

## **(This) Tournament is a Crime**

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Packet 6

Tossups

1. **It was recently revealed that this organization once paid 8 million dollars to Gazprom to win a 330 million dollar contract to manufacture gas equipment. In 2014, this company's gas turbine business was sold to its competitor Siemens. The SFO detained the "arms dealers" Bhanu and Sudheer Choudhrie for their alleged acts of bribery during their business with this company. A recent 4.6 billion pound annual loss for this company was partly caused by a 780 million pound fine they paid to Brazil and the U.S.A for their role in bribing (\*) Petrobras and other companies for contracts. After General Electric, this company makes the second-largest number of jet engines for commercial aircraft in the world. This company shares its name and origins with an unrelated subsidiary of BMW, which makes Wraith and Ghost sedans. For 10 points, give the name of that British luxury car manufacturer.**

ANSWER: **Rolls-Royce**

<IJ, Current Events/Geography/Other>

2. **A dreadnought belonging to one side in this war ran so deep aground off Cape Three Forks that it was never salvaged. One cause of this war was environmental damage caused by open-pit iron mining done by a company owned by Horacio Echevarrieta, who later served as a mediator during this war. Hugo Stoltzenberg was commissioned by one side in this conflict to provide them with chemical weapons, including mustard gas bombs dropped by Farman F.60 Goliath biplanes. Over ten thousand soldiers of the eventual winners of this conflict were killed in a battle known as the Disaster of (\*) Annual. A unit in this war known for their bravery and brutality, the *Tercio de Extranjeros*, was commanded by a young Francisco Franco. Irregular troops led by Abd al-Krim harassed Spanish troops for over five years during this war in the namesake mountainous region just north of the Atlas Mountains. For 10 points, name this 1920s colonial war, which ended with the pacification of native Berbers in Morocco.**

ANSWER: **Rif War** [accept War of Melilla]

<BL, World History>

3. **This novel's narrator observes that the innovations of the Romantic poets left George Crabbe "as dead as mutton." A character in this novel returns to Holland to live with his mother after finding himself unable to puncture a painting with a dinner-knife. The ending of this novel is narrated by Dr. Coutras, who diagnoses the main character's leprosy. The narrator of this novel breaks off contact with the main character after finding him callously unmoved by the suicide by oxalic acid of his mistress (\*) Blanche Stroeve. The main character of this novel suddenly abandons his stable marriage and job as a London stockbroker to live a starving bohemian lifestyle in Paris, and then marries a second time after moving to Tahiti. For 10 points, name this novel about Charles Strickland, an artist modeled on Paul Gauguin, by W. Somerset Maugham.**

ANSWER: **The Moon and Sixpence**

<AG, Long Fiction>

4. **In a piece in this genre, the second movement, marked *Molto espressivo*, calls for a twenty-part chorus subdivided into five groups that sing extremely dense, highly chromatic canons, independent of the other groups. A choral setting of Psalm 23 is the penultimate movement of a piece in this genre written in 1985 by John Rutter. In 2001: *A Space Odyssey*, appearances of the monolith are accompanied by the micropolyphonic second movement of a piece in this genre by György (\*) Ligeti. Andrew Lloyd Webber premiered his only foray into this genre in 1985, while Penderecki wrote one titled *Polish*. Bells oscillate between the tritone F-sharp and C at the start of a piece in this genre written for the reconsecration of Coventry Cathedral. Nine poems by Wilfred Owen are set in that Benjamin Britten piece in this genre titled *War*. For 10 points, name this genre of liturgical music, a mass for the dead.**

ANSWER: requiem [or requiem mass; prompt on Kyrie eleison by asking “What larger piece is it part of?”]  
<EK, Music/Opera>

5. **Before performing this type of action, two characters hear, but fail to see, Athena’s auspicious omen of a screeching heron. Two youths who die in one of these events have their heads paraded on spears the next day. A character performing this type of task unwittingly runs past two men pretending to be corpses. One of these events goes awry when enemy forces notice the distant gleam of a helmet taken from a dead soldier. A sleepless Agamemnon and Menelaus rouse Nestor in order to find warriors to perform this type of task following the embassy to Achilles. In Book IX of the *Aeneid*, the lovers (\*) Euryalus and Nisus die in one of these events. In Book X of the *Iliad*, the scout Dolon reveals the location of the horses of Rhesus after he is captured during one of these operations carried out by Diomedes and Odysseus. For 10 points, identify this type of military operation in which warriors sneak into enemy territory in order to gain intelligence or resources.**

