**Minnesota Undergraduate Tournament 2015:** **My Torah Portion was an Archie Comic**

**Questions by Rob Carson, Mike Cheyne, Andrew Hart, Gautam Kandlikar, Shan Kothari, Bernadette Spencer, Cody Voight, and *special guest* Ike Jose**

**Packet 02: Tossups**

1. **In soil chemistry, this word follows “base” in a term that refers to the fraction of exchangeable cations that are bases. One measure of the degree to which a property denoted by this word is *not* present in a sample is the bromine number. Metals exhibit a “coordinated” property denoted by this word when they satisfy the 18-electron rule. The degree to which an organic molecule does *not* exhibit a property denoted by this word can be calculated with the formula two-C plus two plus N minus number of (\*)** halogens minus number of hydrogens, all over two. In physical chemistry, this word describes the point at which energy loss outweighs entropy gain, thus creating a type of solution to which no additional solute can be added. For 10 points, give this word that also describes organic compounds with no double or triple bonds, such as fats considered unhealthy for the heart.  
ANSWER: **saturation** [accept word forms such as **saturated** or **saturate**; do not accept or prompt on “unsaturated” or word forms thereof]

2. **In an early scene in this novel, the main character stares at his left forefinger while trying to call up the memory of a woman. After an episode in which the music-teacher’s son is revealed to be dying of tuberculosis, this novel’s protagonist visits the grass-linen weavers of Chijimi.A character in this novel jumps onto the running board of another character’s taxi shortly before an alarm alerts everyone of a fire in a (\*)** silkworm cocoon warehouse, during which Yoko dies after leaping from a balcony. This novel’s protagonist was once disillusioned by meeting kabuki performers, so he becomes an expert on Western ballet without ever seeing one. Shimamura has an affair with the geisha Komako at a hot spring town in, for 10 points, which novel by Yasunari Kawabata?  
ANSWER: ***Snow Country*** [or ***Yukiguni***]

3. **This presidential election's winning candidate proclaimed "Let's be done with wiggle and wobble." This election was won by a man who published the *Marion Daily Star* and frequently used the word "bloviate." That winning candidate had his nomination secured by manager Harry Daugherty, who reportedly met with party bosses in a "smoke-filled room." The third party Socialist candidate ran his campaign in this election from (\*)** prison. This was the first presidential election in which women across the country could vote. The winning candidate here promised a "return to normalcy" and opposed joining the League of Nations. For 10 points, name this presidential election won by Warren Harding, which occurred a few years after the end of World War I.  
ANSWER: Election of **1920** [prompt on “**20**”]

4. **A film from this country opens with what appears to be an extreme long shot of a desert landscape before a man’s face abruptly enters the frame from the left, turning it into an extreme close up. That film from this country repeatedly cuts between close-ups of a character's face, to shots of him running against a blurry background, to dizzying images of the background as seen from his point of view, and progresses while “The (\*)** Ecstasy of Gold” plays in the background. That film from this country ends in a two-and-a-half minute standoff at the center of a circular cemetery as Tuco, Angel Eyes, and Blondie slowly reach for their guns. For 10 points, name this country whose *giallo* directors include Dario Argento and whose “spaghetti western” films include *The Good, the Bad, and the Ugly* by Sergio Leone.  
ANSWER: **Italy** [or **Italian** Republic; or Repubblica **Italiana**]

5. **This man’s soul frightened the Angel of Death so much that Gabriel, Zagziel, and God descended from heaven and took it themselves. Millions of ants choked Og the Giant to death after this man stabbed him in the leg with a ten cubit spear. After Korah’s uprising against this man, the earth opened and swallowed the conspirators Abiram and Dathan. This man rescued the seven daughters of his future father-in-law from water-thieving shepherds in (\*)** Midian. He turned his brother’s staff into a serpent to prove God’s power to to the ruler who kept this man’s people captive in Goshen. This husband of Zipporah condemned the golden calf that the Israelites worshipped while he was on Mount Sinai receiving the Ten Commandments. For 10 points, name this Biblical figure who led the Israelite slaves from Egypt.   
ANSWER: **Moses** [or **Moshe**; or **Musa**]

