

## DEES 2014: Desperate Editors Elicit Support

Edited by Will Alston, Rob Carson, Mike Cheyne, Ike Jose, Shan Kothari, John Lawrence, Brian McPeak, Victor Prieto, and Tejas Raje, with additional help from Saul Hankin, Mik Larsen, Jacob Reed and Matt Weiner.

Packet by Columbia A (Rafael Krichevsky, Ben Zhang, Jon Xu, Kieren Weisert)

### Tossups

1. Donald Cram reacted various aldehydes with these compounds to formulate his namesake rule of asymmetric induction. In the first step of the Ivanov reaction, a carboxylic acid is reacted with two of these compounds to form an unusual carboxylate. Storing these compounds in dioxane or pyridine forces it to undergo a redistribution reaction characterized as the Schlenk equilibrium. Two equivalents of this reagent are needed to reduce an ester to a tertiary alcohol. Reacting formaldehyde with one of them forms a primary alcohol. For 10 points, name these compounds formed when a magnesium atom is inserted into a carbon bromine bond.

ANSWER: **Grignard** reagents [prompt on **organometallic** compounds]

2. One character in this text is chastised for excessive mourning of a favored disciple who “does not lapse from benevolence” for three months. That character compares virtue to the “Pole Star” and merely asks “Was anyone hurt?” when his stables caught fire. The central figure of this work venerates Yao and Shun but notes that bringing peace and security to the people would have been taxing for even them. A section in this text emphasizes the proper use of names to denote the way things are, a practice termed the rectification of names. Along with *Great Learning*, *Doctrine of the Mean*, and *Mencius*, this work is one of the Four Books. This work stresses cultivating virtue, or *ren*, through practicing *li* and filial piety. For 10 points, name this collection of sayings by Confucius and his followers.

ANSWER: The **Analects** [or **Lunyu**]

3. A politician who escaped a military revolt in this kingdom on a boat was rescued by a British ship called the *Flying Fish*. A queen of this kingdom requested intervention following a foreign-backed coup d'état by the Enlightenment Party. A pantheistic religious movement that mixed shamanism and Christianity grew out of the “Eastern Learning” movement in this kingdom, where nobles were forced to concede caste privileges during the Gabo reforms. The Donghak rebellion took place in this home of the *yangban* caste system. This “hermit kingdom” was brought to an end when a brutal occupation by a neighbor began in 1910. For 10 points, name this kingdom ruled by the Joseon dynasty.

ANSWER: Kingdom of **Korea** [accept **Joseon** or **Choson** dynasty/kingdom before mentioned; accept **Hanguk**; do not accept “North Korea” or “South Korea” at any point]

4. This mathematician's principle states that solutions to Poisson's equation can be obtained by minimizing his namesake energy, a functional measure of variance. The sum over integers  $k$  from minus  $n$  to  $n$  of  $e$  to the power  $ikx$  is called his kernel and the indicator function on the rationals is sometimes named for him. He proved that for two positive coprime integers  $a$  and  $b$ , there are infinitely many primes congruent to  $a \bmod b$ . Specifying the values of a differential equation's solutions at the boundary is the mathematician's boundary conditions; specifying the derivatives are Von Neumann's. For 10 points, name this German mathematician who formulated the pigeonhole principle.

ANSWER: Johann Peter Gustav Lejeune **Dirichlet**

5. In the book's first chapter, we learn that this character, the son of Kreutznaer, has a brother who was a lieutenant-colonel that was killed at the Battle of Dunkirk. While dying of thirst, this character has a hallucination in which a man on a black cloud on a great flame that tells him he has not repented. This character's detailed diary discusses how he digs an underground cave for his goats and how he made candles from goat grease. At the end of the book, he attacks a bunch of wolves with a travelling companion in the Pyrenees after he travels to Lisbon and discovers that he has accrued much wealth; that character is a former cannibal he meets while on an "island of despair" in the Oronoco. Alexander Selkirk inspired, for 10 points, what character who meets his companion Friday after he is shipwrecked in a novel by Daniel Defoe?