ANSWER: night raid [or espionage; or intelligence; or infiltration; or Doloneia before “Dolon” is read; or obvious equivalents; or any descriptive answer in which warriors sneak into enemy territory in order to gain intelligence or resources]  
<EK, Legends>

6. **It’s not CRISPR, but data from this technique is being used to populate the Cistrome Project. 4-thiouridine, 6-thioguanosine, and other photoreactive ribonucleoside analogs are incorporated into nascent RNA transcripts in a form of this procedure. Depending on the nature of the control, a variant of this technique can either be analyzed by calculating the fold enrichment or the percentage of input. Nonspecific interactions in this technique can be minimized by “pre-clearing” the lysate. A reagent in this technique is (\*) immobilized on either superparamagnetic or agarose beads. Micrococcal nuclease shearing occurs in the “native” type of the best-known variety of this technique, whose starting product can also be sonicated after being “cross-linked” by adding UV light or formaldehyde. For 10 points, name this technique in which a protein is pulled out of solution using an antibody, whose “chromatin” form is abbreviated ChIP.**

ANSWER: immunoprecipitation [or ChIP until read; or CLIP until “ChIP” is read; or RIP until “ChIP” is read; accept answers that contain other tacked-on procedures, such as ChIP-Seq, as long as IP is mentioned in there]  
<AG, Biology>

7. **This philosopher once explained his purpose by stating his unBEARable “duty is to ... sow the seeds of distrust, of disquiet, and even despair” in men. The desire to “reconcile intellectual needs with affective and volitive needs” constituted this philosopher's major problem with philosophy according to his essay “The Rationalist Dissolution,” which argues humanity inherently has a need to guard the dead. This philosopher claimed that the primary quest of philosophy is “the hunger for God” and to realize that “God does not merely exist, but “superexists” in the essay “At the (\*) Bottom of the Abyss; that essay appears in a book by this philosopher which concludes by comparing man's suffering to the struggles of Don Quixote, and opens by stating humanity's “deepest urge for immortality” constitutes the title feeling. For 10 points, name this Spanish author of *The Tragic Sense of Life*, who is also known for his novelistic output.**

ANSWER: Miguel da Unamuno  
<IJ, Thought>

8. **In an oath administered by Judge Alfred Judd, who was one of the original supporters of this document, a female ruler obliquely refused to acknowledge its legitimacy. Resident foreign aliens were granted the right to vote by this document, though all Asians, regardless of citizenship status, were deprived of their right to vote. This document was hastily drafted after a royal figure fired (\*) Walter M. Gibson from his cabinet, which was not subject to royal authority anymore according to the terms of this document. Two years after this document was signed, Robert Wilcox led a rebellion intended to roll back the effects of this document. Lorrin Thurston authored this document, which heavily favored the already-exploitative and dominant sugarcane and pineapple industries. For 10 points, name this document forced upon King Kalakaua by**

plantation owners led by Sanford Dole ceding power to whites in the Kingdom of Hawaii, named for a weapon presumably used to coerce its signing.

ANSWER: **Bayonet** Constitution [or **1887** Constitution of the Kingdom of **Hawaii**; prompt on Constitution of **Hawaii**]

<BL, American History>

9. **The second section of this poem is partly set in “a dark / Illimitable ocean, without bound, / Without dimension; where length, breadth, and height, / And time, and place, are lost.” The author of this poem pauses the action to celebrate the ease of his “unpremeditated verse.” A reissue of this poem included a note calling rhyme “no necessary adjunct or true ornament of poem... but the invention of a barbarous age,” in defense of its blank verse. A setting in this poem is lined with flames that produce “No (\*) light, but rather darkness visible.” A character in this poem observes that “the mind is its own place, and in itself / Can make a heav’n of hell, a hell of heav’n,” before concluding: “Better to reign in Hell, than serve in Heaven.” The first of its twelve books opens: “Of man’s first disobedience, and the fruit / Of that forbidden tree.” For 10 points, name this epic poem about the angelic war in Heaven and the Fall of Man, by John Milton.**

ANSWER: **Paradise Lost**

<AG, Poetry>

10. **In 2007, Rapp et al. suggested that the low ridges of the "rampart" type of these features are produced from ice-laden regoliths, suggesting that these features form on top of a frozen ocean. Schutz's and Lutz-Garihan's statistical analysis of over 100 of these features along great circles provided evidence for the theory that the body which they occupy was once surrounded by moonlets. The Eberswalde one of these gives evidence that the past climate of their associated astronomical body alternated between wetness and dryness. The presence of relatively few of these things on the (\*) Hesperia Planum as compared to the surrounding Noachian terrain has been used to date the Noachian terrain as younger. The largest one of these is the Hellas and appears opposite the Tharsis Bulge; it is thought to have formed during the Late Heavy Bombardment. For 10 points, name these basins on the Red planet.**