6. **In one appearance, this character punches a zoot-suit wearing fiend through a saloon door to form a swastika shape. In another appearance, he constantly gives the Nazi salute to pictures on Hitler while working on an endless conveyor belt. This character's theme song sarcastically asks "Who's got the sweetest disposition?" He is the protagonist of the World War II propaganda shorts *The Spirit of '43* and (\*)** *Der Fuehrer's Face*. This character's uncle owns a "lucky dime" and is the richest individual in the world. This non-canine character frequently sparred with Chip and Dale in the 1950's.For 10 points, name this Disney character who wears a sailor suit and has nephews Huey, Dewey, and Louie.  
ANSWER: **Donald** Duck [prompt on **Duck**]

7. **The transmission term in the Price equation takes the expected value of this quantity times the character change. Fisher’s fundamental theorem predicts that the rate of increase in this quantity is proportional to its additive genetic variance. Sewall Wright visualized changes in this quantity as moving along a high-dimensional** (\*) landscape. The “absolute” variety of this quantity is the ratio of individuals with a certain genotype after and before selection. Kin selection promotes altruism by increasing the “inclusive” variety of this quantity. Neutral mutations have no effect on it. By increasing homozygosity of deleterious recessive alleles, inbreeding depression often reduces this quantity. For 10 points, name this term denoting an organism’s ability to survive and reproduce in a given environment.  
ANSWER: **fitness**

8. **A character in this play has a recurring nightmare in which he kills the same man over and over. An important location in this play has a portico described as an “incongruous white mask”. Various characters in this play imagine either sexless children or sexual natives inhabiting the Blessed Islands. In the first scene of this play, a character is theorized to be the son of Marie Brantôme by the gardener Seth Beckwith. Characters including Everett Hills, Josiah Bordon, and Amos Ames form a sort of (\*)** Greek chorus in this play, which is divided into three parts titled *Homecoming*, *The Hunted*, and *The Haunted*. It centers on Christine and Captain Brant’s murder of Ezra, which is then avenged by Lavinia and Orin. For 10 points, name this adaptation of the *Oresteia* about the Mannon family, a play cycle by Eugene O’Neill.  
ANSWER: ***Mourning Becomes Electra***

9. **Early in his rule this man faced an uprising sparked by widespread mistrust of his Flemish background, and this man’s troops decisively defeated those rebels at the Battle of Villalar. A group led by Philip I of Hesse and Elector Johan Frederick I opposed this man, but lost to his armies at the Battle of Muhlberg. He issued a Pragmatic Sanction that effectively unified all the parts of the (\*)** Low Countries, and he abdicated a year after the ‘*cuius regio eius religio*’ principle was established in his holdings via the Peace of Augsburg. This ruler bankrolled Magellan’s expedition to circumnavigate the earth. For 10 points, identify this man who ruled Spain and the Holy Roman empire for much of the first half of the 16th century, and was the father of Philip II.  
ANSWER: Holy Roman Emperor **Charles V** [accept **Charles I** of Spain; accept **Carlos I**; prompt on “Charles” or “Carlos”]

10. **This man is shown swooning in horror as the title figure of a painting set in a massive colonnaded dining hall by John Martin. In another painting titled for this man, his outstretched left hand appears to cause a servant in a red dress to pour a vase of wine onto her own sleeve. The National Gallery in London now holds a painting titled for this man, in which a disembodied hand draws (\*)** symbols that were mistranscribed by the artist from the suggestions of Menasseh ben Israel. In that painting, taken from a story in the Book of Daniel, this man wears a crown atop an opulent turban and recoils in horror as portentous Hebrew words appear behind him. For 10 points, name this Babylonian king who observes the “handwriting on the wall” in a painting of his “feast” by Rembrandt.  
ANSWER: **Belshazzar**[accept ***Belshazzar’s Feast***]

11. **The third in command of this organization founded the Democratic National Union Movement after he was pardoned for his involvement in this organization. This organization’s atrocities were documented by a catholic priest named Francois Ponchaud. A project run by Yale University has archived photographic evidence of atrocities this group committed at its (\*)** S-21 extermination center at the Tuol Sleng prison. In its last few years of existence, it was led by Ta Mok, and its members had gone into exile after a 1979 invasion by Vietnam. This party’s genocide campaign was carried out in its ‘killing fields’ and it was led by Pol Pot. For 10 points, identify this Communist organization which ruled Cambodia through much of the 1970s.  
ANSWER: **Khmer Rouge** [or **KR**; or **khmers rouges**; or **khmer kraham**]

