Minnesota Open V
Packet by Ike Jose, Aaron Rosenberg, Billy Busse, and Austin Listerud
Edited by Auroni Gupta, Andrew Hart, Gaurav Kandlikar, and Cody Voight

Tossups

1. **In the original version of this poem published in the Charleston *Columbian Herald*, the second line referenced a "dreary dark" place and the most celebrated line concerned an "empty image." In this poem, a "white arrayed" nature "bade thee shun the vulgar eye" by providing the title object with "guardian shade" and "soft waters murmuring by." This poem dictates "If nothing once, you nothing lose, For when you die you are the same" and decrees that "No roving foot shall crush thee here, No busy hand provoke a tear." Later, as "summer goes," the "Unpitying (*)** frosts and Autumn's power" leave "no vestige" of this poem's title object that was "Hid in this silent, dull retreat." The final couplet in this poem reads "The space between is but an hour, The frail duration of a flower." For 10 points, name this poem that illustrates the transience of life with a "fair flower, that dost so comely grow," a work by the "Poet of the American Revolution," Philip Freneau.
ANSWER: "The **Wild Honeysuckle**"

2. **A commentary on this text states that the inventor of writing drew three lines that represent the earth, humanity, and heaven, and intersected them at the birthplace of the king. This work, which describes thirty-seven distinct solar eclipses, was primarily written to investigate *sehen*. A biography of its author claims that he wrote it after seeing a unicorn. A commentary that attempts to build off of this work is called *The Luxurious Dew* of this book and was written by Dong Zhongshu, who argued that this text could serve as a Constitution for China. This work, which Sima Qian held as the most important of the (*)** Five Classics, was most likely written by a scholar of the state of Lu, and begins in 722 BCE and proceeds to 481 BCE. It documents a time of regional cultures, encroachments, and reforms during the Zhou dynasty. For 10 points, name this text whose seasonal title identifies a period of Chinese history.
ANSWER: ***Spring and Autumn*** *Annals* [or ***Chunqui***]

3. **They're not epoxides, but Jacobsen rendered a reaction for synthesizing these compounds asymmetrically using a thio-urea catalyst that binds the two reactants using hydrogen bonds. Another enantioselective synthesis of these compounds uses an Evans oxazo-lidinone to direct the addition of an electrophilic azide species alpha to a carbonyl, then generates the product by reduction of the azide followed by peroxide cleavage of the auxiliary. One method of identifying these compounds reacts them with (*)** phenyl-isothiocyanate. One reaction for synthesizing these compounds reacts an aldehyde with ammonia to create an iminium, which is then attacked by a cyanide anion that is converted to a carboxylic acid upon workup. The dihedral angles of these compounds make up the axes of Ramachandran plot, and examples of them include glutamate. For 10 points, name these compounds linked by peptide bonds, the building blocks of proteins.
ANSWER: **amino acid**s

4. **In the French film *Irreversible*, Pierre beats a man to death with one of these objects at a nightclub called *The Rectum*. In *Joe Dirt*, the witness protection mobster turned janitor Clem looks at one of these objects and threatens to stab it in the face with a soldering iron. In the first part of the comic from the *Left 4 Dead Sacrifice* download, Louis bashes a zombie with one of these objects. Combining one of these objects with dynamite yields Freezer Bombs in *Dead Rising 2*. A former Cypress Creek basketball star helped his team snap a thirteen-game playoff losing streak after returning from an (*)** encounter with one of these objects after Game 2 of the 2012 Eastern Conference Semifinals. In *Skyfall*, James Bond smokes up a committee room by shooting these objects, one of which caused Amar'e Stoudemire lacerated his hand when he punched it. For 10 points, name this device that sprays a gray flurry when "stop, drop, and roll" goes wrong.
ANSWER: fire **extinguisher**

5. **In one work, this composer used three split chorus sections offset by a half-step in pitch, instructing the chorus at different times to groan, shout, and speak. He set "O Green Tree of Life" by Archim von Arnim to music in his choral symphonic *Songs of Transience* and revisited a bass ostinato in F in all of the five movements except the third of his *Third Symphony*. Because his second symphony constantly quotes "Silent Night," it is called the (*)** *Christmas Symphony*. He commemorated the 700th anniversary of the Munster cathedral with a work featuring over one hundred variations of the B-A-C-H motif and has a bass solo that represents Pilate, who tries to free Jesus. He used violent tone clusters to depict the roar of airplane engines and the sound of bombs being dropped in another work. An *a cappella* psalm closes the "Stabat Mater" of his atonal *St. Luke Passion*. For 10 points, name this Polish composer whose fifty-two string *8'37''* was renamed *Threnody for the Victims of Hiroshima*.
ANSWER: Krzysztof **Penderecki**

