

Tossups

1. **Sampson and Raudebush argued that the effect that this theory purports to explain is actually due to collective efficacy. This idea was outlined by using the example of a man named Kelly who has to distinguish between “regulars” and “strangers”. This idea, which was originally outlined in a 1982 *Atlantic Monthly* article, was tested by (\*) Philip Zimbardo leaving an abandoned car in both the Bronx and Palo Alto. This idea was first illustrated in an article by George Kelling and James Q. Wilson, and inspired William J. Bratton’s “zero-tolerance” policies. For 10 points, name this criminological theory which states that minor crimes like vandalism signal a breakdown in order that leads to more serious crime.**

ANSWER: Broken Windows theory

2. **This novel begins with a map of the setting that identifies places like the balneary, the pigsties, and the aedificium, and it is separated into sections titled for the first through seventh days and ends with the “Last Page.” The protagonist struggles for a time with finding an entrance to a hidden room called the *finis Africae*, and this novel includes a man who demands an execution after a peasant girl is brought by Salvatore and has sex with the protagonist. The inquisitor (\*) Bernard Gui is a character in this book, in which poisoned pages from an Aristotle work are used to commit murders that are traced to the blind librarian, Jorge of Burgos. The main plot of this novel is driven by a series of mysterious deaths of monks at a monastery investigated by the protagonist. For 10 points, name this novel about Adso of Melk and William of Baskerville written by Umberto Eco.**

ANSWER: *The Name of the Rose* [or *Il Nome della Rosa*]

3. **One character in this play sees two of his ancestors with the same name who died in two different plagues; those ancestors start chanting in Hebrew and English at the end of that scene. Another scene shows the world’s oldest living Bolshevik addressing a crowd in this play, whose epilogue occurs at the Bethesda Fountain. One character in this work imagines her travel agent, Mr. Lies, which prompts her to ask for a tour of (\*) Antarctica to see the hole in the ozone layer; that character is the valium-addicted Harper, while another drug featured in this play is the experimental AZT. The sections “Millenium Approaches” and “Perestroika” make up this play that centers on gay sufferers of AIDS, Prior Walter and Roy Cohn. For 10 points, name this play, subtitled “A Gay Fantasia on National Themes,” written by Tony Kushner.**

ANSWER: Angels in America

4. **One person who helped stop this event was a one-eyed ox-eared giant who was executed for being late to a party celebrating its end. One person appointed to stop this event was tested by being wedded to two spoiled princesses whom he nonetheless convinced to live like commoners. One person was appointed on the advice of the Four Mountains and tried to use a self-replicating substance stolen from the Supreme Divinity to stop it; that figure was executed on Feather Mountain for failing. The figure who managed to stop this event was aided by (\*) a black turtle and a yellow dragon, and worked for thirteen years straight. After this event, Fengyi martyred himself and became the god He Bo. This event was stopped by Yu the Great using a series of canals. For 10 points, name this climactic natural disaster from Chinese mythology in which the Yellow River overflowed.**

ANSWER: the Chinese Great Flood [accept reasonable equivalents]

5. **A month before this battle, the victorious side crossed the Sava River and seized the fortress of Petervarad. The defeated army in this battle was commanded by the Archbishop of Kolocsa and its ruler was wounded and drowned from the weight of his armor in the Csele River. The result of this battle was overturned in a 1687 battle at the (\*) same site won by Charles V of Lorraine. The losing general in this battle was Pal Tomori, and**

the death of the king he served meant that after this battle, the Crown of St. Stephen went to the House of Habsburg. The winner of this battle defeated a frontal cavalry charge with his janissaries and went on to sack and then retreat from Buda. For 10 points, name this 1526 defeat of Louis II by Suleiman the Magnificent that led to the Ottoman conquest of Hungary.

