STIMPY 2015: we barely wrote the tournament, so there was no time to write a subtitle
Packet by Dartmouth A and Rice
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Tossups

1. **This leader's successor altered the Cancelleria Reliefs that were commissioned by this man. This emperor authored a never-implemented edict that called for the destruction of half of Italy's vineyards. A thaw on the Rhine prevented the Chatti from aiding a rebellion of the governor Saturninus against this emperor. This emperor was the first to use the *dominus et deus* according to Suetonius, whose** (*) unflattering biography of this man is the last in his *Twelve Caesars*. The freedman Maximus and the steward Stephanus killed this emperor in a plot led by his chamberlain Parthenius, after which the Senate proclaimed *damnatio memoriae* on this emperor and elected Nerva as his successor. For 10 points, name this emperor, the son of Vespasian and brother of Titus.
ANSWER: **Domitian** [or Titus Flavius Caesar **Domitianus** Augustus]

2. **An F minor musical depiction of this composer includes one of the first uses of piano harmonics and has the left and right hands displaced by one sixteenth note. This composer calls for *sul tasto* on the E and A strings to imitate flutes in a piece based on horn calls. A piano piece based on his music includes an infamously difficult eight-against-nine passage and is Brahms' Opus 35. His Opus 11 is the most famous *Moto perpetuo*. The first complete recording of his most famous work was made by Ruggiero** (*) Ricci. This composer is the last person depicted in Schumann's *Carnaval*. This player of "The Cannon" Guarneri was the dedicatee of *Harold in Italy*. One of his pieces is the basis for Liszt's *La Campanella*. Rachmaninoff wrote a *Rhapsody on a Theme of* this composer. For 10 points, name this composer of twenty-four caprices, a spectacular Italian violin virtuoso.
ANSWER: Niccolò **Paganini**

3. **The rate of this mechanism is enhanced by intramolecular neighboring group participation, leading to products with atypical stereochemistry. This reaction produces parabolic Hammett plots because its rate is enhanced by both electron-donating and withdrawing groups, and it proceeds unusually slowly in neopentyl systems. A single** (*) transition state characterizes the reaction coordinate of this mechanism, which is typical for primary reactants due to their low steric hindrance. Backside attack leads to stereochemical inversion via this mechanism, whose second-order kinetics are proportional to the concentration of both substrate and nucleophile. For 10 points, name this concerted mechanism of nucleophilic substitution, contrasted with SN1.
ANSWER: **SN2** [or **bimolecular nucleophilic substitution** (in any order); prompt on partial answer]

4. **This book presents the example of a shopkeeper being honest with a naive customer as an example of a man acting in accordance with duty, but not from duty, which this book defines as "the necessity of an action done out of respect for the law." This book argues that happiness can only be considered good by an impartial observer if the happy person has a good will, which this book identifies as the only unqualified good in existence. This book argues that "every rational being exists as an end in himself" as part of its formulation of the** (*) "kingdom of ends." This book states that people should act only according to maxims which they can will to become universal law. Criticism of this work's obscurity prompted its author to write *Critique of Practical Reason*. For 10 points, name this book that first introduces the "categorical imperative," written by Immanuel Kant.
ANSWER: *Groundwork of the Metaphysics of Morals* [or *Grundlegung zur Metaphysik der Sitten*; accept similar translations including *Grounding for the Metaphysics of Morals* or *Foundations of the Metaphysics of Morals*; do not accept or prompt on just "The Metaphysics of Morals" or "Die Metaphysik der Sitten"]

5. **In a story by this author, the narrator's father forbids him from eating at his aunt's party to stop him from vomiting in their Volkswagen. This author wrote a story about a nuclear apocalypse-obsessed teenager that has an affair with a muscular female teacher while dating Paloma. In a novel by this author, two cops beat the protagonist's mother hard enough to kill her unborn fetus, leaving her in a canefield where she is rescued by a golden mongoose. Lola's brother tries to** (*) lose his virginity at Rutgers in that novel by this author, in which his recurring narrator Yunior describes the fukú curse afflicting an overweight sci-fi fanatic as a legacy of the Trujillo regime. For 10 points, name this Dominican-American author of *Drown*, *This Is How You Lose Her* and *The Brief Wondrous Life of Oscar Wao*.
ANSWER: Junot **Díaz**