6. This faith believes that the creator of the world fell from the sky into an inferno, which allowed him to obtain the power to glorify the throne of heaven and the skies. A reliable source for this faith is *The Interrogation of John* and the book *Adam and Eve,* a text by Jeremias that describes how God is invisible. The namesake of this belief system was an obscure man whose name meant "Beloved of God" and spent times preaching against the rich. Before the last of this faith converted to Islam in the fourteenth century, numerous calls for its (*) destruction were pronounced due to its lack of discernible clergymen. At its core, it emphasizes that Satan created the world and that he is the brother of Jesus Christ. This movement, which drew inspiration from Paulicianism, inspired the later Catharism movement. For 10 points, name this dualistic religion popular in medieval Bulgaria.
ANSWER: **Bogomil**ism [accept word forms]

7. The many forms of this process were the subject of two 1957 papers: one by AGW Cameron, the other, a massive, 100-page compendium known as B2FH. An excellent cosmochronometer is made by one type of this process, cosmic-ray spallation in the interstellar medium. The upper bound for the photon-to-baryon ratio obtained from one type of this process constrains the baryonic contribution to the present matter density. Types of it include the (*) s- and r-processes. One of the first hints that stars could perform this process came from the detection of technetium in red giants. The alpha-beta-gamma, or Alpher-Bethe-Gamow, paper proposed that this process occurred shortly after the Big Bang. For 10 points, name this process in which heavier elements are created from lighter elements.
ANSWER: **nucleosynthesis** [prompt on **synthesis** of elements, **neutron capture**, or nuclear **fusion**]

8. During this election, Alfred H. Love, the President of the Universal Peace Union, was nominated as a running mate, but refused because he was horrified at the possibility of serving under a commander-in-chief. Love was to have run with Belva Lockwood in this election, which was Lockwood's second and final attempt. The incumbent lost votes in this election after deciding return captured Confederate Flags to the south. Lionel Sackville-West hurt the Democratic Party's cause by authoring the (*) Murchison Letter in this election. Because his vice president had died in office, the incumbent nominated Allen G. Thurman in this election, in which the winning candidate chose to run after representing the government in *Ex Parte Milligan* and losing his Senate seat from Indiana. For 10 points, name this election in which Benjamin Harrison ousted Grover Cleveland after his first term.
ANSWER: **1888** election [prompt on '**88**']

9. A D-flat-major aria in this work contains the refrain "Ah! responds." In this work, tambourines key in a group of seductresses who plan to disrupt a military leader, one of whom contrasts the full spring bloom of the outdoors with the desolate feeling in her heart in the aria "Printemps qui commence." In Act II of this opera, a woman sings "Mon coeur s'ouvre a ta voix" or "My heart opens itself to your voice" to inquire of a secret ability of her male counterpart. Priests dance a Bacchanale in the (*) Temple of Dagon in this opera, after which one of the protagonists renews his strength and crumbles the temple. Ferdinand Lemaire drew upon the *Book of Judges* to write this opera's libretto. For 10 points, name this opera about a woman who removes the strength of her lover by removing his hair, a work of Camille Saint-Saens.
ANSWER: *Samson and Delilah* [or *Samson et Dalila*; or Camille **Saint-Saens Op. 47**]

10. This author poked fun at the decadence of expatriates from his home country living it up in Monte Carlo in his novella *On the Bright Shore*, one of three works from the *Charcoal Sketches*. The quack Sanderus attempts to peddle the sweat from St. George's brow during the fight with the dragon in this author's novel about Jurand, who pardons the kidnappers and murderers of his daughter Danusia. In another novel by this author of *The Knights on the Cross*, Eunice loves her master, the governor of Bithynia and (*) "arbiter of elegance." This author created the fictional colonel Michael, the star of the last work in his trilogy of historical novels. Ursus saves a woman strapped to a bull, allowing Lygia to escape a burning city with Vicinius, in his novel by this author of *Fire in the Steppe* in which the title query is asked of Jesus by Peter, who turns around and heads back to Rome hearing its answer. For 10 points, name this Polish writer who fictionalized Nero's reign in *Quo vadis?*
ANSWER: Henryk [Adam Aleksander Pius] **Sienkiewicz** [or **Litwos**]

11. The current system of analyzing these archaeological artifacts, which include ones named after the cities of Brigetio and Heddernheim, was pioneered by H. Russell Robinson, who divided them into Hebron and Niedermormter types, among others. In the middle of the second century, the design of these objects changed, with the addition of conical rivets at the bottom. Types of these objects include the *Coolus,* which was made from "spinning," in which a metal sheet was forced over a lathe. Like the innovation of (*) chain mail, the Imperial types of these objects were derived from Gallic design. These objects, which were called *galeae,* contained fish motifs in the ones worn by gladiators called *murmillones*. Centurions typically wore the crest on them longitudinally, while legionnaires wore them transversally. For 10 points, name this type of Roman military gear that protected the head.
ANSWER: Roman **helmet**s [or *galea*e before mention]