ANSWER: Battle of Mohacs [pronounced “MO-hatch”]

6. **One artist from this country choreographed “The Bathing Beauty Ballet” for a work about a conman who sells fake watches. A dancer from this country choreographed the first part of a ballet using a *Passacaglia* and *Six Pieces* by Anton Webern; that dancer played the part of Mary, Queen of Scots in *Episode I* of that ballet. One of the only prima ballerinas from this country died in April of 2013 and was the third wife and frequent collaborator of (\*) George Balanchine. This country was the home of the choreographer of “Tonight,” and “Cool” for a musical, as well as the choreographer of the variations on the Shaker hymn, “Simple Gifts.” For 10 points, name this country that produced the choreographers of *West Side Story* and *Appalachian Spring*, Jerome Robbins and Martha Graham.**

ANSWER: United States of America [or U.S.A.; prompt on “America”]

7. **On October 11, 2013, the European Court of Human Rights issued a statement that it was alarmed at misleading reports primarily from this organization that counted all its trial costs as compensations. This organization was accused of homophobia after Jan Moir said the “dangerous lifestyle” of openly gay pop star Stephen Gately meant there was “nothing natural” about his death. Paul Dacre is the current (\*) editor of this newspaper, which is owned by Lord Rothermere. One reporter for this organization gatecrashed the funeral of an uncle of a politician it called “Red Ed” in an article that called Marxist scholar Ralph Miliband “the Man who hated Britain.” That attack prompted a rare response from Labour Leader Ed Miliband. For 10 points, name this controversial, conservative British middle market newspaper.**

ANSWER: Daily Mail and General Trust [or *The Mail on Sunday*]

8. **For an incompressible flow, one method of solving the Navier-Stokes equation involves taking the divergence of the momentum terms to find a “pressure” version of this equation. The time-independent Klein-Gordon equation reduces to one version of it, which has an extra lambda-squared term subtracted from one side. Solutions to that modification of this equation are sums of Yukawa potentials. An exponential term is added to one side of this equation in an extension commonly used to model solvation; that extension is co-named for (\*) Boltzmann. For gravity, one side of this equation is four pi G rho, and this equation is commonly solved using the method of images. For 10 points, name this equation which states that negative free-charge density equals del squared of the potential, the inhomogeneous version of Laplace’s equation.**

ANSWER: Poisson equation

9. **A soldier in pink full body armor with a pink armored horse appears in one of Cranach the Elder’s versions of this scene, which divides the people in the scene into good and evil groups. This scene is the centerpiece of the predella to the San Zeno altarpiece by Mantegna. This scene is shown between Saint Sebastian and Saint Anthony in the (\*) Isenheim Altarpiece, and it often includes the letters “INRI” above the central figure. Another painting of this scene includes a man in a black hat jumping a wall in the distance and uses shades of red and orange for the landscape behind three Breton women who surround the central figure. For 10 points, name this scene that is depicted in “Yellow” by Paul Gauguin.**

ANSWER: the crucifixion [or Jesus Christ on the cross; prompt on answers mentioning the “death of Jesus”]

10. **For a short period of time, this king was imprisoned at Middleham Castle after his father-in-law, Lord Rivers, was beheaded. This man ditched the Battle of Hexham, where his troops won, in order to court his wife, whom he later cheated on with the wife of a goldsmith, Jane Shore. This king padded his treasury with**

**the bribe he received from the French king at the Treaty of Picquigny, signed after he invaded France with the support of Charles the Bold. This man won the Battle of Barnet with the help of his brother George, Duke of (\*) Clarence, whom he turned on and had executed by “drown[ing] in a butt of Malmsey.” This husband of Elizabeth Woodville slaughtered tons of nobles and took Henry VI prisoner after a 1471 battle, though his own sons died in captivity as the “Princes of the Tower.” For 10 points, name this Yorkist king who won the Battle of Tewkesbury.**

ANSWER: **Edward IV** [or **4th Duke of York** before “Yorkist” is read; or **7th Earl of March**; prompt on “Edward”; prompt on “Duke of York” before “Yorkist” is read; prompt on “Earl of March”]