6. **The Baum–Welch algorithm finds the unknown parameters in a construct named for this man. When a finite number of steps leads to a state that is impossible to leave, this scientist's namesake system is called "absorbing." This man names the statement that the probability of a random variable being greater than or equal to a, is less than or equal to the expected value over a. That inequality can be used to derive** (*) Chebyshev's. In his namesake matrices, the rows and/or columns sum to one. Those transition matrices describe a system named for this man in which future states depend only on the current state. For 10 points, name this Russian mathematician whose namesake systems are used to model random walks as "chains."
ANSWER: Andrey **Markov** [accept **Markov** chains or **Markov** networks; accept **Markov**'s inequality]

7. **In this opera, a soprano is devastated to learn that a man accepted three hundred gulden in the aria, "Oh what grief!" The second of three dances in this opera is a *furiant* in a tavern, while the third is the "Dance of the Comedians" carried out by a troupe that includes a sword-swallower. A character in this opera laments that he can't find the pretty girl who warned him of his fiance's deadliness in the aria "Oh, how doubt fills me!" That man, who sings with a stutter, takes the place of a drunk circus** (*) "bear" in this opera, convincing his father that his older half-brother is more mature. The broker Kecal speaks with Ludmila and Krušina at the beginning of this opera, during which it is decided that Vašek would be a good husband for Jeník's lover. For 10 points, name this comic opera about the rearranged marriage of Mařenka, composed by Bedřich Smetana.
ANSWER: *The **Bartered Bride*** [or ***Prodaná nevěsta***; or *The **Sold Fiancee*** or any reasonable-sounding translation]

8. **Access for women to this island's OSVIA and STOVIA school systems was advocated by a resident of this island in *From Darkness To Light*. Twenty percent of this island's crops had to be produced for export as part of the "Cultivation System." The *Budi Utomo* Party was formed on this island in response to the Ethical Policy, which depopulated parts of this island. A former member of the Sarekat** (*) Islam movement who governed from this island set up a system of "Guided Democracy" until being forced from power during an anti-PKI crackdown. Following an 1880s rust plague, the *liberica* species of this island's major crop was introduced as an alternative to *arabica*. For 10 points, name this island governed from Batavia by the Netherlands, under whose rule its name became a byword for coffee.
ANSWER: **Java** [or **Jawa**]

9. **A painting by this artist premiered at an exhibition at which more than twelve thousand people were provided with opera glasses to view it in a darkened room. The sitting room of this artist's mansion Olana is decorated with a painting of his that depicts ruins through the narrow Siq, *El Khasne Petra*, which was done on a trip which also produced a painting of *The Parthenon*. Descriptions from an** (*) arctic expedition by this artist's student Isaac Hayes provided the basis for his painting *Aurora Borealis*. This artist's interest in Alexander von Humboldt's *Kosmos* inspired another landscape depicting two men in front of a cross, a waterfall, and Mount Chimborazo. For 10 points, name this Hudson River School painter of *Cotopaxi* and *The Heart of the Andes*.
ANSWER: Frederic Edwin **Church**

10. **In a novel from this country, the narrator plays with a boy who destroys birds' eggs after accidentally shooting his twin brother. The protagonist of a novel from this country has his foot crushed by a bread-van and mistakenly dates a job application "1848." That character from this country repeatedly shouts "you are losing your book!" at a woman he later dubs Ylajali. A novel from this country features a woman who strangles her hare-lipped child while at her husband** (*) Isak's farmstead. The author of *Out Stealing Horses* is from this country, as is an author who wrote about an unnamed man who nearly eats his pencil while wandering around this country's capital. For 10 points, name this country home to Per Petterson, the author of *Growth of the Soil* and *Hunger*, Knut Hamsun, and Henrik Ibsen.
ANSWER: **Norway**