ANSWER: **craters** on **Mars** [prompt on **craters**]

<IJ, Math/Other Science>

11. **A photograph by this artist, which shows two humans on boats at its bottom, depicts hundreds of phototubes as golden spheres, and shows the Super Kamiokande reactor. Another photograph by this artist depicts over a thousand women wearing cheerleading costumes in front of a panorama of flowers, and was made at the Arirang Festival. This photographer, who created the *Pyongyang* series, made a color print mounted to glass that depicts two horizontal patches of grass, which are both bordered by a (\*) river; that work *Rhein II* is the most expensive photograph ever sold. While in Hollywood, California, this man made a set of two-part photographs showing various products that seem to be organized by color. For 10 points, name this German photographer, who made the "diptych" *99 Cent II*, showing packed supermarket aisles.**

ANSWER: Andreas **Gursky**

<IJ, Other Art>

12. **An alkane containing this group can react with a carbonyl compound in a nearly identical mechanism to the aldol reaction. Pyridine reacts with a compound with two of these groups in the first step of the Zincke reaction. The antibiotic chloramphenicol is one of the few naturally occurring compounds containing one of these groups. An alkane containing this group is hydrolyzed into a carbonyl in the (\*) Nef reaction. The Bartoli indole synthesis starts with a molecule of toluene with one of these groups. The presence of this group on a ring promotes nucleophilic aromatic substitution, and is the strongest deactivating group that isn't a quaternary amine. Aniline forms as a result of the reduction of benzenes containing this group, which is added using a mixture of sulfuric and nitric acid. Picric acid contains three of these groups, and three of these groups are found on toluene derivative TNT. For 10 points, name this group with a propensity to explode, with formula -NO<sub>2</sub>.**

ANSWER: **nitro** group [accept **NO<sub>2</sub>** before mention; do not accept “nitrite”]  
<AW, Chemistry>

13. **One theorist of this paradigm, Lawrence Keeley, pioneered the use of microwear analysis on stone tools. Another theorist argued this paradigm is comprised of five categories, including technological innovation - which includes soil resistivity surveys. That man Peter Reynolds, used five breeds of sheep, including Hebridean and Moufflon, at a site that emphasized this paradigm, in which "research fields" were built in and around so-called (\*) "constructs" to analyze different possible climates. The Danish "Land of Legends" and the English "Butser Ancient Farm" are open-air museums that exemplify this paradigm, which emphasizes authenticity in recreations so that process and decay can be analyzed. For 10 points, name this paradigm in archaeology in which the past is reconstructed, an example of which is Thor Heyerdahl's Kon-Tiki raft.**

ANSWER: **experimental** archaeology [accept **reconstructionist** archaeology before “constructs”;  
prompt on **archaeology**]  
<IJ, Social Science>

14. **In a play written in this language, a minister gets his king to focus on a military campaign by spreading a false rumor that his queen had died in a fire. Near the end of a play in this language, the swords of two executioners miraculously fail to harm the protagonist. Traditional plays in this language were performed in either oblong, square, or triangular-shaped playhouses. An eight to twelve line benediction is recited before the stage-manager sets the scene in archetypal plays written in this language, such as one which begins with the king's hunting (\*) chariot trespassing on a holy grove. A play written in this language is titled for a minor episode in which a courtesan hands a boy some jewels to purchase a golden replacement for a little clay cart. In the best-known play written in this language, the belly of a fish is found to contain a signet ring through which a king remembers his wife, who had been cursed by a sage. For 10 points, Kalidasa wrote *The Recognition of Shakuntala* in what Classical Indian language?**

ANSWER: **Sanskrit**  
<AG, Drama>

15. **Filmmaker Ari Libsker made a 2008 documentary about a strange early-1960s fad during which pornography set in these locations became popular. While living in one of these locations, Alexis Casdagli used Morse code to spell out an obscene message in the border of some stitching he did. Eric Williams wrote a memoir of his experiences in one of these places, which was converted into the movie *The Wooden Horse*. People living in these places were the subject of the infamous (\*) “bullet decree,” though fortunately for them, were not subject to death marches. People housed in one of the most well-guarded one of these locations in Colditz Castle invented a never-used glider called the “Colditz Cock.” Tom, Dick, and Harry were code names for three tunnels to be used for the daring “Great Escape” from one of these places. For 10 points, name these places like Stalag Luft III, where Americans captured by Germans were held.**