**11. The existence of this substance in a flat universe would cause the linear term of the late-time integrated Sachs-Wolfe effect to dominate the higher-order terms. One model of it states that it initially stays less than the radiation density, then takes on its present characteristics after matter domination. The Blanco telescope is central to a namesake survey of this substance. Evidence of it was first found by the High-Z (\*) Supernova Search Team and the Supernova Cosmology Project, which won Schmidt, Pearlmutter, and Reiss the Nobel. The equation of state parameter for this substance must be less than negative one-thirds and has been measured to around negative one, suggesting that it is accounted for by the cosmological constant. For 10 points, name this substance which drives the expansion of the accelerating universe and comprises about 68% of the universe.**

ANSWER: **dark energy** [accept **quintessence**; do not accept “dark matter”]

**12. This man’s philosophy was viewed through an aesthetic lens in a book by Marjorie Perloff. One of his students extended his arguments to show that the mind is not mentally active while sleeping; that work, *Dreaming*, is by Norman Malcolm. One work ABOUT this philosopher’s thought outlines the “quus” function and states the skeptical solution and the straight solution to his rule-following paradox. A key element of his philosophy was outlined by the example of (\*) builders who communicate using the words “rock,” “slab,” “pillar,” and “beam.” Another of his arguments considers a group who are only allowed to look inside their own boxes, each of which contains a beetle. For 10 points, name this author who was re-interpreted by Saul Kripke in a book about this man “on Rules and Private Language” and who developed the idea of language-games in *Philosophical Investigations*.**

ANSWER: Ludwig **Wittgenstein**

**13. This poem describes a character “Like some bold seer in a trance” before that character’s “blood was frozen slowly.” This poem tells of “a song that echoes cheerly From the river winding clearly” before describing “a troop of damsels,” “An abbot on an ambling pad,” and a “long-hair’d page in crimson” as some of the “Shadows of the world” that appear to a character who later declares, “I am (\*) half sick of shadows.” A character in this poem says, “The curse is upon me,” when her mirror cracks after she hears a man singing “Tirra lirra;” that man is described as having “coal-black curls” that “From underneath his helmet flow’d.” This poem ends with the line, “She has a lovely face; God in his mercy lend her grace,” which is spoken by Sir Lancelot. For 10 points, name this poem about a woman who weaves images of Camelot written by Alfred, Lord Tennyson.**

ANSWER: “The **Lady of Shalott**”

**14. This molecule has a 5-fold-degenerate HOMO band at  $h$  sub  $u$  and a 3-fold-degenerate  $t$  sub one  $u$  LUMO band. A solution of sarcosine and paraformaldehyde in toluene is heated to create an N-methyl-pyrrolidine derivative of this molecule. Brominated diethyl malonate and DBU are used to add cyclopropane to this molecule. Those reactions are named for (\*) Prato and Bingel. This molecule is in the  $I$  sub  $h$  symmetry group, which has order 120. Solutions of it are deep purple because it has a dip in absorbance at 450 and 700 nanometres, meaning individual molecules emit either blue or red. This molecule was originally discovered by Kroto, Smalley, and Curl by using a laser on graphite. For 10 points, name this molecule which consists of 60 carbon atoms and has a soccer-ball shape.**

ANSWER: buckminsterfullerene [or buckyballs; do NOT accept “nanotubes” or “carbon nanotubes”]

15. One protein encoded by this system also controls the AroH, AroI, and mtr clusters. One mutation in this system in *S. typhimurium* allows the use of anthranilic acid as a growth factor. In some species, one part of this system requires the MtrB-encoded TRAP protein, whose 11 subunits bind to a series of G slash U A G repeats. This system is activated by the formation of a certain 2-3 hairpin. This structure’s regulatory region encodes a leader peptide that (\*) cannot be synthesized if the product of this system is unavailable, resulting in the formation of a 3-4 hairpin that stops transcription of structural genes A through E. For 10 points, name this cluster of repressible and attenuable genes that controls the synthesis of an aromatic amino acid symbolized W.