12. **One of this god’s sons, Tenages, was murdered by four of his other sons; those five, along with Ochimus and Cercaphus, were the seven sons of this god and the nymph Rhode who drove the Telkhines out of Rhodes. Heracles profusely apologized for angrily firing an arrow at this god and was in turn rewarded with a trip to Erytheia in this god’s giant golden cup. The island of Thrinacia was sacred to this god, and was where his daughters Lampetia and Phaethusa lived. That island was also home to a (\*)** herd of oxen sacred to this god, some of which were eaten by Odysseus’s crew. This son of Hyperion was often conflated by post-Homeric writers with Apollo. In the most famous story about him, he unwisely vowed to let his son Phaethon drive his chariot. For 10 points, name this Titan of the sun.  
ANSWER: **Helios** [or **Helius**]

13. **Several landmark textbooks about these things were written by Lewis Keeble. A movement advocating a specific variety of these things was inspired by the book *To-Morrow* by Ebenezer Howard. The principle of “conservative surgery” was applied to these things by Patrick Geddes, who opened a laboratory in the Outlook Tower to study a particular one of them. A group known as the “Decentrists” and a movement partly inspired by the MacMillan Plan that sought to make these things (\*)** “Beautiful” were both criticized for their harmful orthodoxy in a book about the “death and life of great American” ones by Jane Jacobs. A book about the history of these things by Lewis Mumford included an analysis of the “megalopolis”. For 10 points, name these things often laid out on grid patterns by urban planners, like Chicago and New York.  
ANSWER: **cities** [accept word forms or close synonyms like **town**s or **neighborhood**s; accept “**urban** areas” until “urban” is read]

14. **This author wrote that “Magnanimous Despair alone / Could show me so divine a thing” as the title subject of one of his poems. That poem ends by identifying its subject as “the conjunction of the mind, and opposition of the stars”. Another poem by this author of “The Definition of Love” imagines “Fond lovers, cruel as their flame” and describes a futile search “in busy companies of men” for “Fair Quiet”. This man described the mind as creating “far other worlds, and other seas” and “annihilating all that’s made / to a (\***) green thought in a green shade” in that poem. In another poem, he wrote that “The grave's a fine and private place” and suggested rolling “all our strength and all / Our sweetness up into one ball”. For 10 points, name this author of “The Garden” who lamented “Had we but world enough and time” in “To His Coy Mistress”.  
ANSWER: Andrew **Marvell**

15. **This process has a characteristic length scale which increases as the square root of time, and is important for applications like CVD. In addition to mobility and lifetime, a constant describing this process for charge carriers was measured in the Haynes-Shockley experiment. A property called MRT measures the average amount of a time a particle undergoes this process, and is analogous to the number of times a particle returns to its starting position while undergoing a (\*)** random walk. This process can be described by laws which related the Laplacian of the concentration with the time derivative of concentration, and the “flux” of this process with the negative divergence of concentration; those laws are named for Adolph Fick. For 10 points, identify this process in which particles move from a region of high concentration to low concentration.  
ANSWER: **diffusion**

16. **The elected king of this state signed a “contract” with the nobles and the people called the Henrician Articles, reflecting a political system under which “the king reins and does not govern.” Late in this state’s existence, it promulgated the first codified constitution in modern European history, the May 3 Constitution. This state continued an earlier aristocratic political system of checks and balances called (\*)** Golden Liberty, which was controlled by nobles called *szlachta*. A predecessor to this state was created in the Union of Krewo. This state arose in the 1569 Union of Lublin, nearly 200 years after a personal union between two countries occurred when the Jagiellon dynasty came to power. For 10 points, name this Eastern European “Commonwealth” ruled jointly from Vilnius and Krakow.  
ANSWER: **Poland-Lithuania** Commonwealth [accept **Polish-Lithuanian** Commonwealth or other word forms; prompt on “Poland” or “Lithuania”]

17. **In this style, the result of a calculation may be passed using continuation passing style. Many arguments in this framework are “curried” so that the arity becomes 1. An important component of this style, referential transparency, allows replaces constant expressions with their equivalent value, and allows results to be memo-ized for future lookup. In the “pure” form of this style, printing to the console is technically not allowed, since that action creates a (\*)** “side effect.” The lambda calculus models simplistic languages that use this style of programming; such languages include Haskell and Scheme. For 10 points, name this programming paradigm contrasted with imperative programming, which treats programs as the namesake mathematical entities that are evaluated.

