

**Minnesota Undergraduate Tournament 2014: We're Not Happy 'til You're Not Happy**  
**Questions by Billy Busse, Rob Carson, Mike Cheyne, Andrew Hart, Melanie Keating, and Bernadette Spencer**  
**Round 11: Tossups**

1. These locations are not churches, but they were the primary buildings designed by Sampson Kempthorne under his “cruciform” plan. Gilbert’s Act attempted to define who would be their residents. In a scandal, John Walter and the *Times* revealed that residents at one of these places in Andover were eating marrow from horse, dog, and cattle bones. These locations were officially abolished with 1948’s National (\*) Assistance Act. In a novel, Mr. Bumble removes a character from a baby farm to make him pick oakum here. Many people entered these locations after they were denied relief under the New Poor Law of 1834. For 10 points, name these English institutions where people who could not support themselves were sent to in order to find employment.  
ANSWER: workhouses [or almshouses, or spikes, accept poorhouse until “Poor Law”]

2. Richard Porson worked on reconstructing parts of the lower right portion of this object, which was recovered from the walls of Fort Julien. It served as the basis for most of the work contained in the *Letter to Monsieur Dacier*, which expanded on earlier work done using this object by Thomas Young. This object, long also known as EA 24, was first rediscovered by Pierre-François (\*) Bouchard. It names Aëtus son of Aëtus as the priest of the cult of Alexander the Great and describes how the gods have awarded victory, strength, and “life, prosperity, and health”, the latter trio represented as “ankh wedja seneb”, to Ptolemy V. For 10 points, name this object used by Jean-Francois Champollion to decipher Egyptian hieroglyphics.  
ANSWER: the Rosetta Stone

3. One character in this novel drops bundles of money on the front door of the widower Xius, who angrily agrees to sell his splendid house and dies two months later. A woman in this novel falls in love with her intended husband and writes him a letter each day for 17 years, but the man eventually returns all of the letters unopened. A bishop arrives by boat to bless the marriage at the center of this novel, which never occurs because (\*) Bayardo San Roman returns the bride. This novel, which is presented as the journalistic presentation of an anonymous narrator, tells of the Vicario twins murdering Santiago Nasar for supposedly despoiling their sister Angela. For 10 points, name this novel by Gabriel Garcia Marquez titled for the fact that the whole town was aware of Nasar’s impending murder.  
ANSWER: Chronicle of a Death Foretold [or Cronica de una muerte anunciada]

4. A viscous fluid and an elastic spring connected in series characterizes this scientist’s namesake model of viscoelasticity. Equating the second mixed partial derivatives of each of the four thermodynamic potentials is the derivation of the set of fundamental thermodynamic equations named for this scientist. This scientist proposed a thought experiment in which high velocity (\*) gas particles accumulate selectively on one side of a divided container, violating the 2nd law of thermodynamics. This man names another set of equations that can be used to derive the wave equation for an electromagnetic wave. For 10 points, Gauss’s laws, Faraday’s law, and Ampere’s law are the 4 fundamental equations of electromagnetism named for what scientist, who also theorized a namesake “demon”?  
ANSWER: James Clerk Maxwell

5. One song in this musical, which was replaced by “Pet Me, Poppa” in a film adaptation, is sung by a woman who says that she’s “talkin’ in my sleep / about you!” Marlon Brando made his only musical appearance in this production, whose original cast included Robert Alda, Sam Levene, and Vivian Blaine. One song from this musical is titled for a phenomenon that “might give me the brush” and has a “very (\*) un-lady-like way / of running out.” This musical, which is based on the stories “Blood Pressure” and “The Idyll of Miss Sarah Brown,” features the songs “A Bushel and a Peck,” “Sit Down, You’re Rocking the Boat,” and “Luck Be a Lady.” For 10 points, name this Frank Loesser musical based on Damon Runyan stories, which stars the craps-game-runner Nathan Detroit and the gambler Sky Masterson.  
ANSWER: Guys and Dolls

6. A woman in this novel is bitter about a man who promised her an acting career while dancing at the Riverside Dance Palace. Near the end of this novel, a character bemoans the continuing lack of ketchup, reminisces about an earlier threat to go live in a cave, and has a vision of his Aunt Clara. Another character in this novel wears a glove full of Vaseline on his left hand and suspects his wife of having an affair with the “jerkline skinner” (\*) Slim. Its other characters include Crooks, the only black man, and Carlson, who heartlessly shoots Candy’s aging sheepdog. One of this novel’s main characters accidentally kills Curley’s wife while stroking her hair, derailing his dreams to live “off the fatta’ the land” on a much-discussed rabbit farm. For 10 points, name this John Steinbeck novel about George and Lennie.

