

2016 MYSTERIUM: “I quiz all sounds, all thoughts, all everything”

Packet 10 – jurowski

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Tossups

1. In a novel from this country, a family is lent rat poison by a man who photographs the burning of a van which had distributed vomit-inducing powdered milk. In a novel from this country, the protagonist refuses to answer when his uncle questions him about a phrase meaning “Mother is Supreme.” After boxing Green Leopard, the father of the protagonist of a novel from this country decides to beat the Party of the Rich, which patronizes (*) Madame Koto’s bar. A novel from here depicts a girl being carried by a sleepwalking oracle and includes the story of a turtle who cracks his shell after attending a feast of the birds. *The Famished Road* is from this country, as is a novel whose protagonist hangs himself after decapitating a messenger of the district commissioner. For 10 points, name this modern country home to Okonkwo in Achebe’s *Things Fall Apart*.

ANSWER: Nigeria

<JB Other Literature>

2. An inquiry into limiting the sale of this commodity sparked the Webster–Hayne debate and was called the Foot Resolution. An act concerning this resource was modified by the 1904 Kinkaid Act. The exchange of this resource for the funding of indentured servants formed the basis of the Headright System. A 6-by-6 grid was included in a 1785 (*) ordinance named for this resource, which was followed by the Northwest Ordinance. Levi Woodbury authored a decree which required that this resource be purchased with gold or silver money, the Specie Circular. The 1862 Morrill Act gave this resource to states to allow the establishment of a namesake type of “grant colleges.” For 10 points, name this resource, massive amounts of which were transferred to the United States by the Louisiana Purchase.

ANSWER: public lands [or obvious equivalents like property, territory, etc.]

<JB American History>

3. Molecules which contain a sterically-hindered frustrated Lewis acid-base pair, like phosphine-boranes, can be used to catalyze a variant of this reaction through the formation of an active zwitterionic species. One catalyst of this reaction contains a pair of diphenyl-phosphino-naphthyl groups attached at the 1-positions, gaining chirality due to an increased barrier to rotation in the naphthyl–naphthyl single bond. That BINAP ligand is used in the Noyori asymmetric variant of this reaction. Another homogenous catalyst for this process contains iridium(I) (“one”) coordinated to pyridine, phosphine, and cyclooctadiene ligands; that is (*) Crabtree’s catalyst, an improvement on Wilkinson’s rhodium-based method. Most commonly, this reaction is heterogeneously catalyzed using solid palladium on carbon, platinum oxide, or Raney nickel. It often transforms double and triple bonds to single bonds. For 10 points, name this reaction that involves adding hydrogen gas to reduce multiple bonds.

ANSWER: hydrogenation

<SP Chemistry>

4. Although its vaulting is sexpartite, this building displays no visible alternation of “weak” and “strong” main piers. This building is often contrasted with a nearly contemporary one in Laon. This building has a portal of Saint Anne to the right of the traditional Last Judgment portal. The highly symmetrical west façade of this building includes two rectangular towers and a perfect-square frame for its rose window, which acts as a “halo” for a statue of the Virgin and Child with two angels. This building was a major influence on Bourges (“boorj”) and (*) Chartres (“shart”), since it was only the second cathedral to have double aisles, after Saint-Denis (“san duh-NEE”). Most of its gargoyles were added in an 1845 restoration led by Eugène Viollet-le-Duc (“oo-JEN vee-oh-LAY luh dook”). Due to its thin, extremely high walls, this building was the first to include flying buttresses. This was by far the largest building of the twelfth century. For 10 points, name this Gothic cathedral of Paris.

ANSWER: Notre-Dame de Paris [accept answers like “the Cathedral of Paris” until it is read]

<JR Other Arts>

5. Before this event, its central figure prepares a gift of 200 female goats and 30 female camels, among other animals. After this event, the central figure lies by saying “If my young animals are driven hard just one day, they will die,” in order to avoid accompanying a figure to Se’ir. It’s not the Birth of Samson, but one figure involved in this event refuses to give his name, instead asking “why do you ask my name?” Jews cannot eat the (*) thigh tendon because of this event. The place where it occurred is called Peniel. A character involved in this event claims to have “seen God face to face,” and this event lasts from night to the break of day. Because of this event, its central character is given the name Israel. For 10 points, name this event described in Genesis, in which the younger son of Isaac grapples with a divine figure.