ANSWER: **functional** programming

18. **Each movement of Igor Stravinsky’s work of this type begins with a chord spelled D-E-A spanning two and a half octaves. Another of these works has a tone row consisting of four triads and part of a whole-tone scale, and quotes the Bach chorale “Es ist genug.” One opens with five quarter-note Ds in the timpani. Eduard Hanslick panned Tchaikovsky’s work in this genre, which has a second movement Canzonetta.** (\*) Alban Berg wrote one dedicated “to the memory of an Angel.” Édouard Lalo’s *Symphonie Espagnole* is one of these pieces. Beethoven’s only work in this genre is in D major, like Brahms’s work in this genre dedicated to Joseph Joachim. The soloist enters after less than two bars in Felix Mendelssohn’s E minor work in this genre. For 10 points, name these works for orchestra and a solo high-pitched stringed instrument.  
ANSWER: **violin concerto**s [or **violin concerti**; prompt on partial answer]

19. **In 2013, the capital of this state built the “S Line”, a streetcar-based spur of its TRAX system running to the neighborhood of Sugar House. Hydrogen sulfide produced by bacteria in a body of water in this state causes an effect known locally as “lake stink”. This state is home to the largest non-fungal living organism, a clonal colony of quaking aspen called Pando. A resort area in this state was purchased in 1968 by Robert (\*)** Redford, who founded a namesake film festival there. The *Jupiter* and the *No. 119* met at a mountain pass in this state where Leland Stanford drove a golden spike to mark the completion of the First Transcontinental Railroad. This state is the location of Sundance and Promontory Summit, as well as the Bonneville Salt Flats and the Wasatch Range. For 10 points, name this “Beehive State”, home to the Great Salt Lake.  
ANSWER: **Utah**

20. **This author described meeting the painter Angelica Kaufmann and searching for an archetypical plant he dubbed the *Urpflanze* in a travelogue that opens with the phrase “Auch ich in Arkadien,” or *Et in Arcadia ego*. That work, which this author wrote after “slipp[ing] away” from his duties as Privy Councillor in Weimar, was his *Italian Journey*. A Thomas Mann novel subtitled *The* (\*)** *Beloved Returns* describes the relationship between this author and Charlotte Kestner, which this man himself fictionalized in a novel in which Lotte’s marriage to Albert causes the title character to shoot himself. In another work by this man, the title character is visited by a poodle who turns out to be Mephistopheles. For 10 points, name this German author who wrote *The Sorrows of Young Werther* and the two-part play *Faust*.  
ANSWER: Johann Wolfgang von **Goethe**

TB. **This man is the subject of much of the scholarly work of Stillman Drake. Adam Elsheimer reworked his painting *The Flight into Egypt* after the publication of this man’s pamphlet *Sidereus Nuncius*. The characters Salviati, Sagredo, and Simplicio star in several of his works, including one that contains an early discussion of the idea that comparisons are undefined on infinite sets and introduces the (\*)** square-cube law. A convergent objective lens and a divergent eyepiece lens are characteristic of the telescope named for this man, who reportedly said “E pur si muove!”, or “And yet it moves”, after losing a trial in the wake of the publication of his *Dialogue Concerning Two Chief World Systems*. For 10 points, name this Italian scientist condemned by the Inquisition for his support of heliocentrism.  
ANSWER: **Galileo** [or Galileo **Galilei**]

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**Packet 02: Bonuses**

1. The holophrastic and telegraphic stages occur during this process, the study of which is aided by a database founded by Catherine Snow and Brian MacWhinney. For 10 points each:  
[10] Identify this process that Steven Pinker suggested is instinctual in a 1994 book. B.F. Skinner argued that it worked through a form of operant condition in his book *Verbal Behavior*.  
ANSWER: first **language acquisition** [accept synonyms like “**learning** a first **language**”; do not accept anything relating to learning an additional language]  
[10] Skinner’s behaviorist arguments about language acquisition were savaged by this MIT linguist, the author of *Syntactic Structures*, who instead proposed that a “universal grammar” might be responsible.  
ANSWER: Noam **Chomsky** [or Avram Noam **Chomsky**]  
[10] Jerome Bruner attempted to explain oral language acquisition by developing scaffolding theory, which was based on this concept of Lev Vygotsky. This concept refers to the things a learner cannot do by themselves, but can do with guidance.  
ANSWER: the **Zone of Proximal Development** [or **ZPD**]