ANSWER: trp operon [prompt on “trp”]

16. One leader of this nation was killed by Mustafa Ashu, a tailor’s apprentice, and this country is home to the relatively moderate Islamic Action Front. It is not Pakistan, but a training mission in this nation was headed by Zia-ul-Haq. A war in this country, which began with a series of hijackings at Dawson’s Field, was ended by the Cairo Agreement and was triggered by a series of attacks by the Fedayeen. That conflict lent its name to an (\*) organization that later carried out the Munich Massacre, called Black September. This nation, whose rulers are from the Hashemite dynasty, lost control of the West Bank after allying with Egypt and Syria during the Six-Day war. For 10 points, name this country ruled by King Hussein’s son, King Abdullah.

ANSWER: Hashemite Kingdom of Jordan [or *al-Mamlakah al-Urdun* *iyah al-Haashimiyah*]

17. One novel set in this country ends with a man dying while having sex, after which his partner eats matches that somehow catch fire and burn down the ranch. The protagonist of a novel set in this country is engaged to John Brown and is haunted by her mother’s ghost; that novel is divided into sections named for the twelve months, each of which begins with a (\*) recipe used by the protagonist, Tita de la Garza. A poem by an author from here wrote of a “tree that is firmly rooted and that dances, turning course of a river” that is “arriving forever.” The author of *Like Water for Chocolate* is from this country, as is the man who wrote “The Dialectic of Solitude” in a collection of essays that also includes “The Sons of La Malinche.” For 10 points, name this country that produced the author of “Sunstone” and *The Labyrinth of Solitude*, Octavio Paz.

ANSWER: Mexico [or the United Mexican States; or *Estados Unidos de Mexico*; or *Estados Unidos Mexicanos*]

18. A recent book by David Bernstein attacking this opinion accuses its author of eschewing natural law in favor of “German legal positivism.” This dissenting opinion was effectively adopted by the Supreme Court in *Nebbia v. New York*. This opinion proclaims that “This case is decided upon an economic theory which a large part of the country does not entertain,” and that “The Fourteenth (\*) Amendment does not enact Mr. Herbert Spencer’s *Social Statics*.” The case producing this opinion arose from a dispute over a law restricting the number of hours of work by an individual per week in bakeries. For 10 points, name this opinion given in a 1905 case in which Justice Rufus Peckham delivered a majority opinion on substantive due process, striking down restrictions of the “freedom of contract,” and ushering in this case’s namesake “era.”

ANSWER: Oliver Wendell Holmes’s dissenting opinion in Lochner v. *New York* [accept anything involving Holmes and Lochner]

19. In a core text of this religion, a dying man tells his visitor to imagine the world as a large furnace and the Creator as a blacksmith. In this religion’s cosmology, the heaven and earth combined are represented by the gourd, whereas the human body contains three regions known as “cinnabar fields,” including one in the lower abdomen that is depleted of energy any time someone masturbates. One of this religion’s texts consists of Inner, Outer, and Mixed Chapters of differing authorship, and includes a bit in which its namesake expresses doubt as to whether he is (\*) dreaming of a butterfly or vice versa. Another of its texts begins “The way that can be followed is not the eternal way,” and elucidates the principle of action through inaction, or wu wei. For

10 points, name this religion whose precepts are illustrated by the *Zhuangzhi* and *Dao De Jing*, which was written by Lao-tzu.

ANSWER: Taoism [or Daoism]

20. This composer wrote a G major chord for the piano to introduce a melody in the first movement of a Fels-commissioned *Violin Concerto*. Another work by this composer includes word painting in lines like, “fainting, lifting, lifts, faints forgone: forgotten. Now is the night one blue dew.” This composer wrote a work for soprano vocalist with orchestra while another work by this composer begins with a single (\*) B-flat whole note; that piece utilizes an arch form and was inspired by a passage from the *Georgics* about a stream growing into a river. This composer used text by James Agee for *Knoxville: Summer 1915* while another of his works began as the middle section of his *String Quartet in B minor*. For 10 points, name this American composer of the notoriously sorrowful piece *Adagio for Strings*.