ANSWER: German **prisoners of war camps** [or **stalags** before “Stalag” is read; accept **oflag** before “Oflag” is read]  
<BL, European History>

16. **Monique Tirion showed that a simple uniform potential models these entities effectively in proteins. When modelling proteins as a Gaussian network, these entities are described by the matrices obtained from decomposing the Kirchhoff matrix. Analyzing these entities is effectively equivalent to molecular dynamics at the low-temperature limit. These entities can be solved for by solving the secular equation for a (\*) mass weighted Hessian. The frequency of these entities can be solved for by assuming solutions of the form of the exponential of i times omega times t, plugging them into the equations of motion, then solving for the eigenvalues of the matrix-form of the equations. Transitions between these things produce the Stokes shifts of the Raman effect. For a non-linear molecule with N atoms, there exist 3N-6 of these entities, examples of which include scissoring and symmetric stretches. For 10 points, name these patterns of motion where every part of a system oscillates at the same frequency.**

ANSWER: normal **modes** [accept vibrational **modes**; prompt on **vibrational degrees of freedom**;  
prompt on molecular **vibrations**]

<AW, Physics>

17. In an essay by this author, a shabbily dressed dwarf lady boldly displays her perfectly proportioned feet as she tries on several expensive pairs of shoes. An essay by this author disfavorably compares an author who had built a “magnificent apparatus for catching life just an inch or two on the wrong side,” to the lively manner in which Chekhov describes the drowning of a soldier in his story “Gusev.” This author narrated a flaneur’s quest to obtain a lead pencil in the essay (\*) “Street Haunting,” and savaged her usual punching bag Arnold Bennett in her essay “Modern Fiction.” The narrator contrasts a sumptuous lunch at an all-male college with a dull dinner at an adjoining women’s college in this author’s best-known essay, which praises the “incandescence” of the best literary minds. This author imagined the abortive career and tragic suicide of Judith, an equally talented sister of Shakespeare, in an essay declaring that women need money and the title domicile to successfully write fiction. For 10 points, name this author of “A Room of One’s Own.”

ANSWER: Virginia **Woolf** [or Adeline Virginia **Woolf**; or Virginia **Stephen**]

<AG, Short Fiction/Miscellaneous>

18. The narrator of this book proposes a dangerous descent from the “crest of Amana,” from the “lions’ dens to the mountains of leopards.” The popular artistic subject of the *hortus conclusus*, or the enclosed garden, takes its name from the Vulgate translation of this book, which is the source of the phrase “ivory tower.” A sixteenth-century song sung to usher in the Shabbat, known as *Lekha Dodi*, takes its first two words and many of its themes from this book. This book is read on the Shabbat of the intermediary days of **Passover**. In this book, the (\*) “daughters of Jerusalem” are repeatedly warned: “do not arouse or awaken love until it so desires,” by a woman who prowls the streets of a city at nighttime in search of her lover. The term “Shulamite” denotes the woman in this book, who declares that “your love is more delightful than wine.” For 10 points, name this unabashedly erotic Old Testament book allegorizing God and Israel as two lovers.

ANSWER: **Song of Songs** [or **Song of Solomon**; or Canticle of **Canticles**]

<AG, Religion>

19. This man can be seen wearing yellow tunic with his back to the viewer in an unusual depiction featuring mountainous terrain painted by Abraham Brueghel. A painting in which this man is blind and touched by Jesus is in the collection of Principe Guido Odescalchi. Another painting depicting this man was, along with its artist’s scene featuring an upside-down *Crucifixion*, situated next to Annibale Caracci’s *Assumption*. The first night scene that featured this man was made for a chapel named after the cardinal Tiberio (\*) Cerasi and can be found at the Santa Maria del Popolo. In that version, this man wears orange and green colored armor and lies supine over a red cloth in a painting showing an old man grooming the horse behind him. For 10 points, name this man whose “conversion” on the way to Damascus was shown in a painting by Caravaggio.

ANSWER: Saint **Paul** [or **Saul**]

<IJ, Painting>

20. A young man belonging to this ethnic group stands guard while holding a semiautomatic pistol and wearing a shirt with the words “By Any Means Necessary” in a *Newsweek* photograph. The Family Red Apple market was owned by members of this ethnic group and was the target of an eight-month-long boycott led by Sonny Carson, who threatened “in the future, there will be funerals, not boycotts.” A member of this ethnicity said “we should not lose our tempers over a bottle of orange juice” after a shopkeeper of this ethnicity shot teenager (\*) Latasha Harlins for supposedly shoplifting. That incident exacerbated tensions that led to an event which this group called *Sa-I-Gu*, or “Four-Two-Nine.” Businesses belonging to this ethnic group suffered over \$400 million in damages in a riot during which members of this ethnicity took justice into their own hands and defended their property by shooting at mobs of black looters from rooftops. For 10 points, name this Asian immigrant group which was the victim of violence and vandalism during the 1992 Rodney King riots in Los Angeles.