2. This album was funded by Columbia Records on the condition that the group that recorded it also agreed to do an album of traditional American songs called *Gone With the Wind*. For 10 points each:  
[10] Name this 1959 jazz album that opens with “Blue Rondo a la Turk” and includes “Take Five”. Its theme is the recurring use of unusual signatures, like 9/8 and 5/4.  
ANSWER: ***Time Out***  
[10] *Time Out* was recorded by the quartet named for this pianist, a longtime partner of saxophonist Paul Desmond. This man also led his quartet on a tour of college campuses, most famously Oberlin.  
ANSWER: Dave **Brubeck** [or David Warren **Brubeck**]  
[10] This hit single from the Dave Brubeck Quartet’s album *Time Further Out* makes heavy use of hand claps and is notable for being in 7/4 time. It ends by quoting “Turkey in the Straw”, followed by two “shave and a haircuts”.  
ANSWER: “**Unsquare Dance**”

3. Variants of this technique are based on protons and carbon-13. For 10 points each:  
[10] Name this spectroscopic technique based on the magnetic properties of atomic nuclei.  
ANSWER: **NMR** spectroscopy [or **nuclear magnetic resonance** spectroscopy]  
[10] The resonant frequency of a particular nucleus relative to a reference standard in NMR spectroscopy is known by this two-word term.  
ANSWER: **chemical shift**  
[10] A diamagnetic or diatropic ring current results when molecules of this type are subjected to NMR spectroscopy. Negative values of a nucleus-independent chemical shift indicate molecules with this property.  
ANSWER: **aromatic** [accept word forms such as **aromaticity**]

4. The title character of this play throws a scholar’s manuscript into a fire because her husband, George Tesman, is jealous of its author. For 10 points each:  
[10] Name this play, whose title character gives the manuscript’s author, Lovborg, a pistol and tells him to “die beautifully.”  
ANSWER: ***Hedda Gabler***  
[10] This Norwegian playwright of *A Doll’s House* wrote *Hedda Gabler*.  
ANSWER: Henrik [Johan] **Ibsen**  
[10] Ibsen’s final play is this 1899 drama focusing on sculptor Arnold Rubek and his wife Maia; it ends with an avalanche carrying Arnold and his former model Irena to their deaths.  
ANSWER: ***When We Dead Awaken*** [or ***Nar vi dode vagner***]

5. NOTE TO MODERATOR: DO NOT READ THE WORD “NEPAL” AFTER THE FIRST BONUS PART.

This group was led by a man named “Prachanda”, aka “The Fierce one”, and it negotiated a ceasefire with the government after King Gyanendra reinstated parliament. For 10 points each:  
[10] Identify this group which fought an 8-year long campaign against the governments of Girija Prasad Koirala and Sher Bahadur Deuba.  
ANSWER: **Communist** Party of Nepal [or **Maoists** in Nepal; do not accept “Marxists”]  
[10] Prachanda became the first Maoist head of state of this country. King Gyanendra was stripped of his executive powers by this country’s parliament, so today you can describe it as a Himalayan republic and not a monarchy.  
ANSWER: Republic of **Nepal**  
[10] Gyanendra’s predecessor King Birendra opened up some political freedoms in Nepal after sanctions imposed by this Indian Prime Minister had caused a severe economic downturn in Nepal. This man was murdered an LTTE suicide bomber.   
ANSWER: **R**ajiv **Gandhi**

6. When this figure meets Modgud, she tells him that he made as much noise crossing Gjallarbru as the “five companies of dead men” who’d crossed it the previous day. For 10 points each:  
[10] Name this son of Odin who, at Frigg’s behest, travels the road to Hel. He eventually returns with Draupnir and some gifts for other gods.   
ANSWER: **Hermod**r  
[10] Hermod is initially sent to Hel in order to find a way to revive this beautiful member of the Aesir, who had previously been killed with a mistletoe dart thrown by his blind brother Hodr.  
ANSWER: **Baldr** [or **Baldur**]  
[10] Hermod rides to Hel on the back of this eight-legged child of Loki and Svadilfari.  
ANSWER: **Sleipnir**

