Penn Bowl 2014 Eds. E. Mukherjee, R. Carson, P. Liao, W. Alston, M. Jackson, C. Chiego // Writers: S. Jamil,

Packet 8 A. Rosenberg, I. Jose, C. Voight, D. Ferguson, N. Huang, J. Carlson,

A. Li, C. Wang, D. Xu, C. Hua, T. Kothari, M. Isenberg

Tossups

1. **A main character of this ballet plays the mandolin during its "Aubade" section. Kenneth MacMillan's popular staging of this ballet departed from tradition by ending a *pas de deux* with an actual kiss in its "Love Dance" section. The gavotte of this ballet is cribbed from its composer's *Classical Symphony*. The most popular instrumental piece from this ballet is the "Dance of the Knights". Music from this ballet was rearranged into three (\*)** orchestral suites by its composer. Based on the fact that "the living can dance, the dying cannot", the original version of this ballet traded the tragic ending of its source with a happy ending, where a title character is stopped from drinking poison in the nick of time. For 10 points, name this Prokofiev ballet based on a Shakespeare play about two lovers.  
ANSWER: ***Romeo and Juliet*** <SJ, ed.>

2. **In a poem set during this event, Dai Greatcoat claims to have been present at the crucifixion of Jesus, and “The Queen of the Woods” is observed distributing garlands by a fictional character named John Ball. This event gave rise to “the modern *versus* habit” and was “more ironic” than any such event before or since, according to a Paul Fussell book whose title pairs it with *Modern Memory*. David Jones’s “In Parenthesis” is set during this event, as is a poem whose speaker “escaped down some profound dull (\*)** tunnel” and encountered a man whose “dead smile” revealed that “we stood in Hell”. A Jessie Pope poem advocating this event prompted another author to write a poem that begins “Bent double, like old beggars under sacks” and describes a man “guttering, choking, drowning” during a gas attack. For 10 points, name this conflict that inspired the poems “Strange Meeting” and “Dulce et Decorum Est” by Wilfred Owen.  
ANSWER: **World War I** [or **WWI**; or the **Great War**] <RC>

3. **With Henry Robinson, this author analyzed *The Skin of our Teeth* as an appropriation from *Finnegan’s Wake*, from which he borrowed a name for one of his concepts. This author used the phrase “Master of Two Worlds” to describe transcendental figures like Gautama and Jesus. This author borrowed a term from Adolf Bastian to describe ethnic variations called “folk ideas”, which are contrasted with universal “elementary ideas.” A diagram of a (\*)** circle cut into uneven semicircles represents this author’s idea of the cycle of “separation - initiation - return” that begins with the “call to adventure.” This author used the word “monomyth” to describe a cross-cultural story pattern exemplified by characters like Cu Chulainn and Perseus. For 10 points, name this author of *The Masks of God* and *The Hero With a Thousand Faces*.  
ANSWER: Joseph **Campbell** <WA>

4. **Widukind of Corvey plagiarized a speech from Maccabees and attributed it to this man, who fought in a battle detailed in the Annals of St. Gall. Gerhard’s biography of St. Ulrich also contains many details of the reign of this man, who suppressed revolts by Conrad of Lotharingia and his half-brother Thankmar. After an escape from the castle of Lake Garda and the poisoning of Lothair II, he married (\*)** Adelaide and became king of the Lombards. This ruler descended into Italy in order to fight the usurper Berengar II and this ruler appointed his brother as archbishop of Cologne. This man relieved the siege of Augsburg before defeating forces led by Lel and Bulcsu. This victor at the Battle of Lechfeld was the son of Henry the Fowler and was crowned by Pope John XII in 962. For 10 points, name this first Germanic Holy Roman Emperor with the epithet “the Great”  
ANSWER: **Otto I** [or **Otto the Great**; accept just **Otto** after “the Great”] <DF, ed.>