ANSWER: **Robinson Crusoe** [Accept either]

6. In 2004, this man was imprisoned in Camp Bucca before being released in December of that year. According to a biography, this man is a member of the al-Bu Badri tribe and is a descendant of the Quraysh. This man started a conflict with Jabhat al-Nusra, which ended when he combined their forces with his own, in opposition to the wishes of Ayman al-Zawahiri. In his first public appearance, this man was mocked for preaching while wearing a Rolex. This man is said to have a PhD from the Islamic University of Baghdad, and in early November 2014, conflicting reports stated that he had been either injured or killed by an airstrike on the city of Qaim. For 10 points, name this self-proclaimed caliph of the Islamic State.

ANSWER: Abu Bakr al-**Baghdadi**

7. One artist from this country painted a work depicting a group of mask-wearing nude figures who bash the skull of an upside-down black man. Another painter from this country depicted a skeleton giving birth while other skeletal figures dressed in caps and gowns look on. That artist from this country painted a series including *Gods of the Modern World* and *Modern Migration of the Spirit*. Nelson Rockefeller ordered the destruction of a painting by a man from this country that controversially depicted Vladimir Lenin. That artist from this country also created a series of works depicting Ford plant workers called *Detroit Industry*. This country is home to the painters of *Man at the Crossroads* and *The Epic of American Civilization*. For 10 points, name this country home to the muralists David Siqueiros, Jose Clemente Orozco, and Diego Rivera.

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

8. One character in this work tells another to imagine a certain woman is Ginger Rogers; the other character then calls that woman "a bitch" for reporting him to "Child Wellfed." Another character in this play uses his bus fare to have a jukebox play Sarah Vaughan's "Little Man You've had a Busy Day." One character in this drama is incredulous to learn that his tyrannical, one legged father is coming home from the hospital. The memory of kite flying attempts to soothe that protagonist's racist mistreatment of two others in this play, but to no avail as the protagonist notes that it is raining. The play concludes with Sam and Willie consoling each other with ballroom dancing. For 10 points, name this play wherein Sam, Willie, and the younger Hally have a conversation, written by Athol Fugard.

ANSWER: **Master Harold...and the Boys**

9. Two brothers of a Duke of Normandy with this name dumped a chamber pot on his head, prompting that man to besiege Rouen in rebellion against his father. A count of Artois with this name was killed leading the French at the Battle of the Golden Spurs. A man with this name signed the Treaty of Corbeil with Charles IV to renewed the Auld Alliance. During the Anarchy, an earl of Gloucester with this name helped his half-sister Matilda fight Stephen of Blois. Edward II was defeated by a besieger of Stirling Castle with this name in a battle securing Scotland's independence. For 10 points, identify this name possessed by a victor at Bannockburn from the Bruce family.

ANSWER: **Robert** [accept **Robert** Curthose, **Robert** the Bruce, or **Robert**, Duke of Gloucester]

10. One orchestral work by this composer opens with a sustained timpani roll and double bass tremolo on a low B, while two harps alternate playing octave F-sharps and G-sharps. Some of this composer's piano works were orchestrated by André Caplet. At the opening of one piece by him, an F - A-flat third in the pianist's left hand is answered by the same third an octave above in the right hand. That movement in D-flat major and 9/8 time appears in a piano suite by him that ends with a "Passepied". The movement "Play of the waves" is the second in a series of three "symphonic sketches" by him, depicting the ocean. For 10 points, name this French composer of *La mer*, whose *Suite bergamasque* includes the movement "Clair de Lune".

ANSWER: (Achille-)Claude **Debussy**

11. One of this man's poems is largely set at Mar Saba monastery and is named for a theology student who renews his faith by making a pilgrimage to Jerusalem. A poem named for him mentions "the calyx of death's bounty giving back a scattered chapter" and ends with a description of "this fabulous shadow [that] only the sea keeps." One of his novels ends with chapters titled "The Chase - First Day," "The Chase - Second Day" and "The Chase - Third Day." He spent several years working on the longest poem in American literature titled *Clarel*, and he saw, "the dice of drowned men's bones" according to a Hart Crane poem about his tomb. He wrote a novel that ends with its narrator being rescued by the *Rachel* after floating on Queequeg's coffin. For 10 points, name this author of *Moby Dick*.