ANSWER: Of Mice and Men

7. The presence of this element at the center of sarin allows it to inhibit acetylcholinesterase. This element bonds to an azide in the first step of the Staudinger reduction. A functional group containing this element in its center stabilizes the carbanion in the intermediate of the Horner-Wadsworth-Emmons reaction. Four atoms of this element bind to 10 oxygen atoms in its (\*) pentoxide. A Z-alkene can be produced by reacting a carbonyl with an ylide with positive charge on this element in the Wittig reaction. Coming in notable white and red allotropes, for 10 points, name this element with atomic number 15 which is found below nitrogen on the periodic table.

ANSWER: phosphorus [prompt on “P”]

8. The third section of this work denounces the “misty realm of philosophical fantasy” embraced by thinkers who rejected the “French one-sidedness” of a certain class of literature. This book proposes “ten planks”, including distributing population equally throughout a territory and universal free education, that will lead to the (\*) “free development of all”. The first section of this work decries the “epidemic of overproduction” that has developed from the “naked self interest” of the bourgeoisie. This work opens by describing a “spectre [...] haunting Europe”, and it claims that all history is the “history of class struggle”. For 10 points, name this work of political philosophy by Friedrich Engels and Karl Marx.

ANSWER: The Communist Manifesto [or Manifesto of the Communist Party; or Manifest der Kommunistischen Partei]

9. In one appearance, this character frantically pushes buttons in an airplane while screaming “Take that, Dr. Sally Waxler!” In another appearance, he gives his friend “Baron Von Costume’s Deluxe Disguise Kit” and insists that the word “radical” is the thing that he says. In that appearance, this character says he knows what it feels like “when doves cry” after meeting someone else with the same name in (\*) Shelbyville. This character’s father was a “big wheel at the cracker factory” and recorded the song “Can I Borrow a Feeling?” This person’s catch phrase is triumphantly saying that “Everything’s coming up [his name].” This character’s glasses are frequently taken away from him by Nelson Muntz, and he has a hopeless crush on his best friend’s sister, Lisa. For 10 points, name this nerdy friend of Bart on *The Simpsons*.

ANSWER: Milhouse van Houten [accept either underlined portion]

10. This leader egotistically declared that his official pictures would initially only depict him in half-profile with one ear showing. His censors prevented author Paul Goma from publishing a novel criticizing this leader’s government. In this man’s final public speech, he was booed by a jeering crowd who chanted “Timisoara” in reference to recent uprising. He urged an intensification of socialist ideology in his 1971 (\*) July Theses. This leader employed secret police known as the Securitate, and he succeeded Gheorghe Gheorghiu-Dej as head of the Communist Party in his country. He and his wife Elena were executed on Christmas Day 1989 after they tried to flee the country. For 10 points, name this dictator who led Romania from 1967 to 1989.

ANSWER: Nicolae Ceausescu

11. **The Ghyben-Herzberg ratio gives the depth at which this kind of substance becomes polluted. This kind of substance provides the environment of limnicoid animals. Catadromous species come to this kind of environment to reproduce, in contrast to their anadromous counterparts. This substance's namesake lens can be found over atolls, which is why it is (\*) potable. Excess phosphorous in environments composed of this kind of substance is the most common cause of eutrophication. This substance is mixed with another substance containing more dissolved solids to create a brackish substance, which is found in estuaries. For 10 points, name this type of substance that can be found in lakes and rivers, as opposed to the oceans or seas.**

ANSWER: fresh water [Prompting on "water" seems dubious to me, but let's do so. Prompt on "lake water" or "river water" or "ground water"]