ANSWER: Samuel Osmond Barber

TB. The Uwchlan Meetinghouse was used as a hospital for residents of this site. Henry Armitt Brown gave a speech commemorating the 100<sup>th</sup> anniversary of leaving this site, and one visitor to this location relied on Pierre Duponceau for translation and wrote “The Blue Book”. Christopher Ludwig served one important function in this location, which was occupied soon after the (\*) Battle of White Marsh. Its inhabitants survived on “firecake” and “pepper-hot soup.” Initially only about one third of the inhabitants of this location possessed shoes. Baron von Steuben was responsible for training the inhabitants of this location. For 10 points, name this site in Pennsylvania where the Continental Army spent a really harrowing winter in 1777.

ANSWER: Valley Forge

## Bonuses

1. This man led a group that fought with a group of six-armed giants called the Gegeines, and this man married the daughter of the king of Corinth named Glauce, which really pissed off his previous lover. For 10 points each:

[10] Name this hero who led the Argonauts in the quest for the Golden Fleece.

ANSWER: **Jason**

[10] This king of Colchis and father of Medea gave Jason a series of tasks to obtain the fleece. When Jason ran away with Medea and the fleece, Medea dismembered her brother Absyrtus and threw the pieces at him.

ANSWER: **Aeetes**

[10] In addition to planting dragon's teeth and killing the sleeping dragon guarding the fleece, Aeetes made Jason plow a field using bulls that had this magical ability.

ANSWER: they could **breathe fire** [accept equivalents]

2. One character in this play tells a story about a tailor who takes three months to make trousers even though God made the world in six days. For 10 points each:

[10] Name this play in which Nagg and Nell emerge from ashbins but can't reach each other to kiss.

ANSWER: **Endgame**

[10] *Endgame* is one of Samuel Beckett's works in this genre that also describes his *Waiting for Godot*.

ANSWER: Theater of the **Absurd** [or **absurdist** or **absurdism**]

[10] The narrator of this novel by Beckett claims to have created Malone and Molloy in the "Trilogy." Other characters include Worm and Mahood who are body parts in a jar and may or may not exist.

ANSWER: *The* **Unnamable**

3. Alpha-beta-unsaturated forms of these compounds undergo the Michael addition. For 10 points each:

[10] Name this functional group which contains a carbon double bonded to an oxygen. Aldehydes and ketones are subtypes of this functional group.

ANSWER: **carbonyl**

[10] In this reaction, an aldehyde becomes a carboxylic acid and an alcohol via disproportionation. Its not very synthetically useful and usually shows up as a side reaction.

ANSWER: **Cannizzaro** reaction

[10] This catalyst is often used to remove carbonyl groups via the Mozingo reduction. In that reaction, a carbonyl is reacted with a dithiol, which then forms a thioketal that is removed using this catalyst.

ANSWER: **Raney nickel** [prompt on "nickel"]

4. This country is home to the author of a work in which Professor Pimko asks questions of Johnnie who returns to adolescence. For 10 points each:

[10] Name this home country of the authors of *Ferdynand* and a novel about Marcus Vinicius subtitled "A Narrative of the Time of Nero."

ANSWER: **Poland** [or the Republic of **Poland**; or **Polska**]

[10] This other Polish author wrote a work narrated by Jozef about Jozef's superhuman merchant father in *The Street of Crocodiles* and also wrote *Sanatorium Under the Sign of the Hourglass*.

ANSWER: Bruno **Schulz**

[10] Sienkiewicz, the author of *Quo Vadis*, also wrote *The Knights of the Cross*, a historical novel about this order of warriors who were defeated at Grunwald in 1410.