ANSWER: Herman **Melville**

12. This man names a group of methods for numerically modelling fluid dynamics on a lattice. Those methods involving solving the discrete version of an equation named for him, which sets the time derivative of the distribution function equal to the sum of a collision term and a force term. One theorem due to this scientist defines a function as the integral of the particle distribution function times the log of that function minus one, and shows that it always increases. He's the second namesake of the classical limit of the velocity distribution of particles in an ideal gas, and he showed that entropy is equal to the log of the total number of microstates times his namesake constant. For 10 points, name this German physicist who has a constant symbolized  $k$  and who names a distribution with James Maxwell.

ANSWER: Ludwig **Boltzmann**

13. In one story, a sacrifice to this deity was interrupted by Callipolis, whose father Alcathous killed him for impiety. Earlier, this god had helped Alcathous construct the walls of Megara. This god caused Clytia to wither and die after she revealed an affair between this god and Leucothea. Xuthus adopted a son that this god fathered with Creusa, named Ion. This god got the Fates drunk as a favor for Admetus, whom this god had to serve as punishment for killing the Cyclopes, which he had done as revenge for Zeus's killing of his son Asclepius. This slayer of Python founded the oracle of Delphi, killed the seven sons of Niobe, and tricked his sister into killing Orion with her bow. For 10 points, name this Greek god of light and music, the twin brother of Artemis.

ANSWER: **Apollo** [or **Apollon**]

14. The day after this event, Guy Henry and his force, known as the "Brunettes," battled an opposing group believed to have burned down the Drexel Mission. Participants in this event controversially received twenty Medals of Honor, with one citation praising the retrieval of a stampeded mule. After it, James Forsyth was relieved of command by an angry General Nelson Miles. In 1973, members of AIM symbolically occupied the location where this event took place. It began when the deaf Black Coyote refused to give up his rifle, prompting a skirmish that caused artillerymen with Hotchkiss guns to open fire. For 10 points, name this 1890 massacre by the U.S. Army of Lakota at a South Dakota reservation.

ANSWER: the **Wounded Knee** massacre

15. In *Primitive Mythology*, Joseph Campbell discusses one of these objects where the souls of Shamans are reared, called “Tuuru.” Abram settles in Hebron and pitches his tent near these objects named after Mamre, and King David’s general Joab kills Absalom after discovering him in one of these things. In Mark, Jesus curses one of these things before he clears the temple of the moneylenders, and Zacchaeus is in one of these when Jesus tells him that he is going to Zacchaeus’ house. The Vajrashila is where the Buddha sat at one of these things when he found enlightenment, which is called Bodhi. For 10 points, identify this living thing whose fruit of “Knowledge of Good and Evil” was responsible for Adam and Eve’s expulsion from the Garden of Eden.

ANSWER: **tree** [prompt on “plant” or equivalents, accept **oak tree**, **fig tree**, **Tree of Life** or any other answer line with “tree” in it]

16. The St. Elizabeth’s Floods of 1401 and 1421 occurred due to overflowing of tributaries of this river. In antiquity, the huge Hercynian Forest extended eastward from the valley of this river. An island in this river is the site of a tower where Hanno II was supposedly eaten by mice. One section of this river passes through Lake Tuma on its way through the town of Chur, where it turns to the north and flows into the Obersee of a certain lake. This river’s length is marked by namesake “kilometers” that begin with zero in the city of Constance. A waterfall caused a “murmuring” sound near a rock on this river that was said to be home to a siren-like woman called the Lorelei. At Duisburg, this river meets the Ruhr. For 10 points, name this river that flows into the North Sea at Rotterdam after passing through Cologne and Düsseldorf in Germany.