12. **One of these characters, Hylonome, loyally committed suicide after the death of her husband Cyllarus. Two of them named Hylaeus and Rhaecus were killed by Meleager in defense of Atalanta. One of these characters, the son of Cronus and the nymph Philyra, rescued the unarmed Peleus and traded his immortality for the life of Prometheus, while another one gave a shirt soaked in his poisoned blood to (\*) Deianeira. Many of them lived on Mount Pelion, and most stories consider them the children of Ixion and Nephele. One of them named Eurytus drunkenly attempted to abduct Hippodamia, sparking a massive fight with the Lapiths which did not involve the most famous example of them, the wise teacher Chiron. For 10 points, name these mythical creatures whose bodies were half-man and half-horse.**

ANSWER: centaurs [or hippocentaurs; or kentauros]

13. **A participant killed after this event edited the newspaper *The Alarm* with his wife, Lucy. A memorial to this event sculpted by Johannes Gelert resembles a policeman with an upraised arm. Louis Lingg killed himself after it by putting a blasting cap in his mouth. After this event, four men, including August Spies, were executed, while several others were pardoned by Governor John Altgeld. It occurred while speakers were addressing strikers at the McCormick Harvesting Machine Company. This event is commemorated with the May 1<sup>st</sup> International Workers' Day, and the bad publicity from it hurt the reputation of the Knights of Labor. For 10 points, name this 1886 bombing which occurred during a workers' demonstration at the namesake square in Chicago.**

ANSWER: Haymarket Square affair/massacre/bombing

14. **This man appears below a sculpture of a bearded head and above a large stone slab displaying a Latin phrase, which surround a circular window in the "porthole portrait" of him. A golden table leg resembling an eagle-topped fasces appears in another portrait of this man, who holds a sword and wears a purple cloak while seated between the goddesses Victory and Liberty in another painting. This subject of the *Lansdowne Portrait* experienced an (\*) "Apotheosis" in a Constantino Brumidi fresco and was depicted by Rembrandt Peale as "Patriae Pater". Ice chunks modeled on those found in the Rhine appear in a painting in which this man dramatically perches next to the flag-bearing Lieutenant James Monroe. For 10 points, name this politician and general who Emanuel Leutze depicted "Crossing the Delaware".**

ANSWER: George Washington

15. **One character in this poem describes a time "When the ivy-tod is heavy with snow, and the owlet whoops to the wolf below, that eats the she-wolf's young." Its sixth section opens with a dialogue between two voices, one of which describes a man who "penance more will do". This poem's speaker regains the ability to pray after learning to appreciate the beauty and life of a "thousand thousand slimy things". Earlier, its speaker observes a (\*) dice game between Death and Life-in-Death, who wins the speaker's soul. At its end, its title character relates the lesson "He prayeth best, who loveth best all things both great and small" to the Wedding-Guest. For 10 points, name this poem whose title character shoots of an albatross, leading to a situation involving "water, water everywhere, nor any drop to drink", a work of Samuel Taylor Coleridge.**

ANSWER: "The Rime of the Ancient Mariner"

16. Both al-Nawawi and Imam Bahouti argued that this concept's *fard kifaya*, or community duties, include knowledge of divine law and *da'wa*. Ibn Rushd divided this concept into four types, including one form "by the tongue" that encompasses *dua*, or invoking God's name. In one hadith, Muhammad distinguished between the "lesser" form of this concept and the "greater", *nafsah*, form against the self and the ego. Bernard (\*) Lewis has argued that the "greater" form of this concept is not peaceful resistance against the non-Muslim world but really this concept "by the sword", including military violence and contemporary Islamic terrorism. For 10 points, identify this Arabic term for "struggle", that is often used to mean Islamic holy war.

ANSWER: jihad

17. This tissue can be visualized by staining with Safranin O and FCF. ADAMTS 4 and 5 degrade one type of this tissue by cleaving aggrecans, which are a type of proteoglycan that binds to a hyaluronan filament in this tissue. The articular type of this tissue is not surrounded by perichondrium, unlike its elastic type, which contains more elastin and less (\*) collagen than the hyaline type of this tissue. This tissue breaks down in osteoarthritis, which often is treated with hip or knee replacement surgery. The skeleton of sharks and other members of chondrichthyes is composed of, for 10 points, what type of connective tissue that in humans is found in the ears, nose, and the joints between bones?

