

Editors: Eric Mukherjee, Ike Jose, Will Alston, Patrick Liao, Ankit Aggarwal, Chris Chiego

Writers: Jaimie Carlson, JinAh Kim, Sarita Jamil, Lam Tran, Paul Lee, Max Smiley, Claudia Epley, Jay Misuk, Faheem Pahlwan, Paul Kasinski, Samantha Claypoole, Aayush Rajasekaran, Rein Otsason, Ben Cushing

Tossups:

1. It's not German, but Karol Szymanowski wrote two song cycles titled for the "Love Songs" of an author who wrote primarily in this language. That poet used this language to ask what happens when "your soul / begins to awaken / your eyes ... and the cells of your body / to the great journey of love?" Another poem in this language says that the only certainty is "this life flies," and "the rest is lies / the flower that once has blown for ever dies." One author used this language to call his greatest treasure "a brimming (*) cup of wine," and his Divan is often used for fortune-telling. Another poem in this language opens with a command to awake, and describes "a jug of wine, a loaf of bread – and thou –" beneath a tree. For 10 points, name this language used by Hafez and Omar Khayyam, who wrote of the moving finger that, "having writ, moves on" in the *Rubaiyat*.
ANSWER: Persian [or Parsi or Farsi]

2. This man was the alphabetically first author on a paper where subjects predicted Tom W's fields of specialization after learning that his writing, while dull and mechanical, was marked by corny puns. He compared expert intuition to a two year old seeing a dog and saying "doggie!" in a book that describes the rule "what you see is all there is." This man, who collaborated with David Schkade to measure appraisals of (*) relative happiness in California and the Midwest, wrote about how people overestimate the danger of terrorist attacks due to the availability heuristic in a work that contrasts "a machine for jumping to conclusions" with the "lazy controller," which he called Systems 1 and 2 respectively. For 10 points, name this founder of prospect theory and author of *Thinking, Fast and Slow* who frequently collaborated with Amos Tversky.
ANSWER: Daniel Kahneman

3. In plants, haloxyfop and tralkoxydim [tral-COX-ee-dim] inhibit the carboxylase of this molecule. An enzyme that produces this compound is targeted by autoantibodies in a condition in which florid duct lesions contain epithelioid granulomas. In the presence of NADPH, palmitate is generated from this molecule and a derivative of malonic acid through the action of FAS. Each cycle of fatty acid synthesis involves adding this molecule to the growing chain. An enzyme that creates this compound contains (*) E1, E2, and E3 subunits, the last of which regenerates a lipoic acid cofactor. This molecule contains a two-carbon group bonded to a beta-mercapto-ethyl-amine group through a high-energy thioester bond. This molecule is combined with oxaloacetate in the first step of the citric acid cycle. For 10 points, name this molecule that is produced when pyruvate is oxidized after glycolysis.
ANSWER: acetyl-CoA [or acetyl-coenzyme A]

4. This person is told by a cousin that a dream of a sunbeam radiating into a courtyard is a sign of the prophet predicted in the Torah and the Injil. This non-prophet was given the boy Zayd ibn Harithah as a present by the merchant Hizam. Both Abu Talib and this person died during the Year of Sorrow. This person sent the servant Maysarah to accompany a hired man on a business trip to Syria. This member of the Quraysh gave Muhammad a blanket for comfort after the prophet's encounter in Hira Cave with (*) Jibril. This person, who hired Muhammad to assist with her business as a merchant, is considered - along with Asiya, Maryam, and Fatima - as one of the four greatest women in Islam. This mother of Fatima was the first convert to Islam. For 10 points, name this first wife of Muhammad.
ANSWER: Khadijah bint Khuwaylid