12. **A Micrococcal protein of this kind is called S7. These kinds of proteins are found in high concentrations in cytoplasmic P-bodies. One enzyme of this kind requires S-adenosyl methionine, magneiusm ions, and ATP as cofactors to function. The activity of enzymes of this kind forms the basis of RFLP ("rif-lip") analysis, and DNA (*)** polymerase has a domain that carries out this activity in a 3-prime-to-5-prime direction. One set of enzymes of this kind tend to act on sequences that are palindromic. One protein of this kind protects *E. coli* by recognizing viral G-A-A-T-T-C sequences and is called EcoR1. For 10 points, name this kind of enzyme that can cleave phosphodiester bonds, such as restriction enzymes, which are denoted "endo" this kind of enzyme.
ANSWER: **nuclease**s [or restriction endo**nuclease**s; or exo**nuclease**s; or ribo**nuclease**s; or deoxyribo**nuclease**s; prompt on **restriction** enzyme; prompt on **RNase**; prompt on **DNase**]

13. **Special forces units and the navy of this country sought to take Lake Commachio by crossing Reno River as part of Operation Roast. In the 1980s, this country's special forces carried out Operation Flavius, which stopped an ASU car bomb from attacking a parade. This country's special forces participated in the Clonoe Ambush, in which members of a provisional army were ambushed and brutally murdered in a graveyard. Recently, Special Forces from this country tried to rescue a pair of engineers from the fundamentalist Boko Haram in (*)** Nigeria. Counter-terrorism in this country is provided by the Government Communications Headquarters, which, during World War II, featured a cryptographic unit called Room 40 and machines called Colossus. For 10 points, name this country whose special forces operated Bletchley Park and fought against Argentina during the Falklands War.
ANSWER: Great **Britain** [or **United Kingdom**; or **UK**; accept **British** special forces; prompt on **English** or **England**]

14. **This character repeats the line "I am an ass" on the blackboard as punishment for spending an entire class writing "CANCELLED" on his exam in neat block letters. During a stay at Shorthills, this character trashes an author he calls "W. C. Tuttle," though he himself pens some wack stories about a girl named "Escape." Later in life, this character becomes a social investigator for the "Deserving Destitutes," but is dismissed soon after for heart trouble; consequently he transfers his hopes and dreams to his children (*)** Savi and Anand. As a child, this character suffered horrible fits of sneezing, lost his brother's calf, leading to his father's death, and was born with six fingers, one of which shriveled away. After going to Hanuman House, he is trapped into an arranged marriage with Shama, sparking his lifelong hatred of the Tulsi family. For 10 points, name this Trinidadian-Indian who seeks his own home in a V.S. Naipaul novel.
ANSWER: Mr. **Mohun** **Biswas** [accept either; accept *A **House for Mr. Biswas**]

15. **In this book, the examination of the role of the mask in *Lord of the Flies* posits that the feeling of the anonymity it creates leads to de-individuation of the self, a concept that this book pairs with a way of thinking that leads to the description of Vietnamese as "gooks" and the Tutsis as "cockroaches" in My Lai and Rwanda. This book, which discusses the dehumanization of others, argues that the actions of Ivan "Chip" Frederick and others in Tier 1A were not the result of a few "bad apples," but of a "bad barrel." This book discusses an experiment in which some participants wore (*)** mirrored sunglasses to avoid eye contact and a particularly harsh participant was known as "John Wayne." It also examines the torture that took place in Abu Ghraib. For 10 points, name this 2007 book, subtitled "Understanding How Good People Turn Evil," in which Philip Zimbardo discusses his Stanford prison experiment.
ANSWER: The ***Lucifer Effect**: Understanding How Good People Turn Evil*

16. **One nine-line poem of this sort exhorts "My lady sweet, arise: Arise, arise" and begins "Hark, Hark! The lark at heaven's gate sings." Cloten speaks that poem of this kind after summoning several musicians to play underneath Cymbeline's window. One poem with this title grinds to a halt as "telephones crouch, getting ready to ring / In locked-up offices," soon before "postmen like doctors go from house to house." That poem with this name suggests that we fear "no sight, no sound, no touch or taste or smell" despite religion, "that vast moth-eaten musical brocade / Created to pretend we never die." Troubadours contrasted this type of poem, also called an *alba*, with a (*)** serenade. This format lends its name to a poem whose speaker comprehends his mortality after waking to "soundless dark;" that poem opens "I work all day, and get half-drunk at night," and was written by Philip Larkin. For 10 points, name this poetic format that literally means "dawn song."
ANSWER: **aubade** [accept **alba** before mention]

17. **One form of this phenomenon occurs when electrons absorb and reemit X-rays with an energy close to that of their nuclear binding energy. The parameter associated with another form of this phenomenon is equal to the second derivative of the phase constant with respect to angular frequency. That parameter takes the opposite sign as the derivative of the group velocity with respect to angular frequency. This phenomenon broadens pulses in space and time. It can be modeled empirically using the (*)** Sellmeier equation. One measure of this phenomenon puts glasses into categories of crowns, at high numbers, and flints, at low numbers, and is the V, or Abbe, number. This phenomenon is the source of chromatic aberrations. For 10 points, name this phenomenon in which a material's index of refraction is dependent on the wavelength of incident light, which allows prisms to separate the constituents of white light.
ANSWER: chromatic **dispersion** [accept **anomalous dispersion** before "another form of this phenomenon is read"; prompt on **chromatic aberration** before it is read]