ANSWER: cartilage

18. Hector Berlioz's *Treatise on Instrumentation* praises this composition's use of the oboe in the *andante* section of its last movement. A quotation from this work's second movement appears under the words "In Memoriam!" near the end of Richard Strauss's *Metamorphosen*. An unexpected C sharp breaks up the cello melody in its unusually long first movement, which also confounded its composer's contemporaries by having a solo horn enter four bars before the rest of the orchestra begins the recapitulation. This work's second movement is a C minor (\*) funeral march, while its fourth movement is based largely on the theme of the last movement of its composer's ballet *The Creatures of Prometheus*. For 10 points, name this symphony which was dedicated first to Napoleon, then to "the memory of a great man", by Ludwig van Beethoven.

ANSWER: the Eroica Symphony [or Sinfonia Eroica; or Ludwig van Beethoven's Symphony No. 3 in E Flat Major; or Beethoven's Opus 55; neither "Beethoven" nor "Symphony" is required after being read]

19. This author was dubbed "Ironie" in the title of Erich Heller's book about him. His Brazilian mother Júlia inspired Consuelo, the mother of a character who is mistaken for an escaped con man and nearly arrested on a visit to his hometown. In that novella by this author, the protagonist discusses art with the painter Lizaveta Ivanovna and attends a ball where he sees people who resemble his childhood friends Hans Hansen and Ingeborg Holm. One of his characters continually encounters a (\*) red-haired man whose face is caked with white makeup and repeatedly notices the odor of disinfectant used to ward off the spread of cholera. An erotic obsession with a Polish boy named Tadzio fills the last days of Gustav von Aschenbach in a 1912 novella by this author. For 10 points, name this German author of *Tonio Kröger* and *Death in Venice*.

ANSWER: Thomas Mann [or Paul Thomas Mann]

20. Numerous prisoners of war were killed in this country during the Cowra breakout. A mentally deficient man angry over his father's failure to acquire a bed and breakfast murdered thirty-five people at a tourist site in this country, leading to increased gun control laws. In 2012, a conservative radio host in this country suggested its then-leader's late father "died of shame." This country celebrates "National Sorry Day" and a recent leader of it apologized to the families that were part of the (\*) Stolen Generations, indigenous children that were forcibly taken by governmental or religious agencies. The "bushranger" Ned Kelly was active here, and its unofficial national anthem is "Waltzing Matilda." For 10 points, name this country whose Prime Ministers have included Kevin Rudd and Julia Gillard.

ANSWER: Commonwealth of Australia

TB. An operator possessing real and distinct eigenvalues is referred to as “strictly” *this*. At *this* kind of point, the principal curvatures have opposite signs and the Gaussian curvature is negative. The wave equation is the prototypical example of this kind of PDE. The degenerate form of one object with this name consists of (\*) two intersecting lines. The function “ $e^x - e^{-x}$  all over 2” is called *this* type of sine. The equation “ $x^2/a^2 - y^2/b^2$ ” is an example of an object with this name. An eccentricity greater than one characterizes, for 10 points, what conic section which has two non-connected curves?  
ANSWER: hyperbolae [or hyperbolic, or word forms]

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**Round 11: Bonuses**

1. Hugo Chavez has claimed this man was poisoned by “New Granada traitors.” For 10 points each:

[10] Name this leader of the independent republic of Gran Colombia. He is known as the “Liberator” of much of South America.

ANSWER: Simon **Bolivar** [do not accept “Bolivia”]

[10] This aide to Bolivar won the Battle of Ayacucho against the Royalist forces. He previously won the Battle of Pichincha and was later assassinated in June 1830.

ANSWER: Antonio Jose de **Sucre** y Alcala

[10] During Bolivar’s 1810’s Admirable Campaign to liberate South America, he issued this 1813 order that allowed for violence to be committed against Spanish civilians who were not supporting independence.

ANSWER: Decree of **War to the Death** [or *Decreto de Guerra a Muerte*]

2. Dirac notation represents this entity using a ket, which is a state vector. For 10 points each:

[10] Name this quantity, which must be normalized in order for it to properly represent a probability amplitude.