5. Description acceptable. The lead-up to this action was known by supporters as Radiant May. The leader in power at the time of this action justified it with a policy of "sacred egoism." Like a similar action taken by King Carol I of Romania a year later, it was prompted by Russian advances in the Carpathians. Talks in London between Jules Cambon, Edward Grey, and Sidney (*) Sonnino led to a secret treaty that enumerated the territorial rewards for taking this action. Failure to win some of those promised gains, such as Fiume, prompted a leader of the country that carried out this diplomatic action to cry and storm out of talks at Versailles. That leader

was Vittorio Orlando, whose army had fought several battles on the Isonzo as a result of this action. For 10 points, name this 1915 action in which a former member of the Triple Alliance joined the Allies in the First World War. ANSWER: Italian entry into the First World War [or equivalents like the Kingdom of Italy begins fighting in World War One; Italy declares for the Entente; Italy declares war on the Central Powers, etc.; prompt on partial answers such as Italian declaration of war; anti-prompt on answers such as Italy declares war on Germany]

6. One of this author's characters has his wife declared insane to discredit her if she reveals his "sin," the time he led Union troops to a massacre of Confederate soldiers. Another character created by this author participates in a Ku Klux Klan attack on Sam Taylor. In a play by this author that opens with a girl reading from *The Merchant of Venice*, a vain and aging actress reproaches her niece for her (*) "unnatural affection" towards a college friend. In that play by this author, Karen leaves her fiance Joe after Mary Tilford's false accusations lead people to believe she is in a lesbian relationship. In this author's sequel to *Another Part of the Forest*, Ben and Oscar hope to build a cotton mill funded by \$88,000 stolen from Horace Giddens and are blackmailed by their sister Regina. For 10 points, name this author of *The Children's Hour* and *The Little Foxes*. ANSWER: Lillian Hellman

7. W.L. Hubbell developed a site-specific labelling technique for proteins using these species. A technique to image these species can be calibrated by measuring the splitting factor for DPPH; that technique depicts both the absorbance and its first derivative on the same readout. PBN and DMPO are used to form adducts with these species in spin trapping. Fremy's salt and TEMPO are examples of particularly stable examples of these compounds, which are imaged in (*) EPR. Fish-hook arrows are used to depict reactions involving them, which are formed when the bond dissociation energy is exceeded. A form of addition using these species occurs through initiation, propagation, and termination, and can be triggered by using UV light on a halogen. These species cause oxidative damage when generated by mitochondria. For 10 points, name these species with unpaired electrons. ANSWER: free radicals

8. James Watson Gerard processed this document so it could avoid the Swedish Roundabout. This document confirmed an intention to break the Sussex Pledge. A copy of this document was obtained through the efforts of Thomas Hohler and Edward Thurstan. An early edition of a Barbara Tuchman book about this document incorrectly began with an account of the CS *Telconia* cutting underwater cables. It was first publicly used in an attempt to break a filibuster led by George Norris and Robert (*) LaFollette. This document was intercepted and deciphered by William Reginald Hall and Nigel de Grey in Room 40. Venustiano Carranza rejected its offer to make an alliance that would try and return areas such as Texas to Mexico. For 10 points, name this document sent by the namesake German Foreign Secretary which led to the United States entering the First World War. ANSWER: Zimmermann telegram [or Zimmermann note]

9. Michael Baldwin and Mel Ramsden superimposed a painting of one of these events onto a Pollock in the Art & Language exhibit. A painting of one of these events from a Chateaubriand novella involving the Natchez character Chactas was executed by Anne-Louis Girodet [zhée-"row"-DAY]. X-ray analysis confirmed Salvador Dali's theory that a painting originally titled "prayer for the potato crop" actually depicted one of these events. In another painting depicting one of these, a white (*) dog stands next to a man anachronistically wearing clothes from the French Revolution. Jean-Francois Millet's *The Angelus* likely shows one of these events. A massive painting of one of these events was criticized for using the scale of history paintings to depict ordinary people, including a man carrying a cross on the left side. For 10 points, name these events, one of which was depicted "at Ornans" by Gustave Courbet.