5. **A model of this phenomenon that uses a tridiagonal transition matrix and has absorbing states at 0 and N is the Moran model, which adds timesteps to a model that assumes no generational overlap. This phenomenon is dominant in systems whose Tajima’s D is equal to zero. When this is the only phenomenon acting, the time to fixation is equal to four times n sub e. A theory which posits that most instances of fixation are actually due to this phenomenon was developed by (\*)** Motoo Kimura and is called neutral theory. Wright and Fisher developed an early model of this process, which is more powerful for smaller populations and occurs due to random sampling. Examples of this effect include the bottleneck effect and the founder effect. For 10 points, name this phenomenon in which alleles change over time due to random variation.  
ANSWER: genetic **drift** [prompt on things like “random mutation” or “random variation” or “neutral variation”] <EM>

6. **In one story about this holiday, Rabbi Levi Yitzchak of Berditchev cried after a shoe mender asked him if he needed anything mended before this holiday came. This holiday occurs shortly before the Fast of Gedalia. One ritual done during or just after this holiday involves going to a body of water and shaking out one’s pockets to symbolize casting off sins; that ritual is called the (\*)** Tashlich. Elul is a time period immediately preceding this holiday. On this holiday, apples dipped in honey are eaten. For 10 points, name this first of the High Holy Days, which begins on the first day of Tishrei ten days before Yom Kippur, and commemorates the Jewish new year.   
ANSWER: **Rosh Hashanah** [prompt on “Jewish New Year” or “New Year” before the end; prompt on “High Holy Days” or “Ten Days of Awe” before “High” is read] <PL>

7. **A group of mathematical constructs used to describe these phenomena is made simpler to use via Noll ordering, and which act as a basis over a circular support. Schwarzschild's perturbation eikonal was originally used to study these phenomena. The nisen bokeh effect occurs when overcorrecting for one of these, which is least noticeable within the circle of least confusion. Third-order ones are described by the Seidel coefficients, and in general they can be described using (\*)** Zernike polynomials. Two versions of this phenomenon occur due to different wavelengths having different speeds and a device not being parabolic; those versions are the “chromatic” and “spherical” varieties, the latter occurring because rays do not cross at the focal point. For 10 points, name these optical phenomena in which images are distorted.  
ANSWER: optical **aberration** <EM>

8. **One of this author’s characters retires to the countryside to write the book *Autobiography of a Prisoner* and is often referred to as “the ticket-of-leave apostle”. Another of this author’s characters encounters two ominous women knitting black wool while applying for a job recently vacated by the late Fresleven. In one of this man’s books, Michaelis and “the Professor” are among those investigated by Chief Inspector Heat. Ossipon elopes with, then abandons, (\*)** Winnie after the latter learns that her brother Stevie was killed in an attempted bombing of Greenwich Observatory in this man’s novel about Mr. Verloc. The narrator of a novel by this man encounters a Russian harlequin and tells his story from the deck of the *Nellie*. For 10 points, name this author of *The Secret Agent*, who wrote of Charlie Marlow’s search for the ivory trader Kurtz in *Heart of Darkness*.  
ANSWER: Joseph **Conrad** [or Józef Teodor Konrad **Korzeniowski**] <RC>

9. **A painting by this artist shows a bronze-armored man pointing his finger in the air while looking at a deceased general with a blue curtain behind him. An angel in blue swoops in to touch a man in red as a shawl-cad Mary looks back along the road in this artist’s version of *The Flight Into Egypt*. In a painting by this artist, a child is blowing bubbles at the foot of a sculpture of Janus while Eos drops (\*)** flowers as she races out in front of a god who holds a giant silver ring. This artist of *The Death of Germanicus* painted a chariot racing over four frolicking participants near an old man with a lyre in one painting, while another painting shows two shepherds pointing at a phrase inscribed on a brown tomb. For 10 points, name this French neoclassical artist of *A Dance to the Music of Time* and *Et in Arcadia Ego*.  
ANSWER: Nicolas **Poussin** <WA>

10. **An agreement signed in this city ended the monopoly of the *cohong* and the Thirteen Factories. This city was the formal base of power of a man who led the Jintian Uprising, promoted female equality, and replaced the Confucian classics with the Bible in civil service examinations. The missionary John Magee documented an event in this city, which is where an agreement granting four new (\*)** treaty ports was signed. Until its capture by the Ever Victorious Army, this city was the capital of the Taiping Heavenly Kingdom. A contest to kill 100 people using a sword took place during a massacre in this city, which names the treaty that ended the First Opium War. For 10 points, name this city where a so-called “Rape” was perpetrated by Japanese soldiers.  
ANSWER: **Nanjing** [or **Nanking**; prompt on “Southern Capital”] <WA>