ANSWER: **wavefunction**

[10] This equation sets the Hamiltonian of the wavefunction equal to  $i$  times  $\hbar$  times the time derivative of the wavefunction. Its namesake also posited a thought experiment involving a single particle decay causing a Geiger counter to destroy a vial of cyanide.

ANSWER: **Schrödinger** equation [or **Schrödinger**’s cat]

[10] The wavefunction in this type of potential can be expressed as the product of a plane wave and a function of this type according to Bloch’s theorem. Quasicrystals possess local order but lack this property.

ANSWER: **periodicity**

3. Identify some Jonathan Swift works that aren’t about eating Irish babies, for 10 points each.

[10] The title character of this Swift novel suffers a number of sailing mishaps which take him to such exotic, fictional lands as Lilliput, Brobdingnag, and Japan.

ANSWER: **Gulliver’s Travels** [or the long title that no one’s going to say but which **Travels into Several Remote Nations of the World** is the important part of]

[10] The “Digression on Madness” is commonly excerpted from this satire, in which three brothers named Peter, Martin, and Jack represent the three major branches of Western Christianity.

ANSWER: A **Tale of a Tub**

[10] Swift attacked the legitimacy of the letters patent which gave William Wood the right to privately mint copper coinage in this series of seven pamphlets, published between 1724 and 1725.

ANSWER: the **Drapier’s Letters**

4. Answer the following about works in D major which are neither violin concerti nor “Hey There Delilah”, for 10 points each.

[10] This German Baroque composer didn’t use D major for any of the arias in his *Hexachordum Apollinis*, but he did use it for his most famous work, the aptly-named *Canon in D*.

ANSWER: Johann **Pachelbel**

[10] Gustav Mahler cut a movement named “Blumine” from his first version of this D major symphony, which is titled after a Jean Paul novel and features a third-movement funeral march based on “Frere Jacques”.

ANSWER: the **Titan** Symphony [or *Symphony No. 1*; or the **First** Symphony]

[10] This eclectic synaesthete claimed that D major was golden in color. His obsession with musical colors also led him to invent a keyboard instrument called the “clavier à lumières” for the premiere of his *Prometheus: Poem of Fire*.

ANSWER: Alexander Nikolayevich **Scriabin**

5. In one novel, this character has Gladia Delmarre sent to Aurora instead of revealing her murder of her husband Rikaine, while in another, he learns that R. Giskard Reventlov is capable of telepathy. For 10 points each:

[10] Identify this plainclothes policeman who is partnered with R. Daneel Olivaw in a trilogy of novels that includes *The Naked Sun* and *The Caves of Steel*.

ANSWER: Elijah “LiJe” Baley [accept any underlined portion]

[10] Elijah Baley is the protagonist of the “Robot Trilogy” of novels by this Russian-American science fiction author, who also penned the *Foundation* series.

ANSWER: Isaac Asimov [or Isaak Yudovich Ozimov]

[10] In this Asimov story, successive generations of humanity use a computer called Multivac and its descendents to search for a way to reverse entropy, which is eventually accomplished when AC recreates the universe.

ANSWER: “The Last Question”

6. The *Times* called this speech “evil,” saying it was an appeal to “hatred.” For 10 points each:

[10] Name this 1968 speech dealing with immigration whose title refers to a line from the *Aeneid*. It resulted in the speaker being removed from the Shadow Cabinet, and it memorably contains an anecdote about an old woman in Northumberland who has become the only white resident on her street.

ANSWER: “Rivers of Blood” speech

[10] “Rivers of Blood” was delivered by Enoch Powell, a member of this British political party, the party currently led by incumbent Prime Minister David Cameron.

ANSWER: Conservative and Unionist Party [or Tory]

[10] A possibly more progressive speech was the 1960 “Wind of Change” speech delivered by this Conservative Prime Minister about African independence. He left office in 1963 shortly after the Profumo Affair.