11. **A correlator used to suppress charge fluctuations is added to a variety of this variable quantity used to model a rigid lattice; that quantity is named for Martin Gutzwiller. When an electron passes through a region with zero magnetic field but nonzero potential, this quantity acquires a phase shift. This quantity is equal to the inner product of the state ket with a position eigenket. For the** (*) hydrogen atom, this quantity is a product of associated Laguerre polynomials and spherical harmonics. In three dimensions, this quantity has units of length to the negative three-halves power. The squared magnitude of this quantity represents the probability density that a particle is at a given place, and its time evolution is described by the Schrödinger equation. For 10 points, name this quantity represented by psi, a "function" describing the quantum state of a particle.
ANSWER: **wavefunction**

12. **After winning a presidential primary, a senator from this state was shown throwing an axe into a tree from forty feet away. That senator from this state declined to do his "famous impression of Ted Kennedy" and fumbled with answers as to whether his age was 46 or 47 while being interviewed by Roger Mudd. A senator of Native American descent from this state changed parties after the 1994 Congressional election; that senator is Ben** (*) "Nighthorse" Campbell. A senator from this state was asked "where's the beef" while in a debate with Walter Mondale. That former senator from this state dropped out of a presidential primary after having been photographed canoodling with Donna Rice. For 10 points, name this home state of Gary Hart that is currently led by governor John Hickenlooper.
ANSWER: **Colorado**

13. **Those who left boughs on the altar of this deity at the wrong time could be sentenced to death under the laws of the Eumolpidae and the Kerykes families. The Ninnion tablet depicts this deity's son Iacchus leading a procession. Outside of the Telesterion, worshippers of this deity drank a psychedelic barley drink called** *kykeon*. **Women honored this deity as the elder of two "law-bearers" in the three-day Thesmophoria festival. This** (*) goddess turned Abas into a lizard and accidentally burned the baby Demophon to death while disguised as a wet-nurse at the court of King Celeus. The Sacred Way led from Athens to the cult center of this goddess at Eleusis, which celebrated her gift to Triptolemus. For 10 points, name this Greek goddess who caused winter by grieving for her daughter Persephone.
ANSWER: **Demeter** [prompt on "Ceres"]

14. **This character knows enough Latin to write "vale" in notes and to incorrectly remember two lines of the Aeneid. In the last scene, he stands dumbfounded as the clank of spurs announces the arrival of the "fat general." Another character has a dream in which she sees this character dining with demons in a hut after being chased through the woods by a bear, and she later explores the library of this character's empty mansion. This character** (*) titles a work which uses a sonnet form featuring alternating masculine and feminine rhymes. This character dances with Olga at her name-day party, leading to a duel in which he kills Lensky. For 10 points, name this dandy loved by Tatyana Larina, the title character of a verse novel by Alexander Pushkin.
ANSWER: **Eugene Onegin** [accept either name]

15. **In this city, one figure reasons with Jews in the Hall of Tyrannus, and handkerchiefs and aprons touched by that figure are used to cure the sick in this city. In a letter** *written in* **this city, the author compares the dead being raised to fighting with wild beasts in this city. In Acts, Demetrius warns other silversmiths in this city that Paul may ruin their trade based in this city's massive Temple of Artemis. One work addressed to this place asks the reader to "take the** (*) helmet of salvation and the sword of the spirit" as well as combat the devil's schemes by putting on the "full armor of God." The epistle addressed to this city asks children to obey their parents, husbands to obey their wives, and slaves to obey their masters. For 10 points, name this city, the namesake of an epistle that follows Galatians, a city in modern-day Turkey.
ANSWER: **Ephesus**