ANSWER: the **Rhine** River

17. This author profiled 50 character types, such as “The Horse-Dark Woman” and “The Syllable-Pure Woman” in his study *Earwitness*. His affair with Iris Murdoch is documented in the last volume of his memoirs, *Party in the Blitz*. A non-fiction work by this writer discusses the merits of Josephus’s scheme to outlive a death pact and suggests that the “act of survival” is power. His only novel features a cunning chess-champion dwarf named Fischerle; the protagonist of that book is a Sinologist who marries his housekeeper Therese in the belief that she’ll protect his massive library. He wrote a work that examines Judge Schreiber and discusses why mobs tend to follow dictators and despots. For 10 points, name this Bulgarian-born writer who wrote the novel *Auto-Da-Fe* and the study *Crowds and Power*.

ANSWER: Elias **Canetti**

18. The title character of an opera in this language is represented by a viola d’amore, which its composer originally intended to use in his second string quartet, dedicated to the same woman. Charles Mackerras conducted the British premieres of several operas in this language by the 20th century composer he was most known for championing. In one opera in this language, the Ringmaster and the Spanish dancer Esmerelda sing a duet after the “Dance of the Comedians”. In another opera in this language, the title character’s baby is drowned in the river by her stepmother, Kostelnicka. For 10 points, name this language of the operas *Katya Kabanova*, *Jenufa*, and *The Bartered Bride*, by Leos Janaček and Bedřich Smetana.

ANSWER: **Czech** [or **čeština**; or **česky**]

19. This city is depicted by Henri-Paul Motte’s most famous historical painting. An expeditionary force unsuccessfully attacked Saint-Martin-de-Re in an attempt to aid this city. Henri de Rohan’s brother Benjamin, the Duke of Soubise, commanded this city’s military. The construction of a seawall by Clement Metzeau ultimately contributed to this city’s surrender. George Villiers, the Duke of Buckingham, led a failed attempt to relieve this city. The Peace of Alais eliminated the power of this city’s mayor Jean Guitton and gutted protections afforded it in the Edict of Nantes. For 10 points, name this Huguenot stronghold in France which was besieged by Cardinal Richelieu.

ANSWER: **La Rochelle**

20. A concept developed by this man asks what a subject enhances, obsolesces, retrieves, and reverses. In a collaboration with Quentin Fiore, this man claimed that ten stages of human history were represented by the “ten thunders” of *Finnegans Wake*. Another of his books examines how humanity moved away from oral traditions and “manuscript culture” to the title stage much more rapidly after the invention of movable type. The amount of attention and effort required to extract meaning, and whether a single sense is targeted, are the criteria by which one of this man’s classification systems dubs something “hot” or “cool”. He coined the term “global village” in his book *The Gutenberg Galaxy*. For 10 points, name this author of *Understanding Media*, a Canadian thinker who coined the term “the medium is the message”.

ANSWER: Marshall McLuhan [or Herbert Marshall McLuhan]

21. It is not Gaucher’s disease, but N-butyl-deoxy-nojiri-mycin successfully treated this condition in mice. It is also not malaria, but pyrimethamine treatment increases the prognosis of patients suffering from the late-onset form of this disease. A G444R missense mutation in the cDNA of a gene in Jacob sheep has been linked to this condition in humans. The clinical symptoms of this disease are identical to Sandhoff’s disease. It is caused by a deficiency of the beta-hexaminidase A enzyme, preventing lysosomes from degrading GM2 gangliosides. For 10 points, name this disease which presents with a cherry-red spot in the retina.

ANSWER: Tay-Sachs disease [or GM2 gangliosidosis before mention, or hexosaminidase A deficiency before mention]

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### Bonuses

1. Identify the following about jesters, for 10 points each.

[10] The court jester Kyoami appears in *Ran*, a film adaptation of King Lear directed by this Japanese director of *Yojimbo* and *Seven Samurai*.

ANSWER: Akira Kurosawa [accept names in either order]

[10] In 1999, Bank of America financial advisor Jesse Bogdonoff was appointed to the position of court jester by Taufa'ahau Tupou IV, the king of this only sovereign indigenous monarchy in Oceania.

ANSWER: Kingdom of Tonga [or Pule'anga Fakatu'i 'o Tonga]

[10] The court dwarf Jeffrey Hudson, who was known as "Lord Minimus", served in the court of this queen consort of England, the mother of Charles II and James II.