ANSWER: Harold Macmillan [or Maurice Harold Macmillan]

7. These molecules can be purified in minipreps which often employ alkaline lysis to destroy the cells containing them followed by centrifugation and removal of the supernatant. For 10 points each:

[10] Name these pieces of circular DNA often found in bacteria. They can be transferred between cells in transformation and conjugation.

ANSWER: plasmids

[10] During conjugation, DNA replication proceeds through this mechanism in which a nick is made in one of the circular strands, then DNA polymerase pushes the nicked strand off of the unnicked strand as it synthesizes a new strand.

ANSWER: rolling circle replication

[10] F plasmids are transferred through the “sex” form of this structure which is found on the surface of bacteria that engage in conjugation.

ANSWER: pilus [plural pili]

8. The speaker of this work discusses an ideal figure who “does not trace the rise of the Trojan War *ab ovo*”, or “from the egg”, and excuses minor compositional mistakes because “even good Homer nods”. For 10 points each:

[10] Name this poem, written as a letter to Lucius Calpurnius Piso and his sons, which warns against misuse of *deus ex machina* and coined the phrases “ut pictura poesis” and “in medias res”.

ANSWER: “Ars Poetica” [or “The Art of Poetry”]

[10] “Ars Poetica” was written by this Roman poet, who like Virgil was patronized by Maecenas. He claimed to have “made a monument more lasting than bronze” and coined the phrase “carpe diem” in his four books of *Odes*.

ANSWER: Horace [or either underlined portion of Quintus Horatius Flaccus]

[10] Horace followed those four books with a book of poems in imitation of Archilochus’s iambic distichs, which he referred to by this name. In Greek verse, it names the thing that follows the strophe and the antistrophe.

ANSWER: epodes [accept Epodon liber or the *Book of Epodes*]

9. This god is the namesake of an early-August harvest festival held about three months before Samhain, and he impressed Nuada with his harp skills and by winning a flagstone-throwing contest against Ogma. For 10 points each:

[10] Name this Celtic god who avenged Nuada's death by killing Balor at the second battle of Magh Tuireadh, after which he became the leader of the Tuatha de Danaan.

ANSWER: Lugh Lamhfhada [or Lug of the Long Arm; accept Lugus or Lleu Llaw Gyffes]

[10] Lugh inherited the sword Fragarach, "the Answerer", from this psychopomp and sea god, his foster father. In another story, this son of the obscure deity Lir tempted Cormac mac Airt with a silver branch.

ANSWER: Mannanan mac Lir [accept Manawydan mac Llyr]

[10] Mannanan's wife Fand once had an affair with this son of Lugh. This wielder of the Gae Bulg is known for his fearsome battle frenzy, which he used to defend Ulster from the armies of Medb during the Cattle Raid of Cooley.

ANSWER: Cuchulainn [or Cuhullin; or Setanta]

10. This man asserted all inquiry begins with "wonder" and contrasted "critical common-sensism" with other methods of inquiry in "The Fixation of Belief". For 10 points each:

[10] Name this prolific American thinker who outlined three different aspects of conception in "How to Make Our Ideas Clear".

ANSWER: Charles Sanders Peirce

[10] Peirce is considered one of the founders of this philosophical movement that was popularized by his friend William James.

ANSWER: pragmatism [accept word forms]

[10] In "The Fixation of Belief", Peirce argued that this way of thought, while fallible and not always practical, is the most accurate way to arrive at "secure" beliefs. Paul Feyerabend argued that this approach to knowledge could be summarized as "anything goes".

ANSWER: scientific method [accept science or other word forms; prompt on "method"]

11. Identify the following regarding Pulitzer-winning plays of the 1930s, for 10 points each.

[10] This 1938 winner depicts the relationship between George Gibbs and Emily Webb. Written by Thornton Wilder, it takes place in Grover's Corners, New Hampshire.

ANSWER: Our Town

[10] In 1939, Robert Sherwood won for a play about this American historical figure, who was also the subject of a six-volume biography by Carl Sandburg.

ANSWER: Abraham Lincoln [accept Lincoln in Illinois]

[10] The 1932 prize went to this author for *Alison's Baby*. This cofounder of the Provincetown Players is more famous now for her 1916 play *Trifles*, which she later adapted into the story "A Jury of Her Peers".