16. **A particle called** *ezafe* **is used to indicate this grammatical case's primary function in Persian. The function of this case is replaced in Arabic by the pairing of a** *muḍāf* **with a** *muḍāf 'ilayhi* **in a construction called** *iḍāfa* **whose analog in Biblical Hebrew is called** *smikhut*. **The ending** *omega-nu* **appears in the plural of this case for every Ancient Greek noun. This case can be used to indicate a subset of objects within a larger group in its** (*) "partitive" usage. *Apo* and *ek* are examples of Ancient Greek prepositions used with this case, which shows separation or origin. This is the case of second word in the Latin phrase "amor fati," which means "love of fate." For 10 points, name this grammatical case that is often translated using the word "of" and indicates possession.
ANSWER: **genitive** case [or **possessive** case]

17. **In a poem by this man, Calidore beheads a man who shaves the beards and hair of passersby while searching for the Blatant Beast. In the opening poem of a collection by this man, the speaker imagines lines "Written with teares in harts close bleeding book," which is handled by his lover's "lilly hands." The speaker of another poem by this man proclaims "let baser things devise / To die in dust, but you shall live by fame," after repeatedly writing the name of his lover in the sand. A character created by this man slays** (*) Error before meeting Fradubio, who had been turned into a tree by the witch Duessa. That character, who takes his name from the design on his shield, serves the queen Gloriana. For 10 points, name this author of the sonnet cycle *Amoretti*, who created the Redcrosse Knight in *The Faerie Queene*.
ANSWER: Edmund **Spenser**

18. **A book about this activity includes a chapter describing the** *thulr* **and** *jongleur* **as reincarnations of the archaic** *vates* **in a chapter titled for this activity "and Poetry." An essay titled for this activity includes a section attributing the meaning "lady-killer" or "champion" as a double-entendre for a certain word. This activity is analyzed as a civilizing function in a book that provides definitions for its "concept" in languages like Blackfoot, Sanskrit, and Greek. An essay titled for this activity describes a kind of this activity initially envisioned by Jeremy Bentham that has such high** (*) stakes that no rational person would engage in it. That essay discusses bets called *toh* placed on a certain activity and introduces a concept called "thick description." For 10 points, identify this activity discussed in Johan Huizinga's *Homo Ludens*, whose "deep" variety titles a Clifford Geertz essay.
ANSWER: **play** [or **play**-function or deep **play** or even "Deep **Play**: Notes on the Balinese Cockfight"]

19. **This man's government used a punishment called "national degradation," which was meted out to people found guilty of "national unworthiness." An ambassador of this leader proposed the creation of an organization called "the Union" in the Fouchet Plan. This leader's withdrawal of representatives from the Hallstein Commission precipitated the "empty chair crisis" and forced the Luxembourg Compromise. Although he's not Romanian, this leader** (*) fled his country in a helicopter during a crisis that the Grenelle agreements failed to resolve. This leader was targeted by the OAS after he signed the Évian Accords, and he was succeeded by George Pompidou after the wildcat strikes of May 1968. For 10 points, name this French president of the Fifth Republic who had earlier led the Free French in 1968.

ANSWER: Charles **de Gaulle**

20. **"Outlier" examples of this organism are identified by ELISA with the V3 domain from the ANT70 isolate. This organism internalizes tetherin by secreting Vpu. According to two landmark 2013 papers by Warner Greene, "abortive infection" with this pathogen triggers pyroptosis and activation-induced cell death. APOBEC is degraded by the Vif protein produced by this pathogen, which predisposes its host to opportunistic infections like candidiasis, toxoplasmosis and** (*) Kaposi's sarcoma. Binding to the co-receptor CCR5 facilitates the CD4-mediated uptake of this virus, which is treated by Truvada, AZT, and other inhibitors of reverse transcriptase. For 10 points, name this retrovirus that infects helper T cells, the causative agent of AIDS.
ANSWER: **HIV** [or **human immunodeficiency virus**]