ANSWER: Henrietta Maria of France [or Henriette Marie]

2. Because of this rule, nothing ever got done in the Sejm. For 10 points each:

[10] Name this two-word Latin principle, which allowed any single member of the Polish nobility to nullify legislation and end the current session.

ANSWER: liberum veto [accept free veto; prompt on "veto"]

[10] During the time that the *liberum veto* was in effect, Poland was in a commonwealth with this other country. Poland and this "grand duchy" established that commonwealth with the 1569 Union of Lublin.

ANSWER: Grand Duchy of Lithuania [or Lietuva or Lietuvos Didžioji Kunigaikštystė or Litwa or Wielkie Księstwo Litewskie; accept Polish-Lithuanian Commonwealth or Poland-Lithuania]

[10] In an earlier bout of self-interest, Polish nobles arranged the 1386 marriage of Queen Jadwiga with this Lithuanian grand duke, who founded a namesake Polish dynasty that reigned until the election of Henry Valois in 1573.

ANSWER: Jogaila or Władysław II Jagiello [accept any underlined name; accept Jagiellonian dynasty]

3. Name these members of King Arthur's court according to *Le Morte d'Arthur*, for 10 points each.

[10] Arthur's wife Guinevere had an affair with this knight, which sparked the downfall of Camelot.

ANSWER: Sir Lancelot du Lac

[10] This man shattered Arthur's sword in a duel after Arthur saw him pursuing the Questing Beast. He later joined the Knights of the Round Table, and his son Percival was one of the first seekers of the Holy Grail.

ANSWER: King Pellinore

[10] After this man killed the invisible Sir Garlot, he picked up a spear and crippled Pellam with the Dolorous Stroke. This man also beheaded the Lady of the Lake and killed his brother, who was disguised as the Knight of the Island.

ANSWER: Sir Balin le Savage [do not accept "Balan"]

4. One piece in this collection opens with the left hand arpeggiating an F major arpeggio in a dotted quarter - eighth rhythm, punctuated by the right hand playing pairs of F major chords in eighth notes. For 10 points each:

[10] Name this collection of 43 piano pieces, which includes the aforementioned “Happy Farmer.” It is divided into two sections, titled “Für Kleinere” and “Für Erwachsene.”

ANSWER: Album for the Young [or Album für die Jugend]

[10] The *Album for the Young* is by this German Romantic composer, the husband of Clara Wieck, whose orchestral works include symphonies nicknamed *Rhenish* and *Spring*.

ANSWER: Robert Schumann

[10] This other piano work by Schumann contains a series of musical cryptograms based on the letters A, S, C, H. It includes musical depictions of Pierrot and Harlequin.

ANSWER: Carnaval

5. The *Bovo-Bukh* was a chivalric romance in this language. For 10 points each:

[10] The musical *Fiddler on the Roof* was based on *Tevye and his Daughters* by Sholem Aleichem, who wrote in what language that combines German and Hebrew?

ANSWER: Yiddish

[10] This Yiddish writer wrote a short story about a gullible baker in Frampol who urinates in his bread and marries the town prostitute Elka titled “Gimpel the Fool.”

ANSWER: Isaac Bashevis Singer

[10] The Khmelnitzky Rebellion was the subject of this Yiddish author’s *Kiddush ha-Shem*. He controversially tried to reunite Christianity and Judaism in works about Jesus such as *The Nazarene*, *The Apostle*, and *The Prophet*.

ANSWER: Sholem Asch

6. For EDTA, which has six donor atoms, this quantity is six. For 10 points each:

[10] Name this quantity of a ligand which describes the number of non-contiguous atoms used to attach to a metal atom.

ANSWER: denticity [do not accept “coordination number”]

[10] The process that forms a ring made up of a polydentate ligand and the metal atom is termed this, which is also used to treat heavy metal poisoning.

ANSWER: chelation

[10] Also called 2,4-pentanedione, this handy bidentate ligand has a five carbon chain with ketone groups at the two and four positions which readily coordinates metal ions between the two oxygens.