11. **After this man’s death, a group betrayed by the herald Leos attempted to seize his kingdom; that group, the Pallantides, were his nephews. This man was jealous after Androgeus won a series of games he put on, then asked him to capture the Marathonian Bull. This man was instructed by an oracle to not loosen the wineskin until reaching the “heights” of his city. After visiting King Pittheus of Troezen and sleeping with his daughter Aethra, this man placed his shield, sandals, and sword (\*)** underneath a rock so that he could identify his son. This man fathered Medus with Medea, who attempted to poison a visitor to his kingdom until he recognized him as his son. This man died after that son didn’t change his sails from black to white after killing the Minotaur. For 10 points, name this King of Athens and mortal father of Theseus, who died by jumping into his namesake sea surrounding Greece.  
ANSWER: **Aegeus** <EM>

12. **Because a leader of this political cause represented “nothing better than the old idea of a middle-class republic”, he was dismissed as “that everlasting old ass” by one author. The public holding company IRI attempted to fix an inequality resulting from the success of this political initiative that is part of the “Southern Question.” A French ruler agreed to support this political cause as part of the Pact of Plombières. A battle during a war fought over this cause prompted the founding of the (\*)** International Red Cross. An early society dedicated to this cause was known as the “coal burners.” This goal was furthered when the Battle of the Volturnus resulted in the capture of an island by the red shirts in the Expedition of a Thousand. For 10 points, name this goal of the *Risorgimento* which resulted in the creation of a country with capital Rome.  
ANSWER: **unification** of **Italy** [accept equivalents like the **creation** of **Italy** or the **independence** of **Italy** from Austrian or other foreign rule; or **Risorgimento** and translations before it is read; anti-prompt on things like “reunification of Sicily into Italy” or “unification of Tuscany”] <WA>

13. **The disjunctive class of this property is split into stylolitic, anastomosing, rough, and smooth types. The mylonitic subclass of this property is formed during ductile shearing. If a rock with this property becomes folded and microfolds are created, a crenulation has resulted. This property replaces bedding fissility before the growth of porphyroblasts. It often arises due to differential pressure creating a preferred orientation, especially when the source rock is a (\*)** phyllosilicate. Because contact metamorphism typically occurs at high temperatures but low pressures, the rocks it forms, like hornfels, notably lack it. For 10 points, name this metamorphic texture that imparts a characteristic planar structure to rocks and which is prominent in gneiss and schist.  
ANSWER: secondary **foliation** [or **cleavage**; prompt on **lineation**, **schistosity**, or gneiss **band**ing] <CV>

14. **One of this author’s characters awaits the coming of his “redeemer” and speaks of nine men who come every nine years so he can “deliver them from evil”. Another of his characters encounters a blind beggar in a mosque who relieves him of the burden of some constantly-multiplying stones. This author created a character who is revealed by Theseus to be the Cretan Minotaur. This author of “Blue Tigers” also wrote a story whose protagonist evades the pursuit of Captain (\*)** Richard Madden by visiting the house of Dr. Stephen Albert, who is delighted to meet a descendant of Ts'ui Pen. Another story by this author of “The House of Asterion” describes an endless universe of hexagonal rooms containing all possible books. For 10 points, name this Argentine author of *Ficciones* who wrote “The Garden of Forking Paths” and “The Library of Babel”.  
ANSWER: Jorge Luis **Borges** [or Jorge Francisco Isidoro Luis **Borges**] <SJ, ed.>

15. **This tome’s preface claims that its opinions are very similar to Brentano’s *Origin of the Knowledge of Right and Wrong,* and that Brentano, too, loves beautiful things. This book’s last chapter, which is titled “The Ideal”, seeks to divide the class of things that are great goods or great evils by examining the “consciousness of the object.” The third chapter of this book, which contains a criticism of Mill’s *Utilitarianism,* refutes hedonism as a choice of doctrine that is compatible with this book’s subject. This treatise was used by (\*)** Virginia Woolf and other members of the Bloomsbury Group as the basis for their aesthetics. Its author borrowed the idea of moral intuitions from his teacher, Henry Sidgwick, to argue that, once the naturalistic fallacy has been removed, those intuitions can be used to determine what is right and what is wrong. For 10 points, name this book on ethics by G.E. Moore.  
ANSWER: ***Principia Ethica*** <Ike>