Bonuses

1. This quantity can be expressed as *r* cross *p*. For 10 points each:
[10] Name this quantity that is conserved in the absence of external torque. It is the rotational analogue of a quantity that is the product of mass and velocity.
ANSWER: **angular momentum**
[10] For a rigid body, this quantity can be expressed as a symmetric three-by-three matrix. It is represented on an ellipsoid which has lengths equal to the eigenvalues of the matrix.
ANSWER: mass **moment of inertia** [prompt on partial answer; accept **angular mass**, **inertia tensor**, or **inertia matrix**]
[10] These mutually orthogonal axes are the eigenvectors of the inertia matrix. A torque about one of these axes only affects rotation about that axis.
ANSWER: **principal** axes [accept **principal** axis]

2. This poet instructed "hope the voyage is a long one / full of adventure, full of discovery" in his poem "Ithaka." For 10 points each:
[10] Name this poet who concluded "Those people, they were a kind of solution" in a poem about a city anticipating an attack entitled "Waiting for the Barbarians."
ANSWER: Constantine **Cavafy** [or Konstantinos **Kavafis**]
[10] Cavafy wrote a poem about the downfall of this historical person, who is urged to "say goodbye to her, the Alexandria you are losing." That poem is titled "The God Abandons [this figure]."
ANSWER: Mark **Antony**
[10] Cavafy was a poet who wrote in this language, whose ancient form was used to write the *Iliad* and the *Odyssey*.
ANSWER: **Greek**

3. A large blue one of these figures appears next to the number 8 in the painting *Reservist of the First Division*. For 10 points each:
[10] Name this four-sided geometric figure, two of which are superimposed in the painting *White on White*.
ANSWER: **square**s [prompt on "quadrilaterals," "rectangles," "polygons," or other less-specific answers]
[10] *White on White* is one of the best known works of this Suprematist artist, who also created *Black Square*. He also designed the set for the Futurist opera *Victory over the Sun*.
ANSWER: Kazimir **Malevich**
[10] El Lissitzky added three-dimensionality to classical Suprematism in a series of works that he gave this name. One of these works features a cube resting between two curved red and blue lines that rise up out of a grid.
ANSWER: **Proun**s

4. Odin hung himself from this tree in order to learn the runes. For 10 points each:
[10] Name this Norse world tree, a giant ash tree that contained nine worlds.
ANSWER: **Yggdrasil**
[10] Yggdrasil is thought to be associated with Hoddmímis holt, where this duo is foretold to survive Fimbulvetr. These two humans are foretold to survive Ragnarök and repopulate the world after its end.
ANSWER: **Líf** and **Lífthrasir** [accept in either order]
[10] The survival of Líf and Lífthrasir is described by this jötunn in a battle of wits with Odin. He is defeated because he does not know what Odin whispered into Baldr's ear at the latter's funeral.
ANSWER: **Vafthrudnir** [or **Vafthruthnir**]

5. This man is thought to have been the primary supporter of the rebel Robin of Redesdale. For 10 points each:

[10] Name this man, who was killed at the Battle of Barnet several years after tensions erupted between him and his king over the king's marriage to Elizabeth Woodville. He was known as "the Kingmaker."
ANSWER: Richard **Neville**, 16th Earl of **Warwick** [accept either name]
[10] Warwick switched sides during these dynastic conflicts for the throne of England, fought primarily between the houses of Lancaster and York. Nobody really won them except for Henry VII.
ANSWER: Wars of the **Roses**
[10] Warwick was one of the historical people discussed in the 1559 edition of a set of poems named for these objects. The Anabaptist book of martyrs is also titled for one of these objects.
ANSWER: **mirror**s [accept The **Mirror** for Magistrates; or Martyrs **Mirror**]