18. **This painting was likely inspired by the artist looking at Archelaos of Priene's relief sculpture on the same subject. It was commissioned for the ceiling of the Egyptian Antiquities room of the Louvre, but it was taken down and shown vertically. On the right of this work, Alexander the Great appears wearing a golden armor and holding an ornate box. The bottom of this work shows a green-clad woman who holds a symbolic oar across her knee and a red clad woman who holds an equally symbolic (*)** sword. Dante, who is wearing a laurel on his head, is shown next to Nicholas Poussin in the bottom left of this painting. The title figure holds a long scepter and is being adorned with laurels by the winged Victory, and Pindar is shown presenting a lyre to the title character of this work. For 10 points, name this Jean-Auguste-Dominique Ingres painting celebrating the achievements of the ancient Greek poet of the *Iliad*.
ANSWER: The **Apotheosis of Homer** [or **Homer Deified**; or **Apothéose d'Homére**]

19. **Although this concept isn't infinity, Maurice Blanchot's idea of it was used by a German who pointed out that death is inherently useless in helping us to understand this phenomenon, which that thinker termed a "moveable image." The human type of this quality is linked with identity in *The Course of Recognition*, in which Paul Ricoeur explained that this concept only has meaning if it is explained through a narrative mode that grants this quality existence. In *Theses on the Philosophy of History*, Walter Benjamin argues that the misery of the entirety of human history can be symbolized with the (*)** "messianic" type of this quality. Another philosopher attempted to explain this concept as a sense of duration conferred upon by *dasein*. For 10 points, name this concept that Martin Heidegger paired with "being."
ANSWER: **time** [or **zeit**; or **temps**]

20. **Borrowing from a Catullus poem about a lock of Berenice's hair, the main character of this portion of a larger work gives an anguished speech including the line "invitus, regina, tuo de litore cessi." This episode includes a description of a shadowy elm whose branches contain many false dreams. During it, Deiphobus recounts how he prepared an unused grave. In a cathartic portion of this episode, the main character sheds tears of pity after seeing a woman run away to her husband Sychaeus. Long after passing through the fortress of (*)** Rhadamanthys, the main character of this episode rejoins his men on a beach after exiting through a gate of ivory. In this episode, the main character hears about his lineage from his father Anchises. During it, the Sibyl of Cumae accompanies the main character after he goes to Lake Avernus and uses the golden bough. For 10 points, Book VI of the *Aeneid* contains what episode, in which the hero visits the land of the dead?
ANSWER: **Aeneas's journey into the underworld** [accept anything with **Aeneas/Aeneid** and the **Underworld** or **Pluto**, **Dis**, **Orcus**, **Hades**, or **Tartarus**; prompt on any portion of the answer **Book VI of the Aeneid** before it is mentioned]

21. **This thinker studied the 1948 presidential election in Elmira, New York along with Berelson and McPhee in *Voting: A Study of Opinion Formation in a Presidential Campaign*. This thinker hypothesized that the people become less likely to act on an issue as they are exposed to more information about it in one theory. This author of *The People's Choice*, who imagined the "narcotizing dysfunction" state, was the director of the Bureau of Applied Social Research at Columbia University, where this person collaborated with Robert (*)** Merton to study the effects of propaganda during World War II. This American sociologist developed a theory with Elihu Katz that states that information first flows to opinion leaders, then to opinion followers. For 10 points, name this American sociologist whose studies of how mass media influences society led him to posit a "two-step flow" model of communication.
ANSWER: Paul [Felix] **Lazarsfeld**

Tiebreakers

22. **One of this author's characters boasts that he has "the same face, the same words and accents, when I speak what I do think, and when I speak what I do not think." Another play by this author includes the "proviso" scene, in which two lovers plan their marriage until interrupted by a drunk trio. The Moorish Queen Zara imbibes poison, mistakenly believing she dies beside Osmyn rather than her husband Manuel, in this writer's play about Almeria and Alphonso's love beleaguered by the war between Valencia and Granada. This writer said that "Music has (*)** charms to soothe the savage breast" in his only tragedy, the source of the quote "hell hath no fury like a woman scorned." This author told of a love triangle between Cynthia, Lady Touchwood, and Mellefont in one play and wrote about Mirabell's plot to get Millamant's full dowry in another. For 10 points, name this Restoration playwright of *The Mourning Bride*, *The Double-Dealer*, and *The Way of the World*.
ANSWER: William **Congreve**

23. **This man's successor, after losing the region of Golconda, was captured along with Kavi Kulesh, after which he was tortured, then cut to pieces, which were then thrown in a river. In this man's victory at Pratapgarh, he lured the opposing commander into a meeting, during which he killed him during a hug using a concealed dagger and set of "tiger claws." That general, Afzal Khan, was the subordinate of Sultan Ali Adil Shah of the Bijapur region, where this man engaged in guerrilla warfare. This man and his son hid inside baskets of sweets to escape the city of Agra, where they lived as prisoners under this man's rival, (*)** Aurangzeb. For 10 points, name this Hindu fighter against the Mughals and founder of the Marathan Empire who shares part of his name with the Hindu destroyer god.
ANSWER: **Shivaji**