16. **This periodical first published a story in which Dugal McAdoo hires a witch to prevent slaves from eating his scuppernongs. An influential article written for this publication averred that “amid the vast range of human powers and properties, the fact of sex is but one item”. That article, “Ought Women to Learn the Alphabet?”, was written for this publication by Thomas Wentworth Higginson, whose “Letter to a Young Contributor” in this magazine inspired (\*)** Emily Dickinson to contact him. This magazine published the early stories of Charles Chesnutt, as well as Julia Ward Howe’s “Battle Hymn of the Republic”. Its longtime editors have included William Dean Howells and one of its co-founders, James Russell Lowell. For 10 points, name this literary magazine founded in 1857 in Boston and named for a nearby body of water.  
ANSWER: *The* ***Atlantic*** *Monthly* <RC>

17. **A set of forty études for this instrument were written by David Popper and are titled *High School of [this instrument] Playing*. The most perfect performer of this instrument was Pierre Fournier. The last movement of Brahms's Opus 38, a duo-sonata for this instrument in E minor, quotes a theme from *Art of Fugue* and combines elements of the fugue and sonata. Brahms's Opus 99, often paired with Opus 38, is another sonata for this instrument, except in F major, that oddly, for Brahms, features tremolando playing in the piano. A concerto for this instrument establishes the key of (\*)** E minor by unusually opening with a four bar recitative for the soloist. That concerto is extremely associated with Jacqueline Du Pré's interpretation and was composed by Elgar. For 10 points, name this string instrument that's deeper pitched than the viola and violin and which is played by Yo-Yo Ma.  
ANSWER: violon**cello** <CV>

18. **This province contains the eastern half of a greenstone-mining belt jointly named for Snow Lake and a city named after the fictional Josiah Flintabbatey Flonatin. The largest population of Icelanders outside of Iceland is around the municipality of Gimli in this province whose capital contains the Exchange District and The Forks**. **British conservationist Grey Owl was an animal caretaker at this province’s Riding Mountain National Park and its city of (\*)** Churchill is nicknamed the “Polar Bear Capital of the World.” Much of this province is in the bed of the prehistoric Lake Agassiz and it is the only prairie province with coastline, since its northeast borders Hudson Bay. For 10 points, name this Canadian province between Ontario and Saskatchewan whose largest lake shares a name with its capital, Winnipeg.  
ANSWER: **Manitoba** [or Le **Manitoba**] <PL>

19. **This element is coordinated to thiol groups after reacting a protein with the FLASH-REASH reagent. It’s not silver, but heating this element with carbon forms a black namesake “mirror”. A compound of this element with molybdenum is used in the Nelson-Somogyi method of determining blood sugar. With all-trans-retinoic acid, an oxide of this element is used to treat acute promyelocytic leukemia. One method of testing for the presence of this element involves forming hydrogen by reacting zinc and (\*)** nitric acid, then reacting it with the sample; that is the Marsh test. This element is often used to dope gallium to form a direct-bandgap semiconductor. Paul Erlich’s syphilis drug, Salvarsan, contains this element, and it also inhibits pyruvate dehydrogenase and succinate dehydrogenase. For 10 points, name this poisonous element with atomic number 33 and symbol As.  
ANSWER: **arsenic** [or **As** until it is read] <EM>

20. **Harry Anslinger was infuriated by the results of a committee commissioned by this man that contradicted the gateway drug theory of marijuana. This politician once read comics over the radio while newspaper writers were on strike and summarized his bipartisan attitude by saying “there is no Democratic or Republican way to clean the streets.” He appointed Thomas Dewey prosecutor as part of his effort to “drive the bums out of town.” This mayor used federal (\*)** Civil Works Administration money to allow Robert Moses to rebuild infrastructure and first won office by defeating Jimmy Walker. Lucky Luciano was arrested during the tenure of this mayor, after whom a law banning yellow-dog contracts was partly named. He won office on a fusion ticket against Tammany Hall. For 10 points, name this New Deal-era Mayor of New York for whom an airport is named.  
ANSWER: Fiorello Henry **La Guardia** <WA>