ANSWER: acetylacetone [or acac]

7. This philosopher developed a political reading of St. Paul as a radical universalist in one book, and in another work he coined the term “inaesthetic” as a means of evading the reflection/object relation. For 10 points each:

[10] Name this French philosopher, a student of Louis Althusser who claimed that “the one is not” in laying down the foundations for an ontology of the multiple in *Being and Event*.

ANSWER: Alain Badiou

[10] Badiou argues that this subject is ontology. A thesis named for Quine and Putnam claims this subject is indispensable for science, and philosophers of this subject argue about the status of things like sets and numbers.

ANSWER: mathematics

[10] Badiou was friends with Louis Althusser, who with Étienne Balibar formed an influential reading group for this unfinished work. It claims use value is the goal of C-M-C, while exchange value is the goal of M-C-M, and it formulated the labor theory of value.

ANSWER: Capital [or *Das Kapital*]

8. The Delphic oracle predicted that one of this state's kings would destroy a "great empire" if he attacked Persia. For 10 points each:

[10] Name this kingdom in Asia Minor ruled by Croesus, which was said to have invented coinage.

ANSWER: Lydia

[10] Unfortunately for Croesus, the "great empire" he destroyed was his own, since he attacked this Achaemenid ruler. This man built up the Persian empire by conquering the Medians, Lydians, and Chaldeans.

ANSWER: Cyrus the Great [or Cyrus II; or Cyrus the Elder; or Kurush II; prompt on "Cyrus" or "Kurush"]

[10] According to Herodotus, this man visited Croesus and angered him by telling him about three men who were happier than him. This man introduced the principle of *timokratia* or timocracy.

ANSWER: Solon

9. Identify the following from the thrilling world of video art, for 10 points each.

[10] The founder and foremost proponent of video art is this Korean-American artist of *Media Shuttle*. He collaborated with cellist Charlotte Moorman on *TV Bra for Living Sculpture* and *TV Cello*.

ANSWER: Nam June Paik [or Baek Namjun; accept names in either order]

[10] Paik's wife Shigeko Kubota created a series of documentaries about, and sculptural homages to, this Dada artist. Several of those pieces are titled after this man's works *Bicycle Wheel* and *Nude Descending a Staircase*.

ANSWER: Marcel Duchamp [or Henri-Robert-Marcel Duchamp; or Duchampiana]

[10] Probably the most prominent recent example of video art is this 2010 film by Christian Marclay, which consists of a 24-hour loop of film clips that contain a certain visual or auditory element following the day in real time.

ANSWER: *The* Clock

10. In the opening of this poem, "Kikuyu, quick as flies, Batten upon the bloodstreams of the veldt." For 10 points each:

[10] Name this poem which compares atrocities to "brutish necessity [that] wipes its hands upon the napkin of a dirty cause." Later, its author asks "How can I turn" from the title continent "and live?".

ANSWER: "A Far Cry from Africa"

[10] This author of "A Far Cry from Africa" and "Sea Grapes" wrote a play about Makak and his belief in an unseen white goddess, titled *Dream on Monkey Mountain*.

ANSWER: Derek Walcott

[10] Derek Walcott's *Omeros* is an adaptation of this epic poem. In its final book, King Priam reclaims the body of his son Hector from Achilles.

ANSWER: *The* Iliad

11. This theorem was derived by showing that the classical correlation of two spin measurements cannot be as high as the quantum correlation. For 10 points each:

[10] Name this no-go theorem that showed that local hidden variable theories can't reproduce the predictions of quantum mechanics.



ANSWER: **Bell**'s inequality [or **Bell**'s theorem]

[10] This Austrian physicist's experiments on the foundations of QM include closing loopholes for Bell experiments as well as teleporting a qubit and entanglement of three particles and more.

ANSWER: Anton **Zeilinger**

[10] Another researcher on the foundations of quantum mechanics is Anthony Leggett, who won the 2003 Nobel Prize with Ginzburg and Abrikosov for studying these materials, in which electrons match up into Cooper pairs according to BCS theory.

ANSWER: **superconductor**s [accept word forms]

12. This group published *The Anarchiad*. For 10 points each:

[10] Name this group of doggerel-shitters that critiqued post-Revolutionary War politics. Members included John Trumbull and David Humphreys.

