that is imprisoned for being insubordinate while fighting for the Austro-Hungarians in his satirical novel *The Good Soldier Schweik*.

ANSWER: Jaroslav Hašek

18. According to legend, this work was written to help Count Keyserlingk overcome insomnia. For 10 points each:

[10] Identify this work for harpsichord named for the man who first performed it, and which is based on an aria of uncertain origin. Glenn Gould made a blockbuster 1955 recording of this work with Columbia Records.

ANSWER: *Goldberg Variations*

[10] The *Goldberg Variations* were written by this German Baroque composer of the *St. Matthew Passion*, as well as the so-called *English Suites* and *French Suites* for keyboards.

ANSWER: Johann Sebastian Bach

[10] The main 'aria' theme of the *Goldberg Variations* is in the form of this slow dance in triple time, which originated in Latin America and Spain before travelling to France. In Baroque suites, it usually followed the *courante*.

ANSWER: sarabande [or zarabanda]

19. This ruler was expelled from his country after the Battle of Chausa. For 10 points each:

[10] Name this ruler who was deposed by Sher Shah of Sur but later regained control of Delhi with Iranian assistance.

ANSWER: Humayun

[10] Humayun was the son of Babur, who defeated the last of the Delhi Sultanates at this 1526 battle, leading to the establishment of the Mughal empire as the supreme power in India.

ANSWER: (First) Battle of Panipat

[10] Humayun was succeeded by this greatest of the Mughal emperors, who practiced religious toleration and married a Hindu Rajput princess. He was succeeded by his son Jahangir.

ANSWER: Akbar the Great

20. Salt of *this type* is generally coarser-grained than ordinary table salt, even though that is nowhere mandated in the Torah. For 10 points each:

[10] Name this term which refers to foods that are permissible to eat under Jewish dietary law. It's the opposite of *treyf*.

ANSWER: kosher or kashrut

[10] According to Leviticus 11, land animals must both have cleft hooves and perform *this action* in order to be considered kosher, thus ruling out the pig.

ANSWER: chew their cud [or ruminant]

[10] Even if it meets the physical requirements for *kashrut*, an animal must be slain with dignity by one of these specially trained kosher butchers.

ANSWER: shochet