ANSWER: funerals [accept burials or equivalent; accept Funeral at Ornans; accept Burial of the Count of Orgaz]

10. In one work, this philosopher claims that if "two individuals of the entirely same nature" joined together, they would make a composite individual twice as powerful as each one alone. Another work by this thinker calls sensory perception "knowledge of the first kind" and claims things are only good in so far as they help one enjoy the "intellectual life." He argued in another work that freedom of speech is politically prudent because people get more rebellious when their own opinions are suppressed in a work whose "principal purpose" was to separate (*) faith from philosophy. This philosopher's rejection of the idea that the Israelites were "chosen" makes it unsurprising that he was excommunicated by the Jewish community of Amsterdam. For 10 points, name this author of *Tractatus Theologico-Politicus* who took a geometrical approach in his *Ethics*.

ANSWER: Baruch Spinoza

11. Early parties of this type include the United Tasmanian Group and the Values Party, the forerunner of the third largest party in New Zealand's House of Representatives. Alexander van der Bellen, a candidate from one party of this type, had a victory over the opposing Freedom Party candidate overturned in the 2016 Austrian presidential election. In Germany, a party of this type was the junior partner in Gerhard Schröder's Social Democratic governing coalition from 1998–2005. Richard di Natale leads an (*) Australian party of this type which is the largest crossbench party in the Senate. The four pillars of parties of this type include grassroots democracy, nonviolence, and social justice. Presidential candidates from the main American political party of this type have included Ralph Nader and Jill Stein. For 10 points, name these parties that run on platforms emphasizing the environment.

ANSWER: Green Party [or Greens]

12. One character with this profession notes that it's impossible to draw a girl towards you "as if you had just been given a copy of the first, suppressed edition of *Madame Bovary*," as there was never such an edition. That character with this profession says he didn't kill his adulterous wife Ellen; he ended her life by cutting off life support after a suicide attempt left her in a coma. Geoffrey Braithwaite, the narrator of *Flaubert's Parrot*, has this profession, as does a man who skips Mr. Turton's bridge party and yells at a woman after seeing her inside a (*) mosque. That character with this profession accidentally incriminates himself after he picks up a pair of field glasses, and is falsely accused of rape by Adela Quested in E.M. Forster's *A Passage to India*. For 10 points, name this profession shared by Aziz and a man who turns into an evil alter ego, Henry Jekyll.

ANSWER: doctor [or physician]

13. One variation of this device consists of a junctionless nanowire surrounded by an electrically isolated "wedding ring." In one variant of this device, a carbon nanotube creates a Schottky barrier which relies on quantum mechanical tunneling. Parameters like transport saturation current are tracked in their Gummel-Poon model. NAND and NOR logic gates are made of these devices combined in (*) "pull up" and "pull down" networks. These devices have NPN or PNP junctions, which can create depletion regions to make opposing diodes. Bipolar ones possess emitter, collector, and base terminals, while field effect ones have gate, source, and drain terminals. Moore's Law predicts that the amount of these things in an integrated circuit will double every 18 months. For 10 points, name these devices made out of semiconductors which are used as amplifiers and switches.

ANSWER: transistor

14. A member of this organization, Gabriel Malagrida, was executed for being implicated in the Tavora affair, after which this group was banned in Portugal in 1761. It's not the Spanish empire, but this organization managed a series of semi-politically independent "reductions" that were targets for *bandeirante* slavers from Brazil. Manuel de Roda used the Esquilante [ess-kee-LAHN-tay] Affair to help convince Charles III to expel this organization from Spain. It was formally suppressed in 1773 by (*) Clement XIV's bull *Dominus ac Redemptor*, and employed men such as Peter Faber, Matteo Ricci, and Francis Xavier. After being wounded at the Battle of Pamplona, this group's founder preached a spiritual revelation and began preaching the meditative practices of his *Spiritual Exercises*. For 10 points, name this Catholic order founded by Ignatius of Loyola.