Bonuses

1. This man’s son of the same name designed the Great Theater at Epidaurus, and this man espoused the principles of symmetria and insomnia in his *Kanon*. For 10 points, name this  
[10] Name this ancient Greek sculptor who created a gigantic statue of Hera for the Heraion of Argos. He may be better known for his *Doryphoros*, or *Spear-Bearer*.  
ANSWER: **Polykleitos** [or **Polyclitus**]  
[10] Another sculpture by Polykleitos depicts an athlete carrying one of these items. A man about to throw one of these objects, standing in a bent pose, is the best-known sculpture of Myron.  
ANSWER: **disc**us  
[10] Polykleitos, Lysippos, and several others also created sculptures of this standard subject, an athlete removing sweat and grime from their bodies using a stigil.  
ANSWER: the **Scraper** [or **Apoxyomenos**] <PL>

2. Valentine becomes elected leader of a band of outlaws outside this city, whose duke attempts to marry his daughter Silvia to Thurio, in *Two Gentlemen of Verona*. For 10 points each:  
[10] Identify this Italian city. Prior to the events of another Shakespeare play, Antonio usurps the dukedom of this city from his brother Prospero.   
ANSWER: **Milan**[10] Antonio’s ship is wrecked on an island inhabited by the exiled Prospero, his daughter Miranda, and the sylph Ariel at the beginning of this play.  
ANSWER: *The* ***Tempest***[10] This character, Antonio’s butler, plots with the jester Trinculo and Caliban to overthrow Prospero during *The Tempest*. Caliban worships this character in gratitude for the latter’s gift of wine.  
ANSWER: **Stephano** <RC>

3. Answer the following about the eugenics movement in the United States. For 10 points each:  
[10] This governor of New Jersey signed a law in 1911 authorizing the sterilization of the “feeble-minded...and other defectives.” He also notably praised *The Birth of a Nation*.  
ANSWER: [Thomas] Woodrow **Wilson**  
[10] The eugenicist Margaret Sanger founded this organization to promote access to birth control. A branch of this organization sued restrictions on abortions imposed by the state of Pennsylvania in 1992.  
ANSWER: **Planned Parenthood** Federation of America [or **PPFA**]  
[10] Paul Popenoe reports on the results of eugenics experiments in this state were cited by the Nazis. Dolores Madrigal sued a university hospital in this state for sterilizing her against her will.  
ANSWER: **California** [or **CA**] <WA>

4. Cinchona alkaloids and quaternary ammonium salts can act as these substances by carrying reactants to a single phase, and a key parameter characterizing porous ones is the Thiele modulus. For 10 points each:  
[10] Name these substances that decrease the activation energy of a reaction.  
ANSWER: **catalysts**  
[10] Speaking of moving things from one phase to another, this procedure uses a separatory funnel, pipet, or other device to selectively remove one phase. Phenol-chloroform is used to do this to DNA.  
ANSWER: liquid-liquid **extraction** [or **partitioning**]  
[10] A type of supramolecular catalysis relies on this macrocyclic molecules, which are condensation products of a phenol and an aldehyde. They get their name from their chalice-like shape.  
ANSWER: **calixarene**s <EM>

5. This theory is often contrasted with theories that business cycles are caused by market failures, such as the inability of a market to clear. For 10 points each:  
[10] Name this theory of the business cycle, which states that economic recessions are efficient responses to exogenous shocks to the economy and production function.  
ANSWER: **real business cycle** theory [or **RBC**T]  
[10] A “real” shock to the economy can be represented by a movement of curve representing the “aggregate” of this function to the left. This function represents the willingness of producers to provide a product at a given price.  
ANSWER: **supply** function/curve  
[10] Real business cycle theory is associated with this tradition, which encompasses neoclassical schools like those at Chicago and CMU. This geographically named school contrasts with a more Keynesian approach advocated on the East and West Coast.  
ANSWER: **freshwater** economics [as opposed to the saltwater economists of the coasts] <WA>