ANSWER: Jacob wrestling the Angel [accept any answer that indicates “Jacob wrestling a divine figure”; do not accept answers using the name “Israel,” since he was not called that until afterwards]

<LL Religion>

6. A member of this family calls a character “von Sohn” after a man who was killed in a brothel and put in a shipping crate. A member of this family attends the bedside of a dying boy who feels guilty for feeding a pin to a dog and had bitten him on the finger at their first meeting. In a dream, a man from this family is told the story of a philosopher condemned to walk a quadrillion kilometers by a shabby gentleman claiming to be the devil. A member of this family watches the exhumation of the putrid corpse of his (*) mentor. A member of this family believes “If God does not exist, everything is permitted” and tells a story about Jesus’s arrest by the Inquisition. After being framed by his epileptic half-brother, a member of this family is sentenced to hard labor for the murder of his father. For 10 points, name this family of Ivan, Dimitri, and Alyosha, the title brothers of a Fyodor Dostoevsky novel.

ANSWER: Karamazov family

<JB European Literature>

7. *Description acceptable.* A traditionalist association of these people called the Gédímù (“guh-dee-mu”) was later supplanted by the nationalist Yìhèwǎnǐ. Dǒng Fúxiáng (“foo-shyong”) organized a militia made up of these people called the Gānsù Braves. Three notable members of this religious group were collectively known as the Xīběi (“shee-bay”) Sān Mǎ; those members of the Mǎ family were ethnically (*) Huí (“hway”) warlords. A subgroup of this religious group rebelled against the Qīng during the Dungan revolt. The eunuch and Míng dynasty explorer Zhèng Hé (“jung-huh”) was a member of this religious group. An army of this religious group defeated the Táng dynasty at the Talas River. For 10 points, name this religious group that includes many residents of Xīnjiāng, such as the Uyghurs, which is associated with the independence movement for East Turkestan.

ANSWER: Chinese Muslims [or Chinese followers of Islam; accept Huí until it is read]

<WC World History>

8. If the rotation numbers that define an allowed segment of phase space with this shape are sufficiently far from being rational, then that shape will not be destroyed under perturbations. That consequence of the Kolmogorov–Arnold–Moser theorem applies to “invariant” ones of these shapes that are defined by action-angle coordinates. Born–von Kármán boundary conditions can be visualized as placing a system on the (*) surface of one of these shapes. Confined magnetic fields can be described by poloidal coordinates and coordinates named for this shape. The dz -squared electron orbital has one component with a dumbbell shape and one with this shape, which is also the shape of a tokamak chamber. Popularizers of topology often describe this shape as equivalent to a coffee cup. For 10 points, name this mathematical shape that resembles a donut.

ANSWER: torus

<SE Physics>

9. A recent live release by this man includes an explosive version of “Turnaroundphrase,” previously known as the track “Moja” from his live album *Dark Magus*. One of his albums features bass clarinet player Bennie Maupin. In the late 1960s, this musician worked with the future founder of the Mahavishnu Orchestra. His album *Live-Evil* prominently features Keith Jarrett playing two keyboards, often at the same time. This man recorded twenty-minute tracks like “Shhh/Peaceful” with John (*) McLaughlin. A double album by this man was cited by Thom Yorke as the major stylistic impetus behind *OK Computer*. He recorded a double album featuring “Pharaoh’s Dance” that kick-started jazz fusion. In his “electric” phase, this musician recorded *In a Silent Way* and *Bitches Brew*. He pioneered modal jazz in tracks like “So What” on the best-selling jazz album of all time. For 10 points, name this trumpeter behind *Kind of Blue*.