6. The "real" version of these quantities are usually used to calculate Purchasing Power Parity. For 10 points each:
[10] Give the common term for the rate of interconvertibility between currencies. For converting dollars to euros, this quantity has decreased to around 1.25 as of late 2014.
ANSWER: foreign-**exchange rate**s [or **FX rate**s]
[10] According to a rule of thumb in finance, an arbitrage profit can be made if the expected rate of change in the exchange rate between two countries is not equal to the difference between this quantity for the countries.
ANSWER: **interest rate**s [prompt on "i"]
[10] Interest rate parity is called "covered" if one of these contracts has been agreed upon in order to cover exchange rate risk. These contracts are agreements to conduct an exchange at a specified future time and price.
ANSWER: **forward** contract [do not accept "future" or "futures contract"]

7. This short story ends with the protagonist finding a man smashing a broken gun and sitting under a gum tree surrounded by squirrels. For 10 points each:
[10] Name this story from Go Down, Moses in which Isaac and Sam Fathers take hunting trips with the terrible marksman Boon, who raises the monstrous "blue dog" Lion to slay Old Ben.
ANSWER: "The **Bear**" [prompt on "Go Down, Moses"]
[10] A performing bear named State o' Maine appears in this novel, in which Susie dresses up in a bear suit to terrify the ex-quarterback Chip Dove for raping Franny, who has an incestuous relationship with her brother John.
ANSWER: The **Hotel New Hampshire**
[10] This author wrote a children's story about a circus bear named Bongo, but is better known for satirizing middle-class conformity in Main Street and Babbitt.
ANSWER: Sinclair **Lewis**

8. This term was coined as a collective term by Edward Spiegel in 1978. For 10 points each:
[10] Give this name for extremely compact quasi-stellar radio sources, which are generally thought to be powered by jet-emitting supermassive black holes at the center of active galaxies.
ANSWER: **blazar**s [prompt on "quasar"; prompt on "active galactic nuclei" or "AGN"]
[10] The term "blazar" originally referred to BL Lac objects and a type of "optically violent" quasar described by this adjective. This adjective is also applied to stars with oscillating luminosity, exemplified by Delta Cephei.
ANSWER: **variable** [accept **Cepheid variable**s; accept optically violent **variable** quasar]
[10] Because of their high speeds, jets emitted from blazars undergo this effect, in which relativistic phenomena modify the jet's apparent luminosity. This effect is most pronounced at small angles compared to the line of sight.
ANSWER: relativistic **beaming** [accept **Doppler beaming** or **Doppler boosting**; accept the **headlight** effect or the **lighthouse** effect; prompt on answers just referring to the "Doppler effect," "redshift," or "blueshift"]

9. Name some religion things that also involve sumo wrestling. For 10 points each:
[10] Sumo wrestling grew out of the worship of kami in this religious system. Sumo dohyōs resemble this religion's temples.
ANSWER: **Shinto**ism

[10] The Shinto ritual *shūbatsu* involves sprinkling this substance on priests, worshippers, or the ground in order to purify it. Before matches, sumo wrestlers will perform *shūbatsu* and sprinkle this substance on the ground.
ANSWER: **salt**
[10] A "thousand year" version of this foodstuff probably eaten by many sumo wrestlers is given away on the Shinto holiday of Shichi-go-san.
ANSWER: **candy**

10. The nicknames of this film's characters were frequently not translated literally in English subtitles, as exemplified by Mané Galinha's name being translated as "Knockout Ned" rather than "Chicken Manny." For 10 points each:
[10] Name this 2002 crime drama directed by Fernando Meirelles. It's narrated by a kid named Rocket, who loses his virginity to a much older reporter while working as a photographer documenting gang wars led by Li'l Ze.
ANSWER: *City of God* [or *Cidade de Deus*]
[10] *City of God* depicts a favela in this country, which is also the home of the director of the 2008 hit *Elite Squad*. This country's bossa nova was popularized by *Black Orpheus*.
ANSWER: **Brazil**
[10] During the 60s and 70s, Brazil was the hub of this social realist film movement, whose most prominent exponent was the polemic Glauber Rocha, the director of *Black God, White Devil*.
ANSWER: **Cinema Novo** [or **New Cinema**]