ANSWER: **Hartford Wits** [or The **Connecticut Wits**; or The **Yale Group**]

[10] This Hartford Wit was the author of the mock-heroic 'The Hasty Pudding' and the actual epic *The Vision of Columbus*. He also helped draft the Treaty of Tripoli.

ANSWER: Joel **Barlow**

[10] A contemporary of the Wits, Royall Tyler, wrote the first American comedy to be professionally produced, *The Contrast*. It was written in the style of this author's *The School for Scandal*.

ANSWER: Richard Brinsley **Sheridan**

13. This painter's supposed possession by the spirit of Masaccio and his seduction and abduction of Lucrezia Buti are both way more interesting than his actual paintings. For 10 points each:

[10] Identify this 15<sup>th</sup> century Florentine painter of *Adoration in the Forest* and *Madonna and Child Enthroned*, who as his name suggests was a friar belonging to the Carmelite Order.

ANSWER: Fra **Lippo Lippi** [or **Filippo Lippi**; prompt on "**Lippi**"; do not accept "Filippino Lippi," who is his son]

[10] One of Lippi's students was this other Florentine painter, whose only signed work is *The Mystical Nativity*. He's even more famous for *Primavera* and *The Birth of Venus*.

ANSWER: Sandro **Botticelli** [or Alessandro di Mariano di Vanni **Filipepi**]

[10] Lippi's illegitimate son Filippino Lippi was a painter in his own right whose famous works include a depiction of the *Apparition of the Virgin* to this saint. A number of other painters depicted the "Lactation" of this saint, in which Mary shoots breast milk at him.

ANSWER: St. **Bernard** of Clairvaux

14. You should avoid feeding your 10 month-old brother honey since it may contain the toxin responsible for this disease. For 10 points each:

[10] Identify this acute paralytic illness caused by a certain species of soil-inhabiting bacteria, whose symptoms include muscle weakness, double vision, and droopy eyelids. The toxin that causes it is also used as a cosmetic product.

ANSWER: **botulism** [or **botulinum toxin**]

[10] The botulinum toxin is produced by organisms belonging to this genus of anaerobic, gram-positive bacteria, which also includes the causative agent of tetanus.

ANSWER: **Clostridium**

[10] The mechanism of action of both botulinum and tetanus toxins involves the inactivation of synaptobrevin, one type of these proteins, to prevent neurotransmitter release. This family of proteins mediates vesicle fusion with the plasma membrane.

ANSWER: **SNARE** proteins (or **Soluble NSF Attachment Protein Receptors**)

15. Practitioners of this religion combine meditation and qigong exercises with a moral philosophy centered on the tenets of Truthfulness, Compassion, and Forebearance. For 10 points each:

[10] Identify this religious movement that borrows from Buddhism and Taoism, and whose name literally translates to “Dharma Wheel Practice.” Beginning in 1999, it was subject to a brutal crackdown in its nation of origin.

ANSWER: Falun Gong [or Falun Dafa]

[10] Falun Gong originated in this nation, which contains over 70 million adherents to the faith. The Kilgour-Matas report accuses this nation of human rights abuses, including the alleged organ harvesting of Falun Gong practitioners.

ANSWER: People’s Republic of China

[10] This founder of Falun Gong left China and took up permanent residency in the US in 1998. He was embroiled in a controversy in which he was accused of changing his birth date to May 13, 1951 to align his birthday with that of the Sakyamuni Buddha.

ANSWER: Li Hongzhi

16. Along with his brother Alphonse, this man loses part of his body in an attempt to restore his mother to life. For 10 points each.

[10] Name this character, the protagonist of *Fullmetal Alchemist*.

ANSWER: Edward Elric [accept either]

[10] Edward seeks this item in order to heal himself and restore his brother’s body. Historically, this item was also sought by Nicholas Flamel and was said to grant immortality.

ANSWER: the philosopher’s stone [do not accept sorcerer’s stone]

[10] The manga *Fullmetal Alchemist* was published in Monthly Shonen Gangan magazine, which is owned by this company. It was formed by the merger of two major companies in 2003 and currently owns the rights to the *Tomb Raider* and *Deus Ex* franchises.