ANSWER: Susan Keating Glaspell

12. This man's favorite painters were Alexandre Cabanel, who painted a life-size portrait of him in black dinner attire, and Franz Xaver Winterhalter, who depicted this man's wife Eugenie "surrounded by her ladies-in-waiting". For 10 points each:

[10] Name this patron of the arts who, despite his own conservative tastes, initiated the 1863 Salon des Refusés.

ANSWER: Napoleon III [or Louis-Napoleon Bonaparte; prompt on "Bonaparte"]

[10] One of the most famous paintings rejected from the Salon of 1863 was this Manet work, which depicts two fashionably-dressed men conversing while seemingly ignoring the nude woman sitting with them.

ANSWER: *The Luncheon on the Grass* [or *Le Déjeuner sur l'Herbe*]

[10] Another artist rejected by the Salon was this student of Camille Corot, who painted many depictions of the Boulevard de Montmartre and was the only person to show paintings at all eight Impressionist exhibitions.

ANSWER: Camille Pissarro [or Jacob Abraham Camille Pissarro]



13. One of these elements is used to dope a YAG crystal in a notable type of laser, while another one of these elements has extremely large paramagnetic properties making it useful as an MRI contrast agent. For 10 points each:  
[10] Name this collection of elements which curiously displays a decrease in atomic radius as their atomic number increases due to poor shielding.

ANSWER: lanthanides

[10] The lanthanides comprise the rare earth elements along with this other collection of elements, which contains uranium and plutonium.

ANSWER: actinides

[10] All lanthanides are stable in this oxidation state. In the vast majority of aluminum-containing compounds, aluminum is in this oxidation state.

ANSWER: +3

14. Berenice, the last of this book's title entities, is alternately just and unjust, while Ersilia contains no people but merely strings charting the former inhabitants' relationships. For 10 points each:

[10] Name this 1951 novel in which Marco Polo claims to be "saying something about Venice" each time he describes one of the title metropolises to Kublai Khan.

ANSWER: Invisible Cities [or *Le Città Invisibili*]

[10] *Invisible Cities* was written by this Italian author of the science-inspired short story collections *t zero* and *Cosmicomics* and the metafictional novel *If on a winter's night a traveler*.

ANSWER: Italo Calvino [or Italo Giovanni Calvino Mameli]

[10] In 1968, Raymond Queneau invited Calvino to join this literary group, whose name is short for a French phrase meaning "workshop of potential literature". It advocated constrained writing and counted François Le Lionnais and George Perec among its other members.

ANSWER: Oulipo [prompt on "Ouvroir de littérature potentielle"]

15. This work of art inspired a 2006 Henry Singer documentary. For 10 points each:

[10] Name this photograph taken during the 9/11 attacks by Richard Drew, which may depict restaurant employee Jonathan Briley's desperate attempt to escape the World Trade Center. Due to complaints about its disturbing nature, the *New York Times* only used it once.

ANSWER: *The Falling Man*

[10] Another photograph taken on 9/11, this one by Thomas Franklin, shows New York City firefighters performing this action at Ground Zero. A Joe Rosenthal photograph shows soldiers doing this after the Battle of Iwo Jima.

ANSWER: raising the American flag [accept obvious equivalents like "erecting a flag"]

[10] Another disturbing photograph was a 1993 Pulitzer winning image taken by Kevin Carter while in Sudan, showing one of these animals watching a sickly child. Carter committed suicide three months after winning the Pulitzer.

ANSWER: a hooded vulture [prompt on bird]

16. This man sued CBS regarding his depiction in the documentary *The Uncounted Enemy*. For 10 points each:

[10] Name this United States military leader. He infamously can be seen claiming that "the Oriental doesn't put the same high price on life as does a Westerner" in the documentary *Hearts and Minds*.

ANSWER: William Westmoreland

[10] Westmoreland was in command of U.S. military operations in this conflict, which escalated after the Gulf of Tonkin Incident in 1964.

ANSWER: the Vietnam War

[10] This pediatrician was a noted anti-war activist and ran for president as the 1972 People's Party candidate. He is best known for writing the mega best-seller book *Baby and Child Care*.