7. Thirty captured members of the Saint Patrick's Battalion were executed during this battle. For 10 points each:  
[10] Name this battle which also featured the valiant last stand of a youthful group of military cadets known as the "Child Heroes." American troops successfully stormed a namesake castle in this September 1847 battle.  
ANSWER: Battle of **Chapultepec**  
[10] This branch of the armed forces commemorates the battle with a lyric in its hymn that reads "From the halls of Montezuma…" Its motto is *Semper Fidelis*.  
ANSWER: The United States **Marine** Corps [or **USMC**]  
[10] The battle effectively brought the Mexican-American War to a close. This failed piece of legislation, named after a Pennsylvania Congressman, was intended to ban slavery in all territory acquired from Mexico. It was introduced as a rider on a major appropriations bill.  
ANSWER: The **Wilmot** Proviso

8. This philosopher’s commentaries on Aristotle’s *Metaphysics* dismantle the interpretations of his predecessor Avicenna and represent the culmination of classical *falsafa*. For 10 points each:  
[10] Name this Islamic philosopher from Spain who responded to al-Ghazali’s *The Incoherence of the Philosophers* in *The Incoherence of the Incoherence*. Medieval European scholars called him “The Commentator” for his notes on Aristotle.  
ANSWER: **Averroes** [or ’Abū l-Walīd Muḥammad Ibn ’Aḥmad **Ibn Rušd**]  
[10] As an Asharite, Al-Ghazali argued for this view on causation, according to which God is the only efficient cause. Another proponent of this view defended it in the final book of *The Search after Truth*.  
ANSWER: **occasional**ism [accept word forms]  
[10] Averroes wrote an encyclopedia of this field called *Colliget* and commented on Avicenna’s *Canon* of this field, which in turn was influenced by the humor theories of Galen and Hippocrates.  
ANSWER: **medicine** [accept near equivalents and word forms]

9. By binding with CypD, this peptide inhibits the mitochondrial permeability transition, and when it binds with CypA, it inhibits calcineurin. For 10 points each:  
[10] Name this non-ribosomal peptide with a D-alanine residue, first isolated from *Tolypocladium inflatum*. It is often used as an immunosuppressant to prevent organ transplant rejection and graft-versus-host disease.  
ANSWER: **cyclosporin** A  
[10] Cyclosporin A is useful in large part because it reduces interleukin 2 production in these cells. These cells have receptors that recognize antigens bound to the MHC, and they usually express CD4 or CD8 glycoproteins.  
ANSWER: **T** cells [or **T** lymphocytes]  
[10] In 1981, Theodore Starzl established the clinical use of cyclosporin A by transplanting one of these organs. This organ produces bile and can be damaged by hepatitis.  
ANSWER: **liver**

10. The love story between Shekure and Black in this novel is deliberately patterned on the Persian romance *Khosrau and Shirin*, which itself appears in this novel. For 10 points each:  
[10] Identify this 1998 novel whose many unusual narrators include, most prominently, the recently-murdered Ottoman miniaturist Elegant Effendi.  
ANSWER: ***My Name Is Red*** [or ***Benim Adim Kirmizi***]  
[10] *My Name Is Red* was written by this Turkish Nobel Laureate, who used a fictionalized version of himself as the narrator of his novel *Snow*.  
ANSWER: Orhan **Pamuk** [or Ferit Orhan **Pamuk**]  
[10] In both *Museum of Innocence* and *The Naive and the Sentimental Novelist*, Pamuk thanked this author of *The Inheritance of Loss* for helping him with the final English texts. At the time, she and Pamuk were dating.  
ANSWER: **K**iran **Desai** [prompt on partial answer]

11. This tensor can be used to raise or lower arbitrary indices, turning covariant indices into contravariant indices and vice versa. For 10 points each:  
[10] Name this symmetric tensor so named because it defines the way length is measured.   
ANSWER: **metric tensor**  
[10] The metric tensor is an integral part of the theory of general relativity proposed by this physicist, whose summation notation is used when raising or lowering the indices of a tensor by contracting it with the metric tensor.  
ANSWER: Albert **Einstein**  
[10] A metric tensor with this property is called a Riemannian metric. An n-by-n symmetric matrix A has this property if, for all x in R-n, transpose of x times A times x is greater than zero; in such a situation it guarantees a unique Cholesky decomposition.  
ANSWER: **positive definite**