ANSWER: Jesuit Order [or Society of Jesus; or Jesuits; or Societas Iesu; prompt on SJ or SI]

15. Dividing a unit of measure of this quantity by meters squared gives a unit named for Karl Jansky. This quantity is directly proportional to the velocity dispersion to the fourth power, according to the Faber-Jackson relation. A maximum for it can be found by setting radiation (*) pressure equal to gravitational force. The absolute bolometric magnitude is proportional to the log of this quantity, which is theoretically bound by the Eddington limit. The Stefan-Boltzmann equation states that sigma times area times temperature raised to the fourth power is equal to this quantity for a perfect blackbody. For 10 points, name this quantity which measures the total amount of energy emitted by an astronomical object per unit time.

ANSWER: luminosity

16. A piano piece titled for one of these places opens with a series of parallel fifths that evoke the disorientation of fog before crescendoing to a *fortissimo* passage marked *Sonore sans dureté* [so-nohr san doo-re-TAY]. A group named for a *specific* one of these places included the *organum* masters who wrote the *Magnus*

***Liber*; that most prominent school of *ars antiqua* composition, which is named for one of these places, included the composers (*) Leonin and Perotin. Claude Debussy's *Preludes* include a piece depicting a "Sunken" one of these structures from legend. One of them names the most important school of European composers of the early 13th century. Britten's *War Requiem* was composed for the consecration of one place damaged in Coventry. For 10 points, identify these musically-important buildings, one of which lends its name to the Notre Dame school.**
ANSWER: cathedrals [prompt on churches; accept *The Sunken Cathedral* or *The Submerged Cathedral* or *The Engulfed Cathedral* or *La Cathédrale engloutie*]

17. The Ainu believe Kandakoro appointed Moshirkara to carry out this action, which was done on the back of a trout. After the bald Esege Malan did this, he called a hedgehog up to the sky. In Gnostic myth, part of the divine *Pleroma* gave her son, who she had hidden away in a cloud, the power to accomplish this task. The demiurge carried out this task, and in order to accomplish it, Raven turned into a small speck of dirt and impregnate a woman, all to steal three bundles. The hairy, horned giant (*) Pangu emerged from an egg to undertake this action with the help of the Turtle, Qilin, Phoenix, and Dragon, although some believers of Pangu believe Shangdi did this before him. For 10 points, name this action which is often used with the phrase "ex nihilo", especially in monotheistic faiths which emphasize that the one God did this thing.
ANSWER: creation of the world or universe or Earth

18. An essay titled after "al-Maghili's Answers" addresses seven questions from a leader of this empire, advising him to seek legal advice from pious scholars. This empire's second ruler was given a name meaning "forceful one" because he seized power during a coup against his brother. The scholar Ahmed Babba al-Masufi first worked for this empire, living through its collapse and succession by the Dendi kingdom. A ruler of this empire who captured the city of Djenne persecuted the scholars of the (*) University of Sankore. The eunuch Judar Pasha destroyed mines at Taghaza before defeating Ishaq II and conquering this empire for Morocco at the Battle of Tondibi. This empire's most famous rulers were Askia Muhammad and its founder, Sunni Ali. For 10 points, name this West African empire with capital Gao which succeeded the Mali.
ANSWER: Songhai Empire [or the Songhay]

19. The opening prelude of an opera by this composer supposedly ends with a song using a "fate" motif that only Satan knew as he was expelled from paradise by Allah. Another of this composer's characters calls on "air spirits, spirits of the wave" and takes a three-part oath of chastity in "Je le jure." This composer wrote an opera in which Ralph and Henry Smith duel over the honor of Catherine Glover; in another of his works, two characters echo the line "let us swear to remain friends." This composer wrote (*) "Oh Dieu Brahma" and "Au fond du temple saint," in which Nadir and Zurga promise not to vie for the love of Leila. However, his most famous work features a dancer who seduces the soldier Don Jose, listens to Escamillo sing the Toreador Song, and sings the *Habanera*. For 10 points, name this composer of *The Pearl Fishers* and *Carmen*.
ANSWER: Georges Bizet