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Bonuses

1. Gisbert Voetius and Jodocus von Lodensteyn led this Protestant movement in the Netherlands, and it was spread to the German Empire with the help of Theophilus Grossgebauer. For 10 points each:
[10] Name this reform movement within Protestantism that stressed that its members must have a thorough knowledge of Christianity in order to facilitate earnest study of the Bible. Its father was Philipp Spener.
ANSWER: **Pietism** [accept word forms]
[10] Spener created a Pietist doctrine based on the story of the broad gate, which leads to the road of destruction, and the narrow gate, which leads to the road of life, a metaphor found in chapter 7, verse 13 of this gospel.
ANSWER: *Book of **Matthew***
[10] Philip Spener spent much of his early life studying in this city, which were Jean Calvin spent much of his time reforming its church.
ANSWER: **Geneva**

2. This poet wrote "I am the enemy you killed, my friend" and "Let us sleep now" in his "Strange Meeting." For 10 points each:
[10] Name this poet who tells his friend to not tell "The old Lie" with "such high zest / To children ardent for some desperate glory" in his poem "Dulce et Decorum est."
ANSWER: Wilfred **Owen**
[10] This four-part Owen poem tells the story of Tim, who dodges a bullet once but nevertheless dies anyways. His face is so contorted upon death that his comrades report to his mother that "Tim died smiling."
ANSWER: "**S.I.W.**"
[10] This author was among those to suggest that Wilfred Owen was gay because of the poet's fanatical admiration for Siegfried Sassoon. This man alienated Sassoon with his autobiographical account of his time spent as a lieutenant and captain of the Royal Welsh Fusiliers, *Goodbye to All That*.
ANSWER: Robert [von Ranke] **Graves**

3. After the Civil War, this first commander of the Army of the Ohio ran the Green River Iron Company, which processed iron to make steel. For 10 points each:
[10] Name this Union general who first made a name for himself in the Mexican-American War at Churubusco, but who is more notable for his arrival at Pittburg Landing, which helped Grant win Shiloh.
ANSWER: Don Carlos **Buell**
[10] In the bloody Battle of Perryville, Don Carlos Buell was able to drive Braxton Bragg out of this state and into Tennessee. This border state was the birthplace of both Abe Lincoln and Jefferson Davis.
ANSWER: **Kentucky**
[10] Buell's replacement was this general, who pursued Braxton Bragg and confronted him at the inconclusive Battle of Stones River before engaging him in the Tullahoma Campaign.
ANSWER: William **Rosecrans** [note that it is **Rose-crans**, not "Rosen-crans"]

4. This river contains James Island. For 10 points each:
[10] Name this seven-hundred-mile long river that rises is Guinea and flows northwest to the Atlantic Ocean.
ANSWER: **Gambia** River
[10] The Gambia River flows through this West African nation, which is the only country bordering Gambia and it has its capital at Dakar.
ANSWER: **Senegal**
[10] Dakar is home to continental Africa's only event of this type, which is organized by Adama Paris. The "Big Four" events of this type take place in New York City, Paris, London, and Milan.
ANSWER: **Fashion Week**s [prompt on **fashion show** or **fashion** event of some sort]

5. The lines in these diagrams represent thermodynamic equilibria between adjacent species and are derived using Faraday's law, the Nernst equation, and the expression of equilibrium constants. For 10 points each:
[10] Name these diagrams that illustrate the fields of stability of chemical species in terms of the activity of hydrogen ions and electrons. They are alternately named for a Russo-Belgian chemist.
ANSWER: **Eh-pH** diagrams [or **pe-pH** diagrams; accept in any order; or **Pourbaix** diagrams; or **potential-pH** diagrams]
[10] Eh-pH diagrams allow geochemists to determine whether one of these substances is in equilibrium with its environment or is subject to chemical transformation. Rocks are aggregates of these somewhat ill-defined inorganic solids, types of which include feldspar and quartz.
ANSWER: **mineral**s
[10] The number of degrees of freedom are equal to the number of components in a system, plus two, for the intensive parameters being considered, minus the number of mineral phases in equilibrium, according to this American's "phase rule."
ANSWER: Josiah Willard **Gibbs**

6. For a Giffen good, the magnitude of this effect is so highly negative that demand rises when price rises. For 10 points each:
[10] Name this effect of a change in price on demand. This effect, which arises from a change in purchasing power, is contrasted with the substitution effect.
ANSWER: **income** effect
[10] Changes in income can also cause a change in demand, which can be shown graphically by this curve that plots the consumption of a good on one axis and the income on the other.
ANSWER: **Engel** curve
[10] Two types of demand function, Marshallian and Hicksian, differ in that the Hicksian demand does not take into account the income effect and can thus be described by this adjective.
ANSWER: **compensated** demand [accept word forms; do not accept "uncompensated," which is the opposite and wrong]