11. Sanco bread was eaten in one ritual in this empire, during which every person in its capital city was forced to leave. For 10 points each:
[10] Identify this empire that practiced an early form of spring cleaning in its capital, Cusco, during the Situa Festival, and was led by rulers like Atahualpa.
ANSWER: **Inca** Empire
[10] This emperor of the Inca wrote special hymns for the Situa Festival. This man, whose name means "Earthshaker," pacified the Chanca peoples and his son, Tupo Inca, built the Saqsaywaman Fort in Cusco.
ANSWER: **Pachacuti** Inca Yupanqui [or **Pachacutec**]
[10] Pachacuti began the subjugation of this powerful empire by the Inca. This empire had its capital at Chan Chan and worshipped a moon god.
ANSWER: **Chimu**

12. Answer some questions about English folk tunes. For 10 points each:
[10] This English folk song usually begins with the line "Alas my love, ye do me wrongly." Its 6/8 tune begins D F [pause] G A B A G [pause] E C.
ANSWER: "**Greensleeves**"
[10] This composer worked extensively with English folk music and carols, and even wrote a *Fantasia on Greensleeves*. He also edited the 1906 Hymnal and wrote *Fantasia on a Theme by Thomas Tallis*.
ANSWER: Ralph ("rafe") **Vaughan Williams** [do not accept or prompt on partial answer]
[10] This six-member British *a cappella* group often performs English folk tunes, as well as pop songs, Renaissance music, and Ligeti. With The Consort of Musicke, they hosted the BBC program *Madrigal History Tour*.
ANSWER: The **King's Singers**

13. This movement's nickname was coined in 1932 by Morris Hillquit as a commentary on its municipal focus. For 10 points each:
[10] Name this left-wing movement centered in Milwaukee, whose leaders included the Austrian-born Victor L. Berger and Emil Seidel.
ANSWER: **Sewer Socialism** [or **Sewer Socialist**s; prompt on partial answers]

[10] Seidel ran as vice president on the ticket of this perennial socialist candidate in 1912. This co-founder of the IWW also led the Pullman strike.
ANSWER: Eugene **Debs**
[10] After being reelected to the House of Representatives, Victor Berger was denied his seat when he was convicted under this act. The phrase "clear and present danger" originated in a case regarding this act.
ANSWER: **Espionage** Act of 1917

14. Receptor tyrosine kinases are regulated by conserved binding domains. Answer some things about them. For 10 points each:
[10] SH2 and PTB domains bind to tyrosine that has been tagged with one of these groups. Kinases catalyze the transfer of one of these groups to a molecule from ATP, which contains three of them.
ANSWER: **phosphate**
[10] SH3 domains bind to helices containing multiple residues of this bulky amino acid, which is often found with glycine in beta turns. Peptide bonds to this amino acid are unusually likely to adopt a *cis*-conformation.
ANSWER: R- or S- or D- or L-**proline** [accept **Pro** or **P**; accept **pyrrolidine-2-carboxylic acid**]
[10] Proline-rich ligands are also recognized by these domains, which are named for the presence of two concerted residues of the most fluorescently active amino acid.
ANSWER: **WW** domains [accept **rsp5** domains or **WW**P repeating motifs]

15. Answer some questions about the real-life inspirations for *Games of Thrones*. For 10 points each:
[10] The Seven Kingdoms of Westeros are inspired by the Heptarchy, the set of seven major kingdoms set up by these people and the Angles while they dominated what would become England.
ANSWER: **Saxon**s [accept Anglo-**Saxon**s]
[10] The Stark children each own one of these animals, which in real life went extinct towards the end of the Pleistocene epoch. Most examples of their limbs have been found in the La Brea tar pits.
ANSWER: **dire wolf** [or **dire wolves**; or *Canis dirus*; prompt on "wolves" or "canines" or "Canis" or "mammals" or other less specific answers]
[10] The massive Titan that guards this maritime Free City was probably inspired by the Colossus of Rhodes. Syrio Forel, Arya Stark's trainer in sword-fighting, was also from this city.
ANSWER: **Braavos**