ANSWER: Miles Davis [Miles Dewey Davis III]

<JR Auditory Arts>

10. This man declared “*Paradise Lost* is one of the books which the reader admires and lays down, and forgets to take up again.” He critiqued the work of Thomas Hanmer in some “Miscellaneous Observations” on *Macbeth*. This man has been misinterpreted as “declaring independence from patronage” in his Letter to Chesterfield. This man discussed his infamous tendency to procrastinate in one of a series of 208 short moralizing essays inspired by *The* (*) *Spectator*. This man, who was famous for his odd gestures and foul mouth, probably had Tourette’s Syndrome. This author of *The Rambler* promised to “correct what is corrupt, and to explain what is obscure” in his edition of Shakespeare’s plays. He critiqued poets like Milton and Gray in his *Lives of the Most Eminent English Poets*. For 10 points, name this 18th-century English author and compiler of *A Dictionary of the English Language*.

ANSWER: Samuel Johnson

<JR Social Science/Thought>

11. A pope with this name allegedly used a hidden speaking tube to torment his predecessor, a peasant who once tried to hang his hat on a sunbeam. Palestrina was razed and sown with salt by a pope of this name as part of his war with the Colonna family. A pope with this name had heralds yell “I am caesar! I am the emperor!” during the first-ever papal jubilee. That pope with this name decried taxation of clergy in (*) *Clericis Laicos* and died shortly after Guillaume de Nogaret slapped him at Anagni. After that pope with this name asserted papal supremacy in *Unam Sanctum*, a king known as “the fair” had him imprisoned and replaced with Clement V, thus beginning the Babylonian Captivity. For 10 points, give this papal name, whose eighth holder feuded with Philip IV and Dante.

ANSWER: Boniface VIII [do not accept any other numbers, since all the clues are about Boniface VIII]

<JB European/British History>

12. A character who writes in *this* genre furiously searches for a pen after being told by a phone operator that there are ten Melanie Fergusons in Bakersfield. A play titled for this genre includes a story set in "Tornado Country" in which a truck pulling a trailer runs out of gas at the same time as the car chasing it. A character in that play titled for this genre steals toasters from around the neighborhood after another character has a (*) golf date with the movie producer Saul. Austin's brother Lee wants to write a "true" story in this genre in a Sam Shepard play. The albino Judge Holden features in a novel in this genre, whose writers include Owen Wister and Zane Grey. For 10 points, name this genre of Cormac McCarthy's *Blood Meridian*, novels in which often feature outlaws and cowboys.

ANSWER: Western [or True West; prompt on "film," "movies," "scripts" or similar answers on the first sentence]
<JB American Literature>

13. The expected number of samplings from this distribution needed to sum to more than one is exactly e . This distribution is equivalent to a beta distribution with 1 for both parameters. If the null hypothesis is true, the distribution of p -values equals this distribution. The joint distribution of arrival times of a Poisson process before some time t has the same distribution as a sample of order statistics from this distribution. The (*) length of its support is estimated by the sample maximum times 1 plus 1 over sample size. This distribution's variance is equal to the length of its support squared over 12, and its mean is halfway between its maximum and minimum values. The cdf of the standard form of this distribution has a line from 0-0 to 1-1, and its pdf is constant at 1. For 10 points, name this distribution whose discrete form assigns equal probability to every event in a sample space, such as rolling one die.

ANSWER: uniform distribution [accept rectangular distribution]
<SP Other Science>

14. Possibly because of its opening section, this text was, randomly, first translated into English by the zoologist H. M. Parshley. It argues that its title group is fated to be "mutilated" or "immanent," as opposed to "transcendent." This book's conclusion claims that its title group enjoys the "incomparable privilege of irresponsibility." This book's first section destroys Friedrich Engels' *The Origin of the Family* in its section "The Point of View of Historical Materialism," and is titled "Facts and (*) Myths." This book, which discusses an "Eternal" version of its title subject, was censored for its second part, "Lived Experience," which includes controversial defenses of abortion and lesbianism, and claims that "marriage always destroys" its title people. Its introduction argues that its title people become "objects" or "the Other" at the hands of men. For 10 points, name this book that declares "one is not born, but rather becomes, a woman," by Simone de Beauvoir.

ANSWER: *The Second Sex* [or *Le deuxième sexe*]
<JR Philosophy>

15. A goddess of this phenomenon is called "She Who Runs Like an Arrow" and wears a pair of antelope horns. The Famine Stele describes a dream in which a god promises to allow this phenomenon to occur again in exchange for the renovation of his temple. The god of this phenomenon is accompanied by a harem of frog goddesses and has saggy breasts and a potbelly. These events were said to begin in two caves beneath Elephantine, and the (*) blue-skinned Hapi personifies these events. Materials left behind by these events are used to create humans on a potter's wheel by a ram-headed god. One myth explains that these events are caused by the tears of a goddess over her husband, whose fourteen body parts she gathers to allow his resurrection. For 10 points, name this yearly event that brought silt and mud to the shores of a body of water associated with Khnum in ancient Egyptian mythology.