ANSWER: Square Enix

17. One of its three prongs requires legislation to have a secular purpose. For 10 points each:

[10] Name this test used to determine if a piece of legislation violates the Establishment Clause of the First Amendment. It shares its name with the plaintiff of a 1971 Supreme Court case about public school funds paying teachers that worked in private, religious schools.

ANSWER: Lemon test

[10] The Lemon test was created while this man was Chief Justice. This man succeeded Earl Warren as Chief and cases like *Roe v. Wade* also occurred during his term.

ANSWER: Warren Burger

[10] Another set of Establishment Clause cases, *Edwards v. Aguillard* and *Kitzmiller v. Dover*, have dealt, broadly speaking, with this controversial practice. The Supreme Court has generally ruled it unconstitutional.

ANSWER: teaching creationism in public schools [accept teaching creation science or teaching intelligent design or any other equivalents, prompt on religious education in public schools]

18. Towards the end of this novel the narrator of this work uses his nickname “Puffin” in order for his mother to recognize him. For 10 points each:

[10] Identify this novel in which Christopher Banks returns to Shanghai during World War II, where he confuses an injured Japanese soldier for his childhood friend Akira.

ANSWER: **When We Were Orphans**

[10] This Japanese-British author of *The Unconsolated* and *An Artist of the Floating World* wrote *When We Were Orphans*. He may be better known for a novel about the butler Stevens called *The Remains of the Day*.

ANSWER: Kazuo **Ishiguro**

[10] A song by Judy Bridgewater provides the title to this dystopian Ishiguro novel, in which Tommy and Kathy are raised to be “donors” at Hailsham.

ANSWER: **Never Let Me Go**

19. Cesaro summation and Abel summation are methods for assigning values to series even if they have this property. For 10 points each:

[10] Name this term for a series which, when taken as a sequence of partial sums, does not converge to a finite limit.

ANSWER: **divergent** [or word forms]

[10] The proof of the no-ghost theorem in bosonic string theory involves summing over infinite oscillator modes. In the proof, according to the method of Ramanujan summation, what is the value of  $1 + 2 + 3 + 4 + \dots$  etc.?

ANSWER: **-1/12** [or **negative one twelfth**; or obvious equivalents]

[10] The infinite sum  $1 + 2 + 3 + \dots$  etc. can be regularized by viewing it as the analytic continuation of this function to  $-1$ . This function is defined as the sum over positive integers  $n$  of  $1/n^s$  to the power  $s$ .

ANSWER: Euler-**Riemann zeta** function [prompt on **zeta** function]

20. The name of this school was coined by Christian von Ehrenfels. For 10 points each:

[10] Name this German school of psychology, whose central principle was the whole is different from the sum of its parts.

ANSWER: **gestalt** psychology

[10] Studies performed on Kurt Koffka and this other co-founder of gestalt psychology led to the development of the phi phenomenon. After this man left for Tenerife, he conducted studies on the insight ability of chimpanzees.

ANSWER: Wolfgang **Köhler**

[10] According to this principle of *gestalt*, the mind tends to perceive stuff as simple, familiar images.

ANSWER: **pragnanz**

21. Reliefs at the Nashq-e Rustam show this man being given a divine ring by Ahuramazda. For 10 points each:

[10] Identify this nobleman from the Persian city of Estakhr, whose victory over Artabanus V at Hormozdgan resulted in the founding of a new empire.

ANSWER: **Ardashir I** [or **Ardashir** the **Unifier**; or **Ardeshir-e Papagan**; or **Artakshathra I**]

[10] Ardashir founded this Persian empire after his defeat of the Parthians at Hormozdgan. This empire, whose rulers included Shapur I and Khosrau II, fought extremely frequent wars with the Romans and Byzantines.

ANSWER: **Sassanid** Empire [or **Sassanian** Empire; or **Eranshahr**]

[10] This Sassanid city was the site of an A.D. 363 battle that took place between Shapur II and Emperor Julian, which saw a tactical victory for the Romans. It was the primary capital for both the Parthian and Sassanid Empires.

ANSWER: **Ctesiphon**