6. With Ki, this figure was the father of a god who tore heaven and earth apart from each other, and he was also the consort of Nammu and Uras. For 10 points each:  
[10] Name this Sumerian sky god who formed a triad with Enlil and Enki.  
ANSWER: **Anu** [or **An**]  
[10] Anu and Antu were the parents of the utukki, a group of *this many* evil demons. Ebisu was among the “lucky gods” of this number in Shinto, and this is also the number of Pleiades.  
ANSWER: **seven**  
[10] Anu and Uras were the parents of this goddess, the mother of Gilgamesh.  
ANSWER: **Ninsun** <EM>

7. This company couldn’t make much profit from its original purpose, so it began a scheme to refinance government debt. For 10 points each:  
[10] Name this company, whose stock collapse prompted action by Robert Walpole. This company was nominally created to take advantage of slave-shipment rights called the *asiento*.  
ANSWER: **South Sea** Company [or The Governor and Company of the merchants of Great Britain, trading to the **South Sea**s and other parts of America, and for the encouragement of fishing]  
[10] The *asiento* was granted to Britain by the Treaty of Utrecht that ended this war, during which a coalition of European powers, including Britain, ended Louis XIV’s ambitions to put his son on an Iberian throne.  
ANSWER: War of the **Spanish Succession** [anti-prompt on “Queen Anne’s War”]  
[10] This Scottish economist used an effective advertising campaign to generate belief that his Mississippi Company could generate far more profit than it actually could. The resulting collapse ruined his Banque Générale.  
ANSWER: John **Law** <WA>

8. The town drunk Danny Taylor commits suicide after willing a strip of land important in the building of an airport to this novel’s protagonist, who takes over a grocery store after reporting Alfio Marullo to the INS. For 10 points each:  
[10] Identify this novel about the moral decay of Ethan Allen Hawley, whose son plagiarizes famous speeches for an essay on “Why I Love America”.  
ANSWER: *The* ***Winter of Our Discontent***[10] Kino attempts to sell the title object of this novella by the same author in order to pay for medical treatment for his scorpion-stung son Coyotito, though his wife Juana attempts to throw it into the ocean to dispel its curse.  
ANSWER: *The* ***Pearl***[10] *The Winter of Our Discontent* and *The Pearl* were both written by this Californian author of *East of Eden* and *The Grapes of Wrath*.  
ANSWER: John **Steinbeck** [or John Ernst **Steinbeck**, Jr.] <RC>

9. This algorithm is used in the quickselect algorithm. For 10 points each:  
[10] The canonical formulation of this deterministic algorithm chooses an element lying between the 30th and 70th percentile rank of the range of the data set. This algorithm groups every five entries in the data set, and picks the middle elements of each group, then recurses on those middle elements.  
ANSWER: **median of medians** algorithm [or **BFPRT**; or **Blum-Floyd-Pratt-Rivest-Tarjan**; or **Blum, et al.**]  
[10] The median of medians can be used as a selection algorithm for the pivot of this sorting algorithm, proposed by C.A.R. Hoare. Despite having a worst case of “big-O of n-squared,” it normally performs faster than other sorts with the same best case of “big-O of n log n.”  
ANSWER: **quick**sort [or **partition-exchange** sort]  
[10] The median of medians algorithm has this best case time complexity. It's the average time complexity when performing a brute-force search on an array. Please give a tight bound.  
ANSWER: **linear** [or big O of **n**] <DX>

10. This painting hung in the monastery at San Giorgio Maggiore for 235 years before it was plundered by Napoleon and shipped off to Paris. For 10 points each:  
[10] Name this massive oil painting, which shows Suleiman the Magnificent among numerous historical figures seated at a massive table, at whose center Jesus sits.   
ANSWER: *The* ***Wedding at Cana***  
[10] Paolo Veronese, the painter of *Wedding at Cana*, created a version of this scene which he later retitled *Feast in the House of Levi* at the Church’s request. Da Vinci made notable use of perspective in his depiction of this scene.  
ANSWER: The **Last Supper** [or **Il Cenacolo**; or **L’Ultima Cena**]  
[10] This man appears anachronistically dressed in pink Renaissance-era clothing in a Veronese painting of people kneeling before him. Another anachronistic depiction of this man is a “world landscape” that shows a massive fictitious mountain near Cyprus in the background.  
ANSWER: **Alexander the Great** [or **Megas Alexandros**; or **Alexander III** of Macedon] <WA>