ANSWER: The **Teutonic Knights** [or The Order of **Brothers of the German House of Saint Mary** in Jerusalem]

5. This holiday is based on one sect's interpretation of the Hadith of the pond of Khumm which ended up splitting the Ummah. For 10 points each:

[10] Name this holiday celebrated by Shia Muslims that commemorates Muhammad's decision to identify Ali as his successor.

ANSWER: Eid al-Ghadeer [prompt on "Eid"]

[10] Eid al-Ghadeer takes place during the twelfth month of the Islamic calendar, which is also when this pilgrimage to Mecca takes place.

ANSWER: Haji

[10] The more widely celebrated Eid al-Adha is based on the text of this second and longest sura that is named for an animal that was to be sacrificed.

ANSWER: Suratu al-Baqarah [or "The Cow" sura]

6. Some of this non-Ravel composer's less famous works include a *Bolero* as well as the *Rondo a la Krakowiak*. For 10 points each:

[10] Name this Polish composer of *Fantaisie-Improptu* and a *Piano Sonata No. 2*, known as the "Funeral March." He also wrote some mazurkas.

ANSWER: Frederic Francois Chopin

[10] Chopin wrote a "Tragic" one of these pieces as his Opus 44 while he dedicated his two Opus 26 pieces of this type to Josef Dessauer. He wrote pieces of this type called the "Heroic" and "Military."

ANSWER: polonaises

[10] Chopin also wrote an Opus 28 collection of pieces of this type arranged in tonality by the circle of fifths, which earned comparisons to *The Well-Tempered Clavier*.

ANSWER: preludes

7. Cauchy names a tensor used to describe this quantity, which can in turn be used to find a scalar value of this quantity named for von Mises. For 10 points each:

[10] Name this quantity which has the same units as pressure. The ratio of this quantity to strain is equal to Young's modulus.

ANSWER: stress

[10] The off-diagonal elements of the Cauchy stress tensor are called these kind of stresses, which are parallel to the material cross section. They are contrasted with normal stresses.

ANSWER: shear stress

[10] Cauchy's first law puts certain restraints on the elements of the Cauchy stress tensor because of this fact. This fact arises because the Lagrangian is invariant under translation according to Noether's theorem.

ANSWER: conservation of linear momentum [accept reasonable equivalents]

8. Name some historians of the Roman Empire for 10 points each.

[10] This historian served as consul under Macrinus and Severus Alexander. He wrote an 80-book history of Rome in Greek from the time of Aeneas onwards called *Romaika*.

ANSWER: Cassius Dio [or Dion Cassius; or Lucius Cassius Dio; or Dion; or Dio Cocceianus]

[10] This other historian was dismissed by Hadrian for inappropriate behavior towards Empress Sabina. He also briefly touched on Aeneas in the surviving lines that open his *Life of Julius Caesar*, the first of his *Twelve Caesars*.

ANSWER: Gaius Suetonius Tranquillus

[10] This other Roman historian wrote *Agricola*, a biography of his father-in-law who was recalled as governor of Britannia by Domitian. In that work of his, Calgacus declares that the Romans "make a desert and call it peace."

ANSWER: Publius/Gaius Cornelius Tacitus

9. This man's family once managed to swindle a tribe out of a bunch of land by claiming the amount that they could walk across in a day and a half. For 10 points each:

[10] Name this colonial leader who signed a treaty with the Lenape Indians to acquire land for his namesake colony. This Quaker also wrote about forming a United States of Europe.

ANSWER: William **Penn**

[10] William Penn promulgated this constitution for his new colony, which guaranteed absolute freedom of worship. It was eventually replaced by the 1701 Charter of Privileges.

ANSWER: **Frame of Government** of Pennsylvania

[10] After a public debate with Thomas Vincent, Penn published this tract, which led to his nine-month stint in the Tower of London. It was a follow-up to the pamphlet "Truth Exalted" and preceded *No Cross, No Crown*.