ANSWER: Benjamin McLane Spock

17. For 10 points each, answer the following about computer scientist Edsger Dijkstra (“DIKE”-strah).

[10] Dijkstra’s algorithm outputs the shortest path for this kind of data structure. These structures consist of nodes and edges, the latter of which can have weights associated with them.

ANSWER: graphs

[10] Dijkstra first created this kind of variable, which manages a shared resource between a concurrent system. This variable is incremented and decremented atomically and is locked after the number of decrements reaches a threshold.

ANSWER: semaphores

[10] Dijkstra’s banker algorithm is designed to help avoid this situation, in which a number of processes are stuck indefinitely in waiting for each other process to finish.

ANSWER: deadlock

18. Name some things related to devotional practices, or bhakti, in Buddhism, for 10 points each.

[10] Devotion is a way to grow closer to the Three Jewels, or Refuges, one of which is this body of Buddha’s teachings about suffering and the ways to escape it.

ANSWER: dharma [or dhamma]

[10] This Buddha figure “of infinite light” is worshiped by many Mahayana sects, including Pure Land Buddhism. In a long ago past life, this figure was a bodhisattva named Dharmakara.

ANSWER: Amitabha Buddha [or Amitayus Buddha]

[10] Many devotionals can be found in the Digha Nikaya part of this collection of Theravada scriptures, whose name means “three baskets”.

ANSWER: Pali Canon [or Tripitaka]

19. Rollo May wrote that this school of thought was overly authoritarian. For 10 points each:

[10] Name this school of therapy founded on the belief that the driving force in people is to find meaning in their lives. It was appropriately outlined in Viktor Frankl’s book *Man’s Search for Meaning*.

ANSWER: logotherapy [prompt on psychotherapy]

[10] *Man’s Search for Meaning* is primarily about Frankl’s experiences in one of these institutions, in which he noted that numerous people experienced depersonalization and lost the will to live without meaning.

ANSWER: a concentration camp [prompt on prison camp or jail]

[10] Aspects of logotherapy are similar to this theory created by Abraham Maslow that organizes human concerns into a pyramid, with physiological concerns at the bottom. People who have satisfied all of their concerns are said to be “self-actualized.”

ANSWER: hierarchy of needs

20. A victor in this war gave back much of the conquered territory, saying that he was the king of France, not a shopkeeper. For 10 points each:

[10] Name this war, ended by the Treaty of Aix-la-Chapelle, in which many European powers fought over the question of Hapsburg ruler Maria Theresa’s right to the throne of a country which would later be ruled by Joseph II.

ANSWER: War of Austrian Succession [or King George’s War]

[10] This sub-conflict of the War of the Austrian Succession began after Spanish coast guards boarded a British merchant ship and physically attacked a captain. The British and Spanish mounted unsuccessful invasions of American colonies during this war.

ANSWER: War of Jenkins’ Ear [or Guerra del Asiento]

[10] In this 1745 battle, Maurice de Saxe led the French army to a major victory, allowing the French to take the Austrian Netherlands. An 841 battle with the same name was a victory for Charles the Bald and Louis the German over Lothair.

ANSWER: Battle of Fontenoy [or Battle of Fontenoy-en-Puisaye]

Extra. This poet asked “What is this that frees me so in storms? What do my shouts amid lightnings and raging winds mean?” in “One Hour to Madness and Joy”. For 10 points each:

[10] Identify this poet who addressed a “weapon, shapely, naked, wan” in his “Song of the Broad-Axe” and elegized a contemporary politician in “Hush’d Be the Camps To-day”, “This Dust Once Was the Man”, and two other poems.

ANSWER: Walt **Whitman** [or Walter **Whitman**]

[10] The speaker of this Whitman poem becomes “tired and sick” of the title scientist’s proofs, figures, charts and diagrams, so he wanders off into the “mystical moist night-air”, where he looks up “in perfect silence at the stars”.

ANSWER: **“When I Heard the Learn’d Astronomer”**

[10] Unlike many of Whitman’s famous poems, “When I Heard the Learn’d Astronomer” was not collected in this 1855 volume, which does include hits like “I Sing the Body Electric” and “Song of Myself”.

ANSWER: **Leaves of Grass**