ANSWER: **Korean**-Americans

<BL, American History>

#### Bonuses

1. Fidel Castro is dead, but not because any of the CIA's 638 attempts to kill him succeeded. For 10 points each:

[10] The CIA's covert operation with this codename sought to overthrow Castro's Communist government in Cuba, which included many assassination plots on Castro.

ANSWER: Operation **Mongoose**

[10] One of the most famous CIA assassination attempts included stuffing one of these objects with explosives. Castro and his revolutionary buddy Che Guevara were very fond of these objects, of which JFK ordered more than a thousand before he ordered the embargo on Cuba.

ANSWER: **cigars**

[10] This woman was sent to kill Castro with poison pills hidden in a jar of face cream, several years after she had an affair with Castro. According to her, Castro was aware of the plot and handed her a gun to kill him, but she didn't follow through.

ANSWER: Marita **Lorenz**

<BL, World History>

2. Answer the following about American theater from before the twentieth century, for 10 points each.

[10] A subcategory of minstrelsy known as "Tom Shows," depicting events from this author's novel *Uncle Tom's Cabin*, was wildly popular from the 1850s onwards.

ANSWER: Harriet Beecher **Stowe** [or Harriet Elisabeth Beecher **Stowe**]

[10] Towards the end of the nineteenth century, this theater director and author of plays based on *Madama Butterfly* and *The Girl of the Golden West* began experimenting with modern lighting and special effects to create realism. Owl-Eyes calls Gatsby a "regular" example of this man.

ANSWER: David **Belasco**

[10] Belasco was inspired to write plays while serving as secretary to this Irish-American author, who attacked the one-drop principle of racial classification in his wildly popular melodrama *The Octoroon*.

ANSWER: Dion **Boucicault** [or Dionysius Lardner **Boursiquot**]

<AG, Drama>

3. In the center-surround model of this structure, an excitatory direct pathway competes with an inhibitory indirect pathway. For 10 points each:

[10] Name this cluster of neurons, consisting of the caudate nucleus, putamen, nucleus accumbens, globus pallidus, and substantia nigra, which is involved in controlling voluntary motor movements and routine behaviors.

ANSWER: **basal ganglia**

[10] Within the basal ganglia, the substantia nigra is home to neurons that secrete this neurotransmitter, which is deficient in Parkinson's disease.

ANSWER: **dopamine**

[10] This diencephalic region of the basal ganglia is its only portion that produces an excitatory neurotransmitter, glutamate. Together with the external segment of the globus pallidus, this lens-shaped region acts as a fast-spiking pacemaker.

ANSWER: **subthalamic nucleus** [or **STN**; or **corpus Luysi**; or **Luys' body**]

<AG, Biology>

4. G. H. Hardy proved that this function outputs an infinite number of zeroes. For 10 points each:

[10] Name this function that is an analytic continuation of the infinite sum of the sequence defined by "one over n raised to the s" power. A hypothesis states that the real part of all its non-trivial zeroes equals one half.

ANSWER: **Riemann Zeta** function [prompt on **zeta** function]

[10] In 1941, this mathematician described two proofs for the Riemann Zeta function defined over finite fields. His namesake conjectures showed that the generating function of varieties over finite fields are zeta functions, should be rational, satisfy the functional equation, and have other properties.

ANSWER: Andre **Weil** [accept the **Weil** conjectures]

[10] To prove the Weil conjectures, Weil used a theorem due to Lefschetz counting the number of these things on an automorphism. The existence one of these from a continuous function  $f$  mapping a compact convex set onto itself was proved by Brouwer.

ANSWER: **fixed points**

<IJ, Math/Other Science>

5. This book claims that after the Deluge, the world was populated by giants, and that when they "turned [their] eyes toward the heavens" they invented God and religion. For 10 points each:

[10] Name this book, which argues that the only way to know human beings is through their creations of language, history, law, and other customs. The study of those creations is said to be this 1725 work's title discipline.

ANSWER: *The **New Science*** [or *Principi di **Scienza Nuova** d'intorno alla Comune Natura delle Nazioni*]

[10] Vico's *The New Science* argues that this concept is cyclical and repeats itself. This discipline is determined by material conditions according to a theory put forth by Karl Marx.