16. Another man claims that this character's "virtues / Will plead like angels, trumpet-tongued, against / The deep damnation of his taking off." For 10 points each:
[10] Name this character, whose killer has a vision of a floating dagger and is told to "screw [his] courage to the sticking-place" by his wife before murdering this character.
ANSWER: King **Duncan**
[10] King Duncan is murdered by this character, who says that his mind is "full of scorpions" as he and his wife plan to kill Banquo to ensure that they retain control over the throne of Scotland. Macduff kills him for his tyranny.
ANSWER: **Macbeth** [prompt on "Thane of Glamis" or "Thane of Cawdor"]
[10] The Weird Sisters tell Macbeth that he will not be vanquished until this forest comes to his castle at Dunsinane. Their prophecy comes true when Malcolm tells his marching soldiers to cloak themselves in this forest's boughs.
ANSWER: **Birnam** Wood

17. Answer the following about the chemistry of protein folding. For 10 points each:
[10] One of the key tenets of protein folding theory is that folding possesses this property, a defining feature of the Carnot cycle. Thermodynamic processes with this property take place through infinitesimally small changes.
ANSWER: **reversibility** [accept word forms; prompt on "isentropic"]
[10] The driving force for protein folding is an increase in this quantity in the surrounding water. This quantity increases over time in the universe according to the second law of thermodynamics.

ANSWER: **entropy** [accept delta *S*]
[10] The extent of protein folding can be assayed by amide exchange after providing a pulse of this molecule. A drop of this molecule is added to NMR samples in a "shake" technique that causes alcohol peaks to disappear.
ANSWER: **heavy water** [or **D₂O**; or **deuterated water**; or **deuterium oxide**; prompt on "water" but not "H₂O"]

18. Answer some questions about coffeehouses and philosophy. For 10 points each:
[10] This Italian philosopher founded the journal *Il Caffè* with the Verri brothers. He also wrote a 1764 treatise condemning the death penalty.
ANSWER: Cesare **Beccaria**
[10] This German critical theorist argued that institutions like coffeehouses were important to the development of a "public sphere" in Early Modern London and other European cities.
ANSWER: Jürgen **Habermas**
[10] Coffeehouses were prime locations for intellectual discussion in this European city, which was home to a "Circle" of philosophers that advocated the elimination of metaphysics and included Moritz Schlick and Rudolf Carnap.
ANSWER: **Vienna** [or **Wien**]

19. While at Oxford, this character grows a love for gambling after being taken to Epsom Downs by a classmate named Ian. For 10 points each:
[10] Name this gambler who takes up a bet with Lucinda to transport a glass church to Bellingen.
ANSWER: **Oscar**
[10] *Oscar and Lucinda* was written by Peter Carey, an author from this country. Another author from this country wrote about an Aboriginal boy going apeshit in *The Chant of Jimmie Blacksmith*.
ANSWER: **Australia**
[10] Carey's *My Life as a Fake* was inspired by this creation of Harold Stewart and James McAuley, a fictitious poet whose "work" was submitted to the avant-garde magazine *Angry Penguins*.
ANSWER: Ern **Malley**

20. Relations between these two countries improved after rounds of "earthquake diplomacy" in 1999. For 10 points each:
[10] Name these two countries, which conducted a population exchange following the Treaty of Lausanne, which ended a war between them in 1923.
ANSWER: **Greece** and **Turkey**
[10] This officer and father of modern Turkey was the leader of Turkey when it signed the Treaty of Lausanne. He standardized Turkish orthography by promoting the use of Latin instead of Arabic writing.
ANSWER: Mustafa **Kemal** **Atatürk** [accept either]
[10] This irredentist Greek nationalist concept was dealt a major blow by the signing of the Treaty of Lausanne. Its primary goal was to unite the entire Greek diaspora within a single state.
ANSWER: **Megali Idea** [accept **Great Idea** or other translations]