ANSWER: floods of the Nile River [or obvious equivalents indicating the overflowing or inundation of the Nile; prompt with "of what?" on "flooding" or similar answers; prompt with "what action?" on "the Nile"]
<JB Mythology/Other>

16. This person's "trophies" were described in the first section of *The Play of the Eyes* by Elias Canetti. The apologetic note to Arnold Schoenberg at the end of Mann's *Doktor Faustus* was made necessary by the "meddling" of this person. This daughter of the doctor Emil Schindler largely edited her pathological anti-Semitism out of her diaries for the memoir *And the Bridge is Love*. Her daughter Manon was the "angel" dedicatee of Berg's Violin Concerto. This woman, whose first kiss was Gustav (*) Klimt, inspired *The Bride of the Wind* and a sex doll made for Oskar Kokoschka. She did not attend the funeral of her last husband, who wrote *The Song of Bernadette*. For 10 points, name this woman who married Walter Gropius, Franz Werfel, and Gustav Mahler.

ANSWER: Alma Mahler [or Alma Gropius; or Alma Werfel; or Alma Maria Schindler]

<JR European/Ancient History>

17. Taxidermied examples of these animals hang from walls in several works of Maurizio Cattelan, whose compatriot Jannis Kounellis tied up twelve of these animals in a studio for one piece. The best-known sculpture of Raymond Duchamp-Villon ("doo-SHOM vee-YON") is a mechanized depiction of the head of one of these animals. A set of Roman sculpture of these animals located at St. Mark's Basilica inspired Johann Gottfried Schadow's designed for (*) quadriga on the Brandenburg Gate. An Étienne Falconet statue featuring one of these animals stands on the Thunder Stone in St. Petersburg. One of these animals features in the best-known sculpture of Frederic Remington, as well as in Donatello's sculpture of the *condottiero* "Gattamelata." For 10 points, name these animals that appear in equestrian sculptures.

ANSWER: horses

<JB Visual Arts>

18. A poem "against" these places criticizes how "Another world was searched, through oceans new, / To find the *Marvel of Peru*" for this kind of place. The line "Till 'Cherry Ripe' themselves do cry" appears in a Thomas Campion poem comparing his lover's face to one of these places. A poem titled for this sort of place mocks men who don't realize "How far these beauties hers exceed" when they carve their lovers' names on trees. That poem describes the mind "Annihilating all that's made / To a (*) green thought in a green shade" in one of them and begins "How vainly men themselves amaze / To win the palm, the oak, or bays." "Sweet and wholesome hours" spent in them are praised in an Andrew Marvell poem titled for this type of place. For 10 points, this sort of place, one of which is the setting of a poem that "justifies God's ways to man," Milton's *Paradise Lost*.

ANSWER: gardens [prompt on "Paradise"]

<JB British Literature>

19. Defects in the gene coding for Claudin-16 can cause both persistently low levels of this ion and renal failure. One of the most common side-effects of cyclosporin A is the inefficient renal reabsorption of this ion. The human proteins SLC41 and TRPM6/7 are suspected transporters of this ion, although generally little is known about passive or active transport of this ion in metazoans. The sulfate salt of this elemental ion is often administered in (*) banana bags to chronic alcoholics. In RNA polymerases, three aspartate residues at the active site stabilize this cofactor. This ion is a cofactor in the enzymes hexokinase, glucose-6-phosphatase, and phospho-fructo-kinase. In the above enzymes, this ion stabilizes the adjacent phosphate groups from each of ATP and ADP. For 10 points, name this divalent ion that is chelated ("KEE-lated") by the porphyrin ring in the green pigment chlorophyll.