ANSWER: *The **Sandy Foundations Shaken***

10. The three nude Graces stand at the right while Apollo plays the viol, Hermes flies in from above, and Athena guides the central figures studying in the *Education* entry in this cycle. For 10 points each:

[10] Name this series of twenty-four paintings that includes *The Triumph of Truth* and *The Disembarkation at Marseilles*.

ANSWER: The **Marie de Medici** cycle [or The **Marie de Medici** series]

[10] The Marie de Medici cycle was produced by this artist of *The Massacre of the Innocents* who painted many full-figured female nudes.

ANSWER: Sir Peter Paul **Rubens**

[10] Rubens also made several paintings with this title; one of those paintings shows Alecto in the clouds while Medusa's head can be seen on a shield behind one of the nude goddess in the painting.

ANSWER: *The **Judgment of Paris***

11. The chromaffin cells of this organ release catecholamines. For 10 points each:

[10] Name these glands that sit atop the kidneys. Their medulla is responsible for producing epinephrine and norepinephrine, and their cortex is responsible for producing the stress hormone cortisol.

ANSWER: **adrenal** glands [or **suprarenal** glands]

[10] The adrenal glands also release this steroid hormone, which is responsible for maintaining salt balance. It is released in response to activation of the renin-angiotensin system by the action of angiotensin II.

ANSWER: **aldosterone**

[10] The most superficial layer of the adrenal cortex, which is responsible for producing aldosterone, is given this name.

ANSWER: **zona glomerulosa**

12. This economist discussed "The Nature of Search" and "Advertising" in a seminal paper titled, "The Economics of Information." For 10 points each:

[10] Name this economist who advanced the theory of regulation and developed the field of economic search.

ANSWER: George Joseph **Stigler**

[10] George Stigler was a member of this school of economics along with Ronald Coase and Milton Friedman who all studied under Frank Knight.

ANSWER: **Chicago** School of economics

[10] Ronald Coase wrote an article defining the size of these economic constructs by the number of internal and external relations in a paper on "The Nature of" this. The standard circular flow of income model shows money moving between households and these constructs.

ANSWER: **firms**



13. This artist won a Clio Award for her photos of celebrities in an American Express ad campaign. For 10 points each:

[10] Name this artist, whose controversial works include a suggestive photoshoot of an underage Miley Cyrus and a photograph of John Lennon and Yoko Ono in which the former is nude.

ANSWER: Annie **Lebovitz**

[10] Also controversially, Lebovitz took a cover photo of LeBron James and Giselle Bündchen for this magazine, which since 1988 has been head-edited by Anna Wintour.

ANSWER: **Vogue**

[10] Lebovitz also took a picture of David Parsons while on a gargoyle on the Chrysler Building. That feat matched this other photographer, who also famously depicted Gandhi at his spinning-wheel.

ANSWER: Margaret **Bourke-White**

14. In response to Walter Lippmann's *The Phantom Republic*, he penned a book that argues the general populace can become part of a "Great Community" to correctly vote on laws. For 10 points each:

[10] Name this philosopher who wrote *The Public and Its Problems*.

ANSWER: John **Dewey**

[10] A work inspired by his scientific interest, this 1896 article by Dewey attempts to provide a scientific explanation for the stimulus and response in the context of the title discipline.

ANSWER: *The* **Reflex Arc Concept in Psychology**

[10] In another book, Dewey considered this kind of entity "as experience" in its relation to beauty. This entity is the subject of study in aesthetics.

ANSWER: **Art**

15. This scientist predicted the existence of hafnium. For 10 points each:

[10] Name this Danish scientist who developed a model of the atom with the nucleus and the centre and electron orbitals around it that only really works for Hydrogen.

ANSWER: Niels Henrik David **Bohr**

[10] Like many other famous physicists, Bohr famously attended the fifth iteration of this international conference at which he told another scientist to "stop telling God what to do."