20. A woman in this novel tells the protagonist that she was sitting on a patch of nettles the first time they kissed in Kew Gardens, but she ignored the pain in her thighs because of the kiss. That woman compares the protagonist, her former lover, to a milestone that says that Melun is twenty-seven kilometres away, as he has stayed the same while she has "outlive[d]" herself. The protagonist is struck by the indescribable nature of the (*) roots of a chestnut tree, and although that protagonist has a relationship with the cafe-owner Françoise, he is in love with Anny. Another character in this novel who tries to read the library in alphabetical order is kicked out after being revealed as a pedophile; that man is Ogier P., or the "Self-Taught Man." For 10 points, name this novel about the "sweetish sickness" experienced by Antoine Roquentin, by Jean-Paul Sartre.
ANSWER: Nausea [or La Nausée]

Bonuses:

1. *Gödel, Escher, Bach* discusses Hofstadter's Law, which states that "It always takes longer than you expect, even if you account for Hofstadter's Law." For 10 points each:

[10] Hofstadter's Law is often said to have this property since it is self-referential. An algorithm or function with this property calls itself.

ANSWER: recursion [or recursive]

[10] This computer scientist devised a sorting algorithm in which an array of values is recursively split in two halves, and then merged. In addition to mergesort, he also developed a computer architecture that is often contrasted with the Harvard architecture.

ANSWER: John von Neumann [accept von Neumann architecture]

[10] Blum, Floyd, Rivest, Tarjan, and Pratt developed an awesome recursive algorithm to accomplish *this task* in linear time. It involves dividing the elements into groups of $n/5$ and recursively running the algorithm.

ANSWER: finding the median [accept finding the *i*th largest element or rank finding]

2. Big on charisma and energy, he was known as "The Little Flower" for his diminutive stature. For 10 points each:

[10] Name this former congressman and FDR supporter who helped to reinvigorate New York City during the Great Depression and WWII. A site originally named for Glenn H. Curtiss was renamed for this man in 1953.

ANSWER: Fiorello Henry La Guardia

[10] During a 1945 strike, LaGuardia notably did this during his weekly radio show *Talk to the People*. He concluded this action by saying that "dirty money always brings sorrow and sadness."

ANSWER: reading the comics [or obvious equivalents such as reading the newspaper]

[10] La Guardia was the first New York mayor to be re-elected while opposed to this organization, whose first sachem was Aaron Burr. Under Carmine DeSapio, it had a resurgence after La Guardia's death in 1947.

ANSWER: Tammany Hall [or Society of St. Tammany; or Sons of St. Tammany; or Columbian Order]

3. The author of this novel considered calling it *Death and Variations*, because each character dies in a manner consistent with their personality. For 10 points each:

[10] Name this novel in which Margaret Hale moves from rural Helstone to the impoverished town of Darkshire. She eventually marries John Thornton, who shuts down his cotton mill due to a strike.

ANSWER: North and South

[10] *North and South* was written by this Victorian novelist of *Wives and Daughters* and *Cranford*.

ANSWER: Elizabeth Gaskell

[10] Gaskell wrote about Jem Wilson's love for a title character with this first name and last name Barton. The first part of *Cranford* is narrated by a title character with this first name, the same as the author of *Frankenstein*.

ANSWER: Mary

4. These things were thought to bond to their substrates by a "lock and key" model, although there is more support for an "induced fit" model. For 10 points each:

[10] Name these proteins which transform substrates into products. They lower the activation energy of a reaction.

ANSWER: enzyme

[10] This model of enzyme kinetics gives reaction rate as maximum rate times substrate concentration, over its namesake constant plus substrate concentration.

ANSWER: Michaelis-Menten model