ANSWER: magnesium ion [accept Mg or Mg2+]

<SP Biology>

20. An essay on this concept begins by acknowledging that it really belongs to aesthetics, but that the aestheticians have ignored it. Schelling defined this concept as “the name for everything that ought to have remained... hidden and secret and has become visible.” The classic study of this phenomenon was a response to Ernst Jentsch (“yench”). One form of this phenomenon was first identified by Masahiro Mori. This term was most famously developed in an essay that links the fear of being blinded in E. T. A. Hoffmann’s “The Sandman” to the fear of castration. Freud related this concept to seeing one’s (*) Doppelgänger in a 1919 essay. This phenomenon results from the cognitive dissonance of seeing “almost human” robots in its namesake “valley.” For 10 points, name this creepy psychological phenomenon evoked by familiar things that “aren’t quite right.”

ANSWER: the uncanny [or das Unheimliche]

<JR Economics/Psychology>

Bonuses

1. Answer some questions about sociologist James S. Coleman, for 10 points each.

[10] Coleman was an influential student of *this* pioneering empirical sociologist. With fellow Columbia professor Robert Merton, this man wrote “Mass Communication, Popular Taste, and Organized Social Action.”

ANSWER: Paul (Felix) **Lazarsfeld**

[10] Coleman’s best-known non-theoretical work was a namesake 1966 Report about *these* institutions. Coleman’s argument that integrating these institutions helps African-Americans spurred the use of busing to desegregate them.

ANSWER: **schools**

[10] Coleman’s *Foundations of Social Theory* helped popularize *this* concept, which is gained by doing people favors and integrating into a community. The decline of this entity was discussed in Robert Putnam’s *Bowling Alone*.

ANSWER: **social capital**

<JR Social Science/Thought>

2. This protein plays a role in countering heat loss in neonates, which is necessary due to their high surface area-to-volume ratio. For 10 points each:

[10] Name this mitochondrial protein, activated by free fatty acids and deactivated by nucleosides, which allows protons to leak through the inner mitochondrial membrane.

ANSWER: **thermogenin** [accept **UCP-1**]

[10] Thermogenin is present in the mitochondria of this tissue, which contain smaller droplets of fat and more mitochondria than their “white fat” counterparts.

ANSWER: **brown** fat [or **brown** adipose tissue]

[10] The transcription of the gene encoding thermogenin is stimulated by this thyroid hormone, which is produced by the outer ring deiodination by type I and II deiodinases on thyroxine.

ANSWER: **triiodothyronine** [accept **T3**]

<SP Biology>

3. Captain Gerald Burgoyne recalled seeing an artillery HQ where the tent floors and the paths were made entirely out of full tins of this foodstuff, whose Fray Bentos brand was particularly popular. For 10 points each:

[10] Name this foodstuff, described by Lieutenant W. S. Dane as a “tramway accident for meat” in a poem titled after it. In that poem, Dane lamented this foodstuff’s repeated delivery for breakfast, dinner, tea, and supper.

ANSWER: **bully beef** [or **corned beef** or **salt-cured beef**; prompt on just “beef”]

[10] Soldiers sentenced to field punishments had to temporarily subsist on bully beef and this baked good. In the American Civil War, it was the main food of Union soldiers, who ate it crumbled into coffee or heated grease.

ANSWER: **hardtack** [or **Army Biscuits** or **dog biscuits**; prompt on just “biscuits”]

[10] Bully beef and hardtack were staples for soldiers of this European nationality during the First World War, who collectively received the nickname “Tommy Atkins,” or more simply “Tommy.”

ANSWER: **British** [or **English** or anything referring to people from the **United Kingdom**]

<WC European/British History>

4. A character nicknamed for these objects claims he wasn't even trying to drive after crashing a car into a ditch. For 10 points each:

[10] Name this sort of object. Two faded but gigantic examples of them are situated over a grey area called the "valley of ashes."

ANSWER: eyes [accept spectacles, glasses, etc.; or Owl Eyes]

[10] The billboard depicting T. J. Eckleburg's eyes appears in this F. Scott Fitzgerald novel about the title millionaire who watches Daisy Buchanan's green wharf light from his mansion in West Egg.

ANSWER: The Great Gatsby

[10] Daisy compares Gatsby's eyes to T. J. Eckleburg's after stating that he always looks *this way*. Exact two-word phrase required.