11. It is equal to two times the principal quantum number times energy squared all over m c squared. For 10 points each:  
[10] Name this term found in the Hamiltonian of the hydrogen atom, which raises the energy of the 2s orbital to be equal to the 2p orbital.  
ANSWER: **Darwin** term  
[10] The hydrogen atom obeys a potential based on this law, which states that the force between a pair of charges is proportional to the product of the charges over the square of the distance between them.  
ANSWER: **Coulomb**’s law  
[10] The screened Coulomb potential, on the other hand, is sometimes named for this scientist, who also names an interaction between a scalar field and a Dirac field and predicted the existence of the pion.  
ANSWER: Hideki **Yukawa** <EM>

12. Answer the following about ways government can take property from private citizens in the United States without trial, for 10 points each.  
[10] This process of buying back private land is constitutionally limited to “public use” for which the owner is given “just compensation” by the Takings Clause in the Fifth Amendment.  
ANSWER: **eminent domain**  
[10] Law enforcement officials can use this procedure during a roadside stop to seize suspicious cash in a vehicle without an indictment. A series of 2014 articles by the Washington Post criticized its overuse on state highways.  
ANSWER: civil asset **forfeiture** [or civil **forfeiture**; or **Equitable Sharing** program]  
[10] SWAT teams can get warrants for these raids, which do not require announcing one’s presence before entering, if they believe evidence would be destroyed due to their announcement. Cato Institute fellow Radley Balko drew attention to them in the mid-2000s.  
ANSWER: **no-knock** police raids [or **no-knock** warrants; prompt on “SWAT team raids,” “drug raids,” etc.] <MJ>

13. One of these dedicated to Kali usually takes place in the month of Kartika on the day of the new moon. For 10 points each:  
[10] Give this name of Hindu prayer celebrations. The one dedicated to Saraswati typically features students placing their textbooks at the feet of said goddess.  
ANSWER: **puja**  
[10] Durga puja typically occurs during this Hindu festival, in which celebrants light candles to guide Rama home.  
ANSWER: **Diwali** [or **Deepavali**]  
[10] This other Sanskrit word means “festival”. The “Kumbh” one features a large pilgrimage to bathe in the Ganges river.  
ANSWER: **Mela** <EM>

14. Answer the following about some geographically-related novels, for 10 points each.  
[10] The title character’s desire to lure Susana San Juan back to the town of Comala drives much of the backstory of this novel, whose first half is narrated by Juan Preciado.  
ANSWER: ***Pedro Paramo*** [by Juan Rulfo]  
[10] The yet-untranslated *Federico en su Balcon* was the last novel published by this author, who fictionalized the disappearance of Ambrose Bierce in *The Old Gringo* and wrote *The Death of Artemio Cruz*.  
ANSWER: Carlos **Fuentes** Macias  
[10] This author made his name by writing novels of the Mexican Revolution, most prominently a tale of Luis Cervantes and Demetrio Macías called *Los de Abajo*, or *The Underdogs*.  
ANSWER: Mariano **Azuela** Gonzalez <RC>

15. Victor Raúl Haya de la Torre originally founded this party, which was accused of cutting a deal with Alberto Fujimori to assure his election. For 10 points each:   
[10] Name this oldest political party in Peru.   
ANSWER: **APRA** [or **American Popular Revolutionary Alliance**]  
[10] This Peruvian winner of the Nobel Prize for Literature was the leader of the Democratic Front ousted in Fujimori’s self-coup. His historical novels include *The War of the End of the World* and *The Feast of the Goat*.  
ANSWER: [Jorge] Mario [Pedro] **Vargas Llosa**, 1st Marquis of Vargas Llosa  
[10] The suppression of this Communist revolutionary organization was the primary success of Fujimori’s first term in office. Partygoers thought to be members of this group were killed in the Barrios Altos massacre.  
ANSWER: **Shining Path** [or **Sendero Luminoso**] <WA>