ANSWER: **history**

[10] One year after publishing *On the Study Methods of Our Time*, Vico published an essay which suggests studying etymology and linguistic analysis to understand human development; that essay is named for the "most ancient wisdom" of this group of people.

ANSWER: **Italians** [accept any answers indicating people from **Italy**; prompt on **Romans**]

<IJ, Thought>

6. In Peter Maxwell Davies's *Eight Songs for a Mad King*, this type of cast is accompanied by an onstage Pierrot ensemble. For 10 points each:

[10] Identify this unusual casting decision employed in the operas *Erwartung* and *La voix humaine*.

ANSWER: there is only **one role** [or it is a **monodrama**; or obvious equivalents]

[10] *La voix humaine* is an opera by this composer. Another of his operas ends with the execution of the title convent of nuns during the French Revolution.

ANSWER: Francis **Poulenc** [or Francis Jean Marcel **Poulenc**]

[10] This Hungarian composer's opera *Duke Bluebeard's Castle* features a much larger cast of two roles: the title character and his new wife Judith.

ANSWER: Béla **Bartók** [or Béla Viktor János **Bartók**]

<EK, Other Art>

7. In a novel by these two authors, a lawyer feels guilty for having gambled away the money given to him by his client Edward Burden, but stops himself from committing suicide at the last minute by life's simple delights, like watching a cat chasing a milkman. For 10 points each:

[10] Identify these two authors who collaborated on *The Nature of a Crime*, as well as on a science fiction novel in which people from the Fourth Dimension aim to take over the Earth, titled *The Inheritors*.

ANSWER: Ford Madox **Ford** and Joseph **Conrad** [or Ford Hermann **Hueffer** and Józef Teodor **Konrad** Korzeniowski; both are required, prompt on partial answer]

[10] Conrad complained that he had to make Ford rewrite most chapters of *The Inheritors* three times over in a letter to this literary editor, who had brought the two authors together. This man launched D.H. Lawrence's career by cutting roughly a tenth of *Sons and Lovers* to get it to a publishable form.

ANSWER: Edward **Garnett** [or Edward William **Garnett**]

[10] Ford urged Conrad to scrap the sentence "Nobody moved for a time" in the last paragraph of this novel, which comes soon after Marlow lies to Kurtz's widow that his final words were her name, rather than "The horror! The horror!"

ANSWER: **Heart of Darkness**

<AG, Long Fiction>

8. Many people fleeing the effects of this effect did so *via* the McCorkell Line. For 10 points each:

[10] Name this staple crop whose failure caused a devastating famine in Ireland during the 1840s.

ANSWER: **potato** [accept Irish **potato** famine]

[10] This British bureaucrat came under heavy criticism for his lackluster efforts at addressing the famine, due to his belief that a *laissez-faire* attitude towards relief was best. Along with Stafford Northcote, he

wrote a report admiring the Chinese civil service exam system advising the implementation of a similar British system.

ANSWER: Charles **Trevelyan** [accept Northcote-**Trevelyan** Report]

[10] This foreign ruler gave a generous 10,000 pounds for the victims of the Irish potato famine, but was forced to reduce the sum of money to only 1,000 pounds by Queen Victoria, who supposedly gave a contemptuous five pounds.

ANSWER: **Abdulmecid I**

<BL, European History>

9. For 10 points each, name some painters of ancient Roman scenes.

[10] Julius Caesar wrapped in a bloody toga appears in the bottom right of this artist's *The Death of Caesar*. A gladiator looks at an emperor for the title thumbs down in his *Pollice Verso*.

ANSWER: Jean-Leon **Gerome**

[10] This artist's quote that "art begins where the tiny begins" is analyzed in Tolstoy's essay "Why Do Men Stupefy Themselves?" Alexander Pushkin wrote a poem based on his epic painting *The Last Day of Pompeii*, which inspired the Bulwer-bullshit-Lytton novel of the same name, and the equally crappy BBC series.

ANSWER: Karl **Bryullov**

[10] The last painting this man produced is set in a floating temple, and is titled *Mars Being Disarmed by Venus*. This man's *Oath of the Horatii* is dominated by symbolism relating to the number three.

ANSWER: Jacques-Louis **David**

<IJ, Painting/Other Art>

10. The Carothers equation gives this quantity as 1 plus the extent of reaction, limiting it to a maximum of 2. For 10 points each:

[10] Name this quantity which IUPAC has started to insist be symbolized  $\bar{D}$  [d-stroke]. It is equal to weight-average molar mass over number-average molar mass or the same ratio for the corresponding degrees of polymerization.