ANSWER: "you always look so cool"

<JB American Literature>

5. The Devonian is often called the "age" of these organisms. For 10 points each:

[10] Name these aquatic organisms whose superclass Osteichthyes includes class Actinopterygii. These organisms include sharks, which have fins and gills.

ANSWER: fish

[10] The Devonian period also saw the evolution of this group of mollusks, which are important index fossils. Their fossil shells took the form of planispirals, and they likely lived in open water rather than being benthic.

ANSWER: ammonites

[10] The ammonites died out in this most recent large mass extinction, which was likely caused by an asteroid or comet impacting the Yucatán basin 65 million years ago. The dinosaurs also went extinct in this event.

ANSWER: Cretaceous–Paleogene extinction event [or Cretaceous–Tertiary; accept K–Pg or K–T]

<SP Other Science>

6. This country is home to the Chongoni Rock Art Area and the commercial capital of Blantyre. For 10 points each:

[10] Name this country currently run by internationally-renowned legal scholar Peter Mutharika. Its largest ethnic groups are the Lomwe and the Chewa.

ANSWER: Malawi

[10] The Chewa and Lomwe are both in *this* large group of peoples, who colonized most of sub-Saharan Africa in their namesake "expansion."

ANSWER: Bantu peoples

[10] The Bantu expansion ended in and around *this* desert, which covers a large part of Botswana, as well as some of South Africa. This desert is home to the Okavango Delta and the San bushmen.

ANSWER: Kalahari Desert

<JR Mythology/Other>

7. The life of Chen Pan's family in this country is the subject of the novel *Monkey Hunting*. For 10 points each:

[10] Name this birth country of Cristina García, who used magical realist elements such as Celia's telepathic communication with her daughter Pilar in her novel titled for "Dreaming" in this country's dialect.

ANSWER: Cuba

[10] Magical realism was discussed in the introduction to this novel by Cuban author Alejo Carpentier, which ends with the aged former slave Ti Noël living in the form of a goose.

ANSWER: The Kingdom of This World [or El reino de este mundo]

[10] In *Dreaming in Cuban*, Jorge del Pino sometimes appears as this sort of figure. Jacob Marley announces three of these figures in Charles Dickens's *A Christmas Carol*.

ANSWER: ghosts [accept apparitions or other synonyms]

<JB Other Literature>

8. Answer some questions about late-stage Italian Baroque music, for 10 points each.

[10] The preeminent instrument of the late Italian Baroque was this high string instrument, the soloist in Corelli's Opus 5 sonatas and Vivaldi's *Four Seasons*.

ANSWER: **violins**

[10] Corelli and others contributed to the development of tonality with their prolific use of sequences that go around the "circle" of *this* musical interval. In tonal music, this interval separates the roots of the tonic and the dominant.

ANSWER: **fifths** [accept **circle of fifths**]

[10] Two violin soloists and many circle-of-fifths sequences feature in this Italian Baroque piece, which ends with a "pastorale ad libitum." It was the last of the "church" pieces in its composer's Opus 6.

ANSWER: Corelli's "**Christmas**" Concerto [or Opus 6 No. **8**; or "**Fatto per la notte di Natale**"]

<JR Auditory Arts>

9. Charles V demanded a yearly tribute of one of these animals from the Order of St. John on Malta. For 10 points each:

[10] Name this type of bird which names a style of hunting in which trained birds of prey are used to catch quarry, though hawks are also used for the same sport.

ANSWER: **falcons**

[10] This king dedicated his treatise *On the Art of Hunting with Birds* to his son Manfred of Sicily. Multiple excommunications from Gregory IX did not stop this king from peacefully recovering Jerusalem from al-Kamil.

ANSWER: **Frederick II** [prompt on "Frederick" or "Stupor Mundi"]

[10] This first king of the Ottonian dynasty gets his nickname from the legend that he was fixing birding nets when told that he had been elected King of Germany.

ANSWER: **Henry** the **Fowler** [or **Heinrich** der **Finkler**; prompt on "Henry" or "Heinrich"]

<JB European/Ancient History>

10. This play's prologue contrasts "natural" fools with "fools of fortune" and is spoken by Mr. Betterton. For 10 points each:

[10] Name this William Congreve play in which Mirabell must get Lady Wishfort's consent for his marriage to Millamant.