7. One of these paintings, *Leocadia*, shows a woman in a black dress leaning on a wall with some railings visible in the background. For 10 points each:
[10] Name this group of paintings made by Goya for the "House of the Deaf." Entries in this series include *Fight With Cudgels* and *Saturn Devouring His Children*.
ANSWER: The **Black** Paintings [or pinturas **negra**s]
[10] The central action of this Goya work shows two muscular men fighting each other as another man beats both of them with a stick. A crouching woman is grinning at the viewer from the bottom right of this painting.
ANSWER: *Courtyard With Lunatics* [accept synonyms like **Yard** in place of "Courtyard" and accept synonyms like **Madmen** in place of "Lunatics"; accept *Corral de Locos*]
[10] This Goya etching, an entry in his series of *Caprichos*, shows the artist laying his head on a desk as numerous owls and bats fly all around him. The title of this work is written on the side of the desk on which the artist is resting his head.
ANSWER: The *Sleep of Reason Produces Monsters* [or El *sueño de razón produce monstruos*]

8. The amount of splitting due to this phenomenon is characterized by a namesake dimensionless parameter equal to about one over 137. For 10 points each:
[10] Name this phenomenon in which the main spectral lines of atoms are split into two or more components when examined in high detail.
ANSWER: **fine structure** [do not accept "hyperfine structure"]
[10] The split lines arise, partially, from this interaction. Thomas precession reduces this effect by a factor of two.
ANSWER: **spin-orbit** interaction [or **spin-orbit** coupling; or **spin-orbit** effect]
[10] Structure inversion asymmetry gives rise to the Rashba spin-orbit interaction, which was first used to describe the absorption of radio waves in semiconductors with this type of lattice. This lattice is the hexagonal counterpart of zincblende.
ANSWER: **wurtzite**

9. This character dates the pompous Lane Coutell, who pisses her off when he criticizes *The Way of a Pilgrim*. For 10 points each:
[10] Name this college girl who escapes depression after her older brother connects the metaphor of the fat lady to Jesus Christ and her dead brother.
ANSWER: **Franny** Glass [or **Frances** Glass; prompt on **Glass**]
[10] This author wrote the novella *Franny and Zooey* and further described the woes of the Glass family in "A Perfect Day for Bananafish." Unfortunately, he is best known for a novel about the phony-hating Holden Caulfield.
ANSWER: Jerome David [J.D.] **Salinger**
[10] This Salinger story was the only one of the *Nine Stories* to not have been published earlier. In it, an art student, living with his stepfather Bobby and experiencing the title depression following the death of his mother, pretends to be the great-nephew of a French artist in order to apply for a position at M. Yoshoto's school.
ANSWER: "**De Daumier-Smith's Blue Period**"

10. Ike is a foreign trader in the Ashanti Empire. Help him make money by answering the following, for 10 points each.
[10] Ike profiteers from the third Anglo-Ashanti War by trading lots of this precious metal, which the Ashanti had inlaid on their throne, and which Mali ruler Mansa Musa spread everywhere during his *hajj*.
ANSWER: **gold**
[10] For his late-night horseback rides, Ike keeps a healthy supply of these caffeinated plant parts, an abundance of which in the Ashanti state of Dwaben helped fuel the wealth of the empire.
ANSWER: **kola nut**s [prompt on partial answer]
[10] The Ashanti were able to dazzle Ike and his fellow foreign traders at this capital city, where they kept a treasury that contained 400,000 ounces of gold and celebrated a yearly festival of yams.
ANSWER: **Kumasi**

11. The title character of one novel by this author is dressed up as a sailor by her mother after her engagements to Gunnar, Hans, and Yngve incite rage in the townsfolk. For 10 points each:
[10] Name this playwright who wrote *The Bankrupt* and *Arne*.
ANSWER: Bjornsterjerne **Bjornson**
[10] Bjornsterjerne Bjornson and Henrik Ibsen were two of the "Four Greats" of this European country. Contra Ike Jose, they are the only two that you should know.
ANSWER: Kingdom of **Norway** [or Kongeriket **Norge**; or Kongeriket **Noreg**]
[10] In this last play by Ibsen, Arnold Rubek is nearly murdered by his former model Irene, but the two of them, realizing that they are already lifeless inside, climb a mountainside and perish in an avalanche.
ANSWER: *When We Dead Awaken* [or *Nar vi dode vagner*]

12. Bruce has travelled back in time and became a court jester for the Hapsburgs in the late Renaissance. Answer the following about what he will be doing, for 10 points each.
[10] Bruce will see many of the German *aristoi* sending their children to these Prussian institutions that attempted to meld a classical education with courtly skills into one education.
ANSWER: **knight academies** [or **Ritterakadamien**; accept word forms]
[10] Instead of snooping down creepy corridors, Bruce can read about Hapsburg gossip in *Tuesday Mercury*, a newspaper devoted to gossip and court life in this capital of Prussia.
ANSWER: **Berlin**
[10] Bruce may get his ass kicked out of court while serving under this refined Holy Roman Emperor, for whose marriage to the Spanish Infanta the epic *Battle of the Elements* was staged in perhaps the most lavish musical event of the century. If he sticks around, Bruce might have to do a victory dance for this HRE's triumph at Blenheim.
ANSWER: **Leopold I** [prompt on **Leopold**]