12. A black pinafore is part of this character’s “scribbling suit”, which she wears while writing her novel, as well as “mild romances” for *The Spread Eagle* and sensation stories for the *Weekly Volcano*. For 10 points each:  
[10] Name this character who eventually marries Professor Bhaer, with whom she founds a boys’ school at Plumfield.  
ANSWER: **Jo** March [or **Josephine** March; prompt on “**March**”]  
[10] Jo and her sisters Amy, Beth, and Meg are the title characters of this Louisa May Alcott novel, whose second volume was originally published as *Good Wives*.  
ANSWER: ***Little Women***  
[10] In the first several chapters of *Little Women*, Marmee suggests the girls revive one of their old childhood games, in which they reenact the plot of this novel. [As children, it involved them traveling from the basement to the attic.]  
ANSWER: *The* ***Pilgrim’s Progress*** [or *The* ***Pilgrim’s Progress*** *from This World to That Which Is to Come; Delivered under the Similitude of a Dream*]

13. This man was chancellor during the presidency of Paul von Hindenburg. For 10 points each:  
[10] Identify this man who schemed to make Adolph Hitler the chancellor. He became Hitler’s vice Chancellor, but growing differences between him and Hitler forced him to opt out after the Night of the Long Knives.  
ANSWER: Franz von **Papen** [or Franz Joseph Hermann Michael Maria von **Papen** zu Köningen]  
[10] von Papen was chancellor during this period of German history. Its namesake government dealt with hyperinflation that resulted from printing lots of money to pay off World War I reparations.  
ANSWER: **Weimar** republic [or **Weimarer** republik]  
[10] This communist group, led by Karl Liebknecht and Rosa Luxembourg, staged massive street protests in the early days of the Weimar republic. The revolt was crushed by then chancellor Friedrich Ebert.  
ANSWER: **Spartacus** league [accept equivalents for “league”; or **spartakusbund**; or **Spartacist**s]

14. This man’s piano works include the suite *Scenes from Childhood*, which includes the movement “Träumerei,” and a three-movement *Fantasie in C* that quotes Beethoven’s *An die ferne geliebte*. For 10 points each:  
[10] Name this German Romantic composer who wrote the *Spring* and *Rhenish* symphonies. He married the pianist Clara Wieck and co-founded the *Neue Zeitschrift für Musik*.  
ANSWER: Robert **Schumann**  
[10] This eight-movement piano work by Schumann was dedicated to Chopin and named after an E. T. A. Hoffman character. Its shifts between G minor and B flat major reflect Schumann’s alter-egos Florestan and Eusebius.  
ANSWER: ***Kreisleriana***  
[10] “Florestan” and “Eusebius” are among the twenty-one movements in this Schumann piano suite which features a recurring A-E flat-C-B motif. It also depicts commedia dell’arte characters at the namesake festival before Lent.  
ANSWER: ***Carnaval***

15. Medieval travelers would often receive scallop shells at the start of this religious journey, while modern pilgrims can obtain cheap lodging with a *credencial* from their local church.For 10 points each:   
[10] Name this popular Christian pilgrimage route that often proceeds west along the Via Regia and ends at at cathedral in Galicia that traces the supposed journey of a certain Apostle of Jesus.   
ANSWER: **Way** of **Saint James** [or **Camino** de **Santiago**; or **St. James's Way**, **St. James's Path**, **St. James's Trail**, **Route** of **Santiago de Compostela**, **Road to Santiago**; accept more specific answers like **Camino Francés**]  
[10] This other important religious city on the Guadalquivir in Spain was the center of the al-Andalus caliphate. Its former Grand Mosque is now the Cathedral of Our Lady of this city.   
ANSWER: **Córdoba** [or **Cordova**]  
[10] This grandson of Alfonso XIII officially ended the Spanish monarchy’s right to name Roman Catholic bishops in 1976. He also teased the conservative King of Belgium while signing off on legalizing gay marriage in Spain in 2005.   
ANSWER: King **Juan Carlos** I [or **Juan Carlos** Alfonso Víctor María de Borbón y Borbón-Dos Sicilias]

16. Washington DC based electronic duo Thievery Corporation titled their 2014 album “Saudade.” For 10 points each:  
[10] The word saudade is often translated as an intense feeling of this type. The term for this feeling was coined by Johannes Hofer, who wanted to describe a longing for home common among Swiss mercenaries.  
ANSWER: **nostalgia**  
[10] The word saudade is from this language. An author who wrote primarily in this language adopted heteronyms like Ricardo Reis, and wrote a poetry collection called *Message*, which was a mystical retelling of his country’s history.  
ANSWER: **Portuguese**  
[10] “Chega de Saudade”, or “No More Blues,” was an early hit for Joao Gilberto, a pioneer of this genre, which draws from samba and jazz influences. It emerged in Brazil in the 1960s.  
ANSWER: **Bossa nova**