ANSWER: Fifth **Solvay** International Conference

[10] That colleague, Einstein, had uttered this phrase at the Solvay Conference in frustration at the implications of Heisenberg's Uncertainty Principle

ANSWER: "**God does not play dice** with the universe"

16. The fundamental group is the simplest of the groups of objects related by this transformation. For 10 points each:

[10] Name this transformation in topology in which a continuous function is continuously deformed into another. A torus can undergo this transformation to form a coffee cup.

ANSWER: **homotopy**

[10] One statement of this conjecture says that if a 3-manifold homotopy equivalent to the 3-sphere, it must be homeomorphic to the 3-sphere. It was solved by eccentric Russian Grigori Perelman.

ANSWER: **Poincare** conjecture

[10] This mathematician's namesake exotic seven-dimensional spheres show that the Poincare conjecture is false in seven dimensions.

ANSWER: John Willard **Milnor**

17. The protagonist of a novel by this author worked as a rat catcher for a British ship before being taken in by native islanders after being abandoned. For 10 points each:

[10] Name this author who created Gemmy Fairley, a boy who finds support in Jock McIvor's family despite the rest of the community's distaste for him. This author also wrote *Ransom* and *The Great World*.

ANSWER: David George Joseph **Malouf**

[10] This author from the same country as David Malouf wrote *The Chant of Jimmie Blacksmith* and wrote a historical novel about Oskar, a businessman who saves the Polish from Nazi persecution.

ANSWER: Thomas Michael **Keneally**

[10] Both David Malouf and Thomas Keneally are from this country that was also the home of Patrick White.

ANSWER: **Australia** [or the Commonwealth of **Australia**]

18. At the beginning of this conflict, Mangal Pandey attempted to shoot himself with his musket, only to survive and be hanged a few days later. For 10 points each:

[10] Name this massive 1857 rebellion of Indian soldiers. It was partly triggered by the use of cartridges greased with animal fat, and led to the formation of the British Raj.

ANSWER: **Sepoy** Mutiny

[10] An important event during the Sepoy Mutiny was the six-month siege of this capital of Awadh, which was also the site of a pact signed between the Muslim League and the Indian National Congress.

ANSWER: **Lucknow**

[10] This earlier rebellion in India was triggered by changes in the uniform of sepoys that banned beards and religious markings. It's named for a fort in Tamil Nadu.

ANSWER: **Vellore** mutiny

19. The narrator of this novel learns about Felix's scary invention when he is conducting research for his book, *The Day the World Ended*. For 10 points each:

[10] Name this novel in which John converts to a religion that McCabe outlawed in San Lorenzo called Bokomonism.

ANSWER: **Cat's Cradle**

[10] *Cat's Cradle* is a novel by this author who wrote of Billy Pilgrim in *Slaughterhouse-Five*.

ANSWER: Kurt **Vonnegut**, Jr.

[10] In *Cat's Cradle*, this man supervised Felix Hoenikker while he was researching the atomic bomb. When John questions him about ice-nine, he gets mad and stops his interview.

ANSWER: **Asa Breed** [accept either underlined portion]

20. This explorer's most famous quotation was delivered on the shores of Lake Tanganyika. For 10 points each:

[10] Name this Welsh explorer who said, "Dr. Livingston, I presume" upon finding that man in the centre of Africa.

ANSWER: Sir Henry Morton **Stanley** [or John **Rowlands**]

[10] Stanley led an 1886-89 expedition to save this German-born governor of Equatoria who was cut off from Egypt by Mahdist forces. Stanley famously left his Rear Column to die in the jungle for a year while rescuing this figure.

ANSWER: Mehmed **Emin** Pasha [or Isaak Eduard **Schnitzer**; or Eduard Carl Oskar Theodor **Schnitzer**]

[10] Stanley was also contracted to explore this polity on behalf of its founder. *King Leopold's Ghost* was about atrocities in this polity.

ANSWER: **Congo Free State** [or **État indépendant du Congo**; do not accept "Belgian Congo", "Congo Belge" or "Belgisch-Kongo"]