ANSWER: *The **Way of the World***

[10] *The Way of the World* was performed in the first year of this century. Goldsmith's *She Stoops to Conquer* and Sheridan's *A School for Scandal* were also written during this century.

ANSWER: the **18th** century [or **1700s**]

[10] This author praised *The Way of the World* for interesting the audience in the pursuits of its characters, "for whom you care absolutely nothing," in his essay "On the Artificial Comedy of the Last Century." His other essays include "Old China."

ANSWER: Charles **Lamb**

<JB British Literature>

11. Answer the following questions about NMR spectroscopy. For 10 points each:

[10] Consider the proton NMR spectrum of the compound isopropyl bromide. This number is the splitting of the peak of the hydrogen bonded to the secondary carbon.

ANSWER: seven [or 7; accept septet]

[10] In NMR, the chemical shifts of different nuclides are measured to infer the electronic environments of those nuclides, and thus deduce structure. Those chemical shifts are measured in this unit.

ANSWER: ppm [accept parts per million]

[10] In NMR, this field splits the energy levels of nuclei, allowing the absorption and emission of radio waves at the scale of the energy splitting. These fields can be formed by currents or by changing electric fields.

ANSWER: magnetic field [accept B-field]

<SP Chemistry>

12. Answer some questions about the work of Claude Monet, for 10 points each.

[10] A Monet painting of a *Sunrise* gave its name to *this* artistic movement, which used visible brush strokes to accurately depict different lighting conditions.

ANSWER: Impressionism

[10] The sky in several of Monet's paintings of the Houses of Parliament is dominated by *this* color. This is the color of the sun in *Impression, Sunrise*.

ANSWER: orange

[10] Late in his life, Monet made a single trip to Venice, and painted a rainbow-coloured depiction of *this* church at dusk. This monastery church houses Tintoretto's *Last Supper*.

ANSWER: San Giorgio Maggiore ("san jor-joh mahj-JOR-ay")

<JR Visual Arts>

13. This document ends with its author's declaration, "Calmly I take the first step towards eternity and leave life to enter history." For 10 points each:

[10] Name this document, which was written in response to demands for its author's resignation after Gregorio Fortunato, the head of his bodyguard, arranged an assassination attempt against Carlos Lacerda.

ANSWER: Testamentary Letter [accept, but **do not reveal**, "Getúlio Vargas's suicide note," or equivalents]

[10] The Testamentary Letter accompanied the suicide of this leader, its author. The Cohen Plan, a fabricated plan for a Communist revolution, was used to justify the establishment of this leader's Estado Novo regime.

ANSWER: Getúlio Dornelles Vargas

[10] Getúlio Vargas was the president of this South American country, whose politics had once been dominated by an alliance of the coffee producers of São Paulo and the milk producers of Minas Gerais.

ANSWER: Brazil

<WC World History>

14. Answer some questions about economist Eugene Fama, for 10 points each.

[10] Fama's doctoral advisor was this other economist. He co-authored a theorem with an Italian economist that states that, in the absence of externalities, the value of a firm is independent of how it is financed.

ANSWER: Merton H. Miller [Merton Howard Miller]

[10] Eugene Fama's efficient-market hypothesis asserts that *this* quantity is always fair for publicly traded assets like stocks. In other words, this quantity actually corresponds to their value.

ANSWER: prices

[10] Fama and Kenneth French also developed the "three-factor model" of stock returns, which adds factors based on these *two* properties of a stock to CAPM's beta variable. Name *either*.

ANSWER: size OR price-to-book ratio [accept small stocks OR value stocks; accept SMB OR HML; accept P/B ratio, market-to-book ratio, or price-to-equity ratio in place of "price-to-book ratio"]

<AF Economics/Psychology>

15. Answer the following about animals that appear in the works of Franz Kafka, for 10 points each.

[10] One of these animals laments that "the world is growing smaller every day" before being told "you only need to change your direction" in "A Little Fable." In another Kafka story, animals of this type question whether one of their number is singing or only piping.

ANSWER: mice [or mouse folk]

[10] Gregor Samsa awakes to find himself transformed into an unspecified "monstrous vermin" at the beginning of this Kafka novella.