17. A partially ordered example of these things can be graphically depicted using a Hasse diagram. For 10 points each:  
[10] Name these mathematical objects whose study was begun by Georg Cantor and axiomatized by Zermelo and Fraenkel in response to Russell’s paradox.  
ANSWER: **set**  
[10] A total order on a set S is of this type if every non-empty subset of S has a least element. A theorem named for this type of ordering is included in Zermelo-Fraenkel set theory as equivalent to the axiom of choice.  
ANSWER: **well** ordered [or word forms of “ordered”]  
[10] This operation between two sets is denoted by an upside-down U. This operation applied to sets A and B yields a set with elements in both A and B.  
ANSWER: **intersection** [prompt on: **and**]

18. Name the following 20th-century female British authors, for 10 points each.  
[10] Dougal Douglas creates chaos in the title district of London in this Scottish author’s *The Ballad of Peckham Rye*. Sandy Stranger reveals the fascist sympathies of the title teacher in her novel *The Prime of Miss Jean Brodie*.  
ANSWER: Muriel **Spark**  
[10] This author of *Offshore* and *The Bookshop* launched her literary career at age 58 with a biography of Edward Burne-Jones. Her final novel is a fictionalized life of Novalis called *The Blue Flower*.  
ANSWER: Penelope **Fitzgerald**  
[10] This author’s first hit was 1920’s *The Mysterious Affair at Styles*, which introduced the detective Hercule Poirot. She also wrote the play *The Mousetrap*.  
ANSWER: Agatha **Christie** [or Agatha Mary Clarissa **Christie**; or Agatha Mary Clarissa **Miller**]

19. Answer the following about Georgi Plekhanov, for 10 points each.  
[10] He was an early Russian follower of this German philosopher, and his *The Development of the Monist View of History* melded the thought of Hegel, Feuerbach, and this author of *Das Kapital*.  
ANSWER: Karl **Marx**  
[10] Plekhanov was a major participant in the *Black Repartition* movement, which splintered from this more radical faction, whose members assassinated Tsar Alexander II.  
ANSWER: **People’s Will** [or **People’s Freedom**; or **Narodnaya Volya**]  
[10] Plekhanov was a founding staffer at the socialist newspaper *Iskra*, alongside this Russian-Jewish writer. His dispute with Lenin led to the split between the Bolsheviks and the Mensheviks, whom this man led.  
ANSWER: Julius **Martov** [or **L. Martov**; or Yuliy Osipovich **Tsederbaum**]

20. For 10 points each, answer the following about Jewish-American painters.  
[10] This color-field painter was born in what is now Latvia; he designed the *Four Seasons* murals and a namesake chapel in Houston before committing suicide in 1970.  
ANSWER: Mark **Rothko** [or Marcus Yakovlevich **Rothkowitz**; or Markus **Rotkovics**]  
[10] Max Weber painted *Chinese Restaurant* and other works in this artistic style that emphasized three-dimensional perspective. It was divided into “analytic” and “synthetic” branches by Juan Gris, a Spanish practitioner.  
ANSWER: **Cubism** [accept word forms such as **Cubist**]  
[10] The Whitney Museum houses paintings from this social realist’s series *The Passion of Sacco and Vanzetti*. His artistic theories appeared in his book *The Shape of Content*.  
ANSWER: Ben **Shahn**

Extra. The central character of this book attends many meetings of the Literary Club and refuses to send his servant Francis Barber to buy oysters for his cat Hodge, choosing instead to do it himself. For 10 points each:  
[10] Identify this book that expands on its author’s earlier *Journal of a Tour to the Hebrides*, a biography of the author of *Rasselas* and the essays collected in “The Idler” and “The Rambler”.  
ANSWER: *The* ***Life of*** *Samuel* ***Johnson****, L.L.D.*  
[10] James Boswell’s *Life of Johnson* naturally includes passages describing Johnson’s work on a pioneering 42,000- entry example of these books for the English language.  
ANSWER: a **dictionary** [accept *A* ***Dictionary*** *of the English Language* or *Johnson’s* ***Dictionary***]  
[10] Johnson’s own biographical masterwork, *Lives of the Most Eminent English Poets*, coined the term “metaphysical poetry” in its section on *this* author of *The Mistress* and a lot of Pindaric odes.  
ANSWER: Abraham **Cowley** [pronounced “Cooley”, but be lenient]