16. The introduction to this poem features Peter the Great vowing to “open a window into Europe” by building a city. For 10 points each:  
[10] Identify this poem whose main character Evgenii is driven mad by Parasha’s death in a flood of the Neva, which later causes him to curse, and then be killed by, the title effigy.  
ANSWER: “The **Bronze Horseman**: A Petersburg Tale” [or “**Mednyi vsadnik**: Peterburgskaya povest”; accept “copper” for “bronze”]  
[10] “The Bronze Horseman” was written by this Russian poet, who also wrote the play *Boris Godunov* and the verse novel *Eugene Onegin*.  
ANSWER: Alexander Sergeyevich **Pushkin**[10] Orlik interrogates the nobleman Kochubei in a scene from this historical poem by Pushkin, whose main character elopes with Kochubey's daughter Maria but dies after leading a rebellion.  
ANSWER: “**Poltava**”

17. This philosopher described perception through the order of nature as an unreliable form of “knowledge from random experience.” For 10 points each:  
[10] Name this philosopher, who criticized the notion of God having an end goal as being born out of fear in a treatise which argues that Moses did not write the Torah, since it was clearly a compilation.  
ANSWER: Baruch **Spinoza**  
[10] Spinoza’s most famous treatise is this one, written in geometrical order. It describes God as being equivalent to nature and having infinite attributes.  
ANSWER: ***Ethics****, Demonstrated in Geometrical Order* [or ***Ethica****, ordine geometrico demonstrata*]  
[10] Spinoza, like other philosophers of his time, gave this Latin name to the existential inertia that constitutes the essence of any given being.  
ANSWER: **conatus** <WA>

18. The hexactinellida class of these organisms have skeletons made of silica spicules, which is why researchers refer to them as “glass”. For 10 points each:  
[10] Name this very simple phylum that contains the sponges.  
ANSWER: **Porifera**[10] The immune system of porifera consists of a group of graft-destroying cells described by this adjective. A structure described by this adjective in Xenopus development is a “crescent” which later develops into the Nieuwkoop center.  
ANSWER: **gray** [or **grey**]  
[10] The excretory system of a sponge consists of these holes, whose size is controlled by myocytes. They eject water after it has passed through the mesohyl.  
ANSWER: **osculum** [or **oscula**] <EM>

19. This city was the capital of a kingdom in Asia Minor ruled by the Attalid Dynasty. For 10 points each:  
[10] Name this city that contained a namesake altar showing the Gigantomachy. Its library was second only to that of Alexandria. In 133 BCE, it was bequeathed to Rome by its last ruler, Attalus III.  
ANSWER: Kingdom of **Pergamon** [or **Pergamum**]  
[10] Like Attalus III, Bithynia was bequeathed to Rome after the death of its last ruler, who was the fourth Bithynian king to hold this name. The second Bithynian king of this name rebuilt his capital and named it after himself.  
ANSWER: **Nicomedes** IV [or **Nicomedes** II]  
[10] This scholar from Pergamon documented the Antonine Plague, which is sometimes named for him. Vesalius and Harvey disproved this physician’s theories on anatomy and circulation after millennia of acceptance.  
ANSWER: Aelius **Galen**us [or Claudius **Galen**us; or **Galen** of Pergamon] <PL>

20. A performance of this composer's *Trois Morceaux* by him and Ricardo Viñes inspired Jean Cocteau to collaborate with him on *Parade*. For 10 points each:  
[10] Name this French composer, cabaret pianist, dadaist, and minimalist who composed the *Gymnopédies*.  
ANSWER: Erik **Satie** [or Éric Alfred Leslie **Satie**; or Virginie **Lebeau**; or François de **Paule**]  
[10] Satie composed three examples of this Baroque dance, the second oddly subtitled "à Maurice Ravel". Baroque-era suites most often included this slow, triple-meter dance with the allemande, courante, and gigue.  
ANSWER: **sarabande**  
[10] The sarabande from the fifth of these compositions contains no chords. These compositions all have six movements, of which the fourth is a sarabande, and Pablo Casals is responsible for their popularity.  
ANSWER: J.S. **Bach**'s six solo **cello suite**s [or **Six suites for unaccompanied cello**; or **Six unaccompanied cello suite**s] <CV>