ANSWER: poly**dispersity** index [or **PDI**]

[10] Polymer size can be determined with this technique, which fires a laser through a polarizer, a sample, then another polarizer to obtain a speckle pattern. Many speckle patterns are made, and the autocorrelation function is taken, and eventually a mass distribution is obtained.

ANSWER: **dynamic light scattering** [prompt on partial answer]

[10] Polymer molecular weight can also be measured by measuring this resistance to flow of a solution containing the polymer.

ANSWER: **viscosity**

<AW, Chemistry>

11. A humanitarian organization named for this term has set up a bakery in 2015 to service thousands of Syrian refugees. For 10 points each:

[10] Name this term for the kitchen attached to Sikh gurdwaras, where all visitors are fed, regardless of religious background.

ANSWER: **langar**

[10] In an admirable example of interfaith dialogue, the food served at a *langar* typically meets this requirement, out of respect for the needs of Jains and devout Hindus.

ANSWER: **vegetarianism**

[10] An exception to the above rule is made by this blue-clad Sikh warrior order, who serve meat at the open-air langars during the festival of *Hola Mohalla*.

ANSWER: **Nihang** [or **Akali**; or **immortals**]

<AG, Religion>

12. Mary Wharton wrote a Natural History of the "Inner" component of this geographic region. For 10 points each:

[10] Name this region of Kentucky, which is north of both the Mississippi Plateau and the Cumberland Plateau. It is named for a type of plant, and gives its name to a style of Appalachian music.

ANSWER: **Bluegrass**



[10] The largest city in the "Inner Bluegrass" region of Kentucky is this "first-class" city, sometimes called the Athens of the West and the "Horse Capital of the World."

ANSWER: **Lexington**

[10] Lexington mandates that portions of the city be set aside as these areas, which may include parks and skylines. Tom Turner's classification of these undeveloped areas, was inspired by Christopher Alexander's pattern language.

ANSWER: **greenways**

<IJ, Geography/Current Events/Other>

13. At a dinner party in this story, the literature professor Roger Patton classifies people, irrespective of sex, as "canine" or "feline." For 10 points each:

[10] Name this story in which Sally Carrol Happer frantically yells that she wants to return to her hometown of Tarleton, Georgia "To-morrow! To-morrow! To-morrow!" after being separated from her fiancé Harry Bellamy inside the title structure.

ANSWER: "The **Ice Palace**"

[10] This American author of "The Diamond as Big as the Ritz" and "Bernice Bobs Her Hair" drew on his courtship of the Southern belle Zelda Sayre to write "The Ice Palace."

ANSWER: F. Scott **Fitzgerald** [or Francis Scott Key **Fitzgerald**]

[10] Fitzgerald's sequel of sorts to "The Ice Palace," titled "The Jelly-Bean," appears in his collection *Tales of the Jazz Age* in a section titled "My Last [these people]." They are the first title people of Fitzgerald's inaugural collection, which includes "The Ice Palace" and "Bernice Bobs Her Hair."

ANSWER: **flappers**

<AG, Short Fiction/Miscellaneous>

14. This composer's *Officium Defunctorum* includes an almost-complete setting of the requiem mass, in addition to a funeral motet and sections of the Matins and the Absolution. For 10 points each:

[10] Name this Spanish Renaissance composer best-known for shorter choral pieces such as his settings of the *O vos omnes* and the *O magnum mysterium*.

ANSWER: Tomás Luis de **Victoria**

[10] The first complete setting of the requiem mass is commonly attributed to this Franco-Flemish composer, who chronologically sits a generation between Guillaume Dufay and Josquin des Prez.

ANSWER: Johannes **Ockeghem**

[10] The requiems of Victoria and Ockeghem both omit this lengthy Latin text about the Last Judgment, or "Day of Wrath."

ANSWER: **Dies Irae**

<EK, Music/Opera>

15. For 10 points each, name these poems about the American Revolution, none of which are by Philip Freneau.

[10] In this highly inaccurate poem by Longfellow, the title patriot tells his friend to signal from Boston's Old North Church once if the British are coming by land, and twice if by sea.

ANSWER: "**Paul Revere's Ride**"

[10] This poem, whose speaker tells a "celestial choir" that "Columbia's scenes of glorious toil I write," commands: "Proceed, great chief, with virtue on thy side, / Thy ev'ry action let the Goddess guide."

ANSWER: "To **His Excellency, General Washington**" [or "To **His Excellency, George Washington**;" by Phillis Wheatley]

[10] In his speech "Give Us the Ballot," Martin Luther King Jr. quoted the line "Truth, crushed to earth, shall rise again" from this poem by William Cullen Bryant, an elegy for revolutionaries who died on "this soft turf, this rivulet's sands."