13. This player was traded in a blockbuster in which Travis D'Arnaud went to this man's former team. For 10 points each:
[10] Name this pitcher who won AL Cy Young with the Blue Jays in 2003 and the NL Cy Young with the Phillies in 2010.
ANSWER: [Harry Leroy] Roy **Halladay** [or **Doc** Halladay]
[10] DeWayne Wise's amazing catch preserved this pitcher's perfect game in 2009. ESPN's Baseball Tonight named a metric for judging defensive plays after this former White Sox ace, who was recently traded to the Blue Jays, flipped a ball between his legs to record an out.
ANSWER: Mark [Alan] **Buerhle**
[10] An amusing Phillies blog is named for wanting to do this activity with Roy Halladay. The blog's name is appropriately abbreviated "ZWR."
ANSWER: going to the **zoo** [accept **Zoo with Roy**]

14. Aceto-acetyl-CoA is converted into this compound, which is then acted on by its namesake lyase to produce aceto-acetate during a certain pathway. For 10 points each:
[10] Name this compound, which is also an intermediate during the biosynthesis of a certain steroid. Lipitor and other statins inhibit this compound's namesake reductase enzyme.
ANSWER: **HMG CoA** [or **HMG-Coenzyme A**; or **3-hydroxy-3-methyl-glutaryl-co**enzyme **A**; do not accept or prompt on just "HMG," just "CoA," or just "coenzyme A"]
[10] HMG-CoA is an intermediate in the formation of this set of three molecules, which includes acetone and acetoacetate. Untreated Type I diabetes leads to acidic blood due to the overproduction of these compounds.
ANSWER: **ketone bodies** [prompt on **ketone**s]
[10] HMG CoA reductase inhibitors like Lipitor and other statins treat for high body levels of this steroid. Ezetimibe is a non-statin drug combating high levels of it.
ANSWER: **cholesterol**

15. Name the following legendary heraldic beasts, for 10 points each.
[10] This beast, a common symbol in Welsh coats of arms, possesses the head and body of a dragon, a pair of wings, and two rooster-like feet. According to Wikipedia, they are similar to the extinct pterosaurs.
ANSWER: **wyvern**s
[10] Unsurprisingly, this flame bird that lays an egg before crumbling into ashes is a symbol of resurrection.
ANSWER: **phoenix**
[10] Players of *Age of Mythology*, show Marshall Steinbaum that heraldic beasts are the new tactics by naming this Persian or Indian beast common to that game, a sphinx-like creature with a lion head and a poisonous scorpion tail.
ANSWER: **manticore** [or **martyaxwar**]

16. The residual Gibbs free energy is equal to the gas constant times temperature times the natural log of this quantity's namesake coefficient. For 10 points each:
[10] Name this quantity whose namesake coefficient is equal to 1 for an ideal gas. This quantity appears in the numerator of an equation that describes the activity of a component of a solution.
ANSWER: **fugacity** coefficient
[10] Fugacity has units of this property, defined as the force per unit area.
ANSWER: **pressure**
[10] For a pure liquid, the fugacity is equal to the fugacity coefficient times the saturation pressure times this quantity. This quantity accounts for the difference between actual pressure and saturation pressure and is an exponential of an integral.
ANSWER: **Poynting** correction factor

17. This composer repeated a seven-note-in-four-bars ostinato pattern twenty-eight times in his *Passacaglia in D minor*, a piece that is split into four sections of twenty-eight bars, exhibiting his obsessive numerology. For 10 points each:
[10] Name this talented organist who performed in Lubeck in St. Mary's Church.
ANSWER: Dietrich **Buxtehude**
[10] This Buxtehude concert series performed in St. Mary's Church in Lubeck consisted of five oratorios distributed over five Sundays.
ANSWER: *Abendmusik* [or *Evening Music*]
[10] This other organist and composer is best known for his *Canon and Gigue in D*, the first part of which is very repetitive and often played at weddings.
ANSWER: Johann **Pachelbel**

18. The politician Jeronimo secludes and surrounds his deformed son with other mutated misfits in this novel. For 10 points each:
[10] Name this Jose Donoso novel about Humberto Penaloza, whose narration takes on guises of a fetus, a mute, and a doll in the nursery who may or may not give virgin birth.
ANSWER: The *Obscene Bird of Night* [or El *Obsceno Pajaro de la Noche*]
[10] The novel draws from a folktale about a deformed monster from this South American country, the birthplace of the poets Gabriela Mistral and Pablo Neruda.
ANSWER: Republic of **Chile** [or Republica de **Chile**]
[10] In *The Obscene Bird of Night*, a person with this occupation plays a disturbing sexual game with the pregnant Iris Mateluna. In Charlotte Bronte's novel *Villette*, Lucy Snowe is haunted by a ghost who formerly held this occupation.
ANSWER: **nun** [or **sister**; or **prioress**; or **abbess**; or anything along those lines; prompt on **clergy**]