ANSWER: *The* Metamorphosis [or *The* Transformation; or *Die* Verwandlung]

[10] In a Kafka story, Alexander the Great's horse Bucephalus takes up the study of this subject. In a fable from *The Trial* titled "Before [this thing]," a man spends his life waiting for a gatekeeper to grant him entry to it.

ANSWER: the law [or gesetz]

<JB European Literature>

16. Answer some questions about Santería, for 10 points each.

[10] Since it is based on both Yoruba and Catholic beliefs, Santería is considered to be *this* kind of religion, which combines two or more older traditions.

ANSWER: syncretic

[10] The sacred language of Santería is called *this*, a name generally applied to Yoruba-descended people in Cuba.

ANSWER: Lucumí

[10] Santería is often compared to this other syncretic religion, which mixes Yoruba religion and Catholicism with Fon and Bantu beliefs. It started in the Bahia region of Brazil.

ANSWER: Candomblé

<JR Religion>

17. Answer the following about rules used in studying quantum transitions, for 10 points each.

[10] Quantum transition rates are proportional to the square of the coupling matrix element according to this man's "golden rule." He also names a type of half-integer spin particle that is contrasted with a boson.

ANSWER: Enrico Fermi

[10] These rules, derived by seeing when matrix elements of transition moment operators vanish, are used to identify allowed and forbidden transitions. This rule for an electric dipole requires ΔJ to be zero or plus-or-minus one.

ANSWER: selection rules

[10] Solid-state and atomic physicists often use these rules, which set certain integrals over state space equal to constants. The one named for Thomas, Reiche, and Kuhn sets an integral of oscillator strengths equal to one.

ANSWER: sum rules

<SE Physics>

18. This woman tragically died in a shipwreck off of Fire Island in July 1850. For 10 points each:

[10] Name this woman who wrote the pivotal book *Woman in the Nineteenth Century*, who was the first editor of the Transcendentalist journal *The Dial*.

ANSWER: Sarah Margaret **Fuller Ossoli** [accept either last name]

[10] Fuller wrote for this newspaper, which was owned by Horace Greeley. This newspaper once employed Karl Marx as its European correspondent.

ANSWER: **New York Tribune** [or **New York Daily Tribune**]

[10] Horace Greeley was a prominent member of this party, which only got two of its members, Millard Fillmore and John Tyler, elected to the presidency.

ANSWER: **Whig** Party

<LL American History>

19. This director's maxim was "one scene, one [take]." For 10 points each:

[10] Name this director of *The Story of the Last Chrysanthemums*. In his most famous film, from 1953, a rural potter's wife is killed while he is being seduced by the ghost of a noblewoman.

ANSWER: **Mizoguchi** Kenji [accept names in either order]

[10] That film, *Ugetsu*, won the Silver Lion at the Film Festival in this European city. In 2005, this city's film festival awarded the Golden Lion to *Brokeback Mountain*.

ANSWER: **Venice** [or **Venezia**]

[10] During the war, Mizoguchi was press-ganged into making a two-part film about a group of forty-seven of these people. Toshirō Mifune starred in a Kurosawa movie titled for seven of these people.

ANSWER: **samurai** [or **rōnin**; accept *The Forty-Seven Rōnin* or *Genroku Chūshingura*; accept **Seven Samurai** or **Shichinin no Samurai**]

<JR Other Arts>

20. Answer some questions about everybody's favorite Critique, the *Critique of the Power of Judgement*, for 10 points each.

[10] The critique begins by laying out the four "reflective judgments," which are the agreeable, the good, the sublime, and *this* other quality. This general term is used to describe aesthetically pleasing objects.

ANSWER: the **beautiful** [or das **Schöne**]

[10] Kant's discussion of the "moments" relating to judgments of the beautiful corresponds to his deduction of *these* twelve pure concepts of the understanding. These concepts were inspired by the first book of Aristotle's *Organon*.

ANSWER: **categories**

[10] In the second half of the *Critique*, Kant claimed that we can only think "by images," or that we have *this* kind of intellect. He contrasts this kind of intellect with *intellectus archetypus*.

ANSWER: *intellectus* **ectypus**

<JR Philosophy>