ANSWER: "The **Battle-Field**"

<AG, Poetry>

16. The transparent conducting oxide indium tin oxide is considered this type of material. For 10 points each:

[10] Name this sort of semiconductor that has been doped to the extent that it behaves like a true metal.

ANSWER: **degenerate** semiconductor

[10] Degeneracy of states can be broken with the presence of one of these weak disturbances. These entities name a method for approximating a Hamiltonian by splitting it into  $H_0$  plus  $\lambda V$  and creating a power series in terms of  $\lambda$  and the solution to  $H_0$ .

ANSWER: **perturbations** [accept **perturbation theory**]

[10] A multi-dimensional system of this type with two sides of equivalent length will experience degeneracy. Wavefunctions in this simple quantum mechanical system must equal zero at and beyond its boundaries.

ANSWER: **particle in a box** [or **infinite square well**; prompt on partial answer]

<AW, Physics>

17. Name some details of Great Depression-era photographs, for 10 points each:

[10] Dorothea Lange's photograph *Migrant Mother* was taken in this state, where its subject—like many "Okies"—immigrated to in hopes of finding jobs as agricultural laborers.

ANSWER: **California**

[10] Black people driven from their homes by a flood in 1937 queue up in front of a billboard with this five-word boast on it. The billboard also shows a smiling white family in a car and the words "There's no way like the American Way."

ANSWER: **"World's Highest Standard of Living"**

[10] A portrait of Allie May Burroughs was taken in by this photographer, who documented rural Alabama through staying with the Burroughs, Fields, and Tingle families. He compiled his photos into the collection *Let Us Now Praise Famous Men*.

ANSWER: Walker **Evans**

<BL, American History>

18. A psychotherapist or psychologist experiences the physical state of a client in the "body-centered counter-" form of this phenomenon. For 10 points each:

[10] Name this phenomenon in which a client shifts their feelings arising from their problems to their therapist. Clients exhibiting the "erotic" form of it may suddenly become romantically attracted to their therapist.

ANSWER: **transference**

[10] Transference was first outlined in the writings of this psychologist, whose books introduced the concepts of the Oedipus Complex and psychoanalysis to the public.

ANSWER: Sigmund Schlomo **Freud**

[10] Transference is used in the form of therapy named after this theory, holding that the namesake psychological structures develop from external factors, such as caregivers. This theory of development was introduced by Ronald Fairburn and other psychologists, and refined by Melanie Klein.

ANSWER: **object relations** theory

<IJ, Social Science>

19. The *Ramayana* gives the distance from Kishkindha to Lanka as one hundred of these units, a distance so great that only Hanuman can make the journey there and back. For 10 points each:

[10] Identify this unit of distance employed in Vedic India, which may be anywhere between five and nine miles in length. In Buddhism, the first hot *naraka* is located one thousand of these units below the Earth.

ANSWER: **yojana**

[10] Hanuman's hundred-*yojana* leap takes him to the fortress of this *rakshasa*, a devotee of Shiva who engineers the kidnap of Sita.

ANSWER: **Ravana** [or **Ravan**]

[10] This son of Ravana inflicts a critical wound on Lakshmana that can only be cured with a healing herb. Early in his life, Brahma changes this character's name from Meghanada and makes him invulnerable in combat.

ANSWER: **Indrajit**

<EK, Legends>

20. New emperors were wished to be "more fortunate than Augustus and better than" this emperor by the Senate. For 10 points each:

[10] Name this second of the Five Good Emperors who was officially declared *optimus princeps*, or greatest ruler, for his achievements like expanding the Roman Empire to its greatest height by conquering Dacia and Parthia.

ANSWER: **Trajan** [or Emperor Caesar Nerva **Traianus** Divi Nervae Filius Augustus; accept “more fortunate than Augustus and better than **Trajan**”; accept *felicior Augusto, melior Traiano*]

[10] Like all the other Five Good Emperors, Trajan became emperor through this means rather than inheriting the throne. Because of this way of gaining the throne, the Five Good Emperors are sometimes also collectively known as this type of emperor.

ANSWER: they were **adopted** by the previous emperor [accept **Adoptive** Emperors; accept equivalent answers that mention **adoption**]

[10] Trajan’s own successor, Hadrian, was ensured accession to the imperial throne after the interference of this wife of Trajan, who kept Trajan’s death hidden for a while after he died by hiring someone to impersonate his voice behind a curtain.

ANSWER: **Pompeia Plotina** [need both names for points]

<BL, Other History>