19. This fountain replaced a statue of Venus that was defaced for its apparent ties to the Black Plague. For 10 points each:
[10] Name this white marble Jacopo Della Quercia fountain located in the Piazza del Campo. Its side panels depict the Creation of Adam and the Flight from the Garden of Eden, and a Madonna and child are at its center.
ANSWER: *Fonte Gaia* [or *Gaia* Fountain]
[10] The *Fonte Gaia* is found in this Italian city, whose namesake school of painters included Duccio and Simone Martini. Its cathedral contains Donatello's *The Feast of Herod*.
ANSWER: **Siena**
[10] Quercia was among those passed up in favor of Ghiberti to build the doors to the Baptistery of St. John, a building located in this city. Giotto's bell tower and Brunelleschi's Duomo are also located here.
ANSWER: **Florence** [or **Firenze**]

20. Name these participants of the Third Crusade, for 10 points each.
[10] The reign as King of Jerusalem of this bellicose cousin of Frederick Barbarossa, who defended Tyre from Saladin during the Third Crusade, ended after he was assassinated in broad daylight.
ANSWER: **Conrad of Montferrat** [or **Conrad I of Jerusalem**; prompt on **Conrad**]
[10] This predecessor to Conrad as King of Jerusalem served in that capacity until his army was destroyed and he was captured at Hattin.
ANSWER: **Guy** of/de **Lusignan** [prompt on **Guy**]
[10] This British monarch, the son of Henry II and brother of King John, participated in the Third Crusade as well, but met with disaster when he was ransomed by Henry VI following it.
ANSWER: **Richard I** of England [or **Richard the Lionheart**ed; or **Richard, Couer de Lion**; prompt on **Richard**]

21. Name these philosophical treatises of David Hume, for 10 points each.
[10] This 1757 dissertation sought to outdo Lucretius's and Hobbes's accounts of the title sacred phenomenon by tracing the propensity of humanity in acknowledging an "invisible, intelligent power."
ANSWER: *A **Natural History of Religion***
[10] Hume also wrote this posthumously published work that centers on the debate of the existence of God and evil. Its title conversations are related by Philo, Cleanthes, and Demea.
ANSWER: ***Dialogues Concerning Natural Religion***
[10] Hume's *Treatise of Human Nature* builds on this earlier essay, which outlines how humanity is enslaved to the title feelings, and they alone are what makes morality necessary.
ANSWER: ***Of the Passions***

Extra bonuses

22. In a single page of text he committed 114 out of a possible 115 literary offenses according to Mark Twain. For 10 points each:
[10] Name this early American author who wrote about Natty Bumppo in his *Leatherstocking Tales*.
ANSWER: James Fenimore **Cooper**
[10] This other early American author described an avid sleepwalker who stalks Clithero to investigate the death of Waldegrave in *Edgar Huntly*.
ANSWER: Charles Brockden **Brown**
[10] This early American author created the unmarried socialite Eliza Wharton, whose death in childbirth prompts society use her story as a moral allegory in her novel *The Coquette*. She also pseudonymously published *The Boarding School*.
ANSWER: Hannah Webster **Foster** [prompt on "A **Lady of Massachusetts**"]

23. This political group's dominance began with the mayoral election of Fernando Wood in 1854 and lasted until the election of Fiorello LaGuardia in 1934. For 10 points each:
[10] Name this New York City Democratic political machine, which was led for a time by William "Boss" Tweed.
ANSWER: **Tammany** Hall [or the Society of St. **Tammany**; accept reasonable answers containing **Tammany**]
[10] This early-1900s political boss of Kansas City, Missouri helped haberdasher Harry Truman rise to prominence before being brought down on charges of tax evasion.
ANSWER: Thomas [Joseph] **Pendergast**
[10] This Virginian governor and senator in the mid-1900s led a Democratic political machine and advocated "pay-as-you-go" policies. He retired in 1965 after failing to stop the passage of the Voting Rights Act.
ANSWER: Harry [Flood] **Byrd** Sr.

24. The operators corresponding to the three Cartesian components of this quantity do not commute with each other, but they do commute with the operator corresponding to this quantity squared. For 10 points each:
[10] Name this quantity, equal in classical systems to the moment of inertia times the angular velocity.
ANSWER: **angular momentum**
[10] When dealing with the coupling of angular momentum in quantum mechanics, the combined state can be expressed as a linear combination of composite states multiplied by these doubly eponymous coefficients.
ANSWER: **Clebsch-Gordan** coefficients
[10] In the case where four angular momenta are being coupled, these symbols can be used instead of Clebsch-Gordan coefficients.
ANSWER: Wigner **9j** symbols [do not accept "3j" or "6j"; prompt on **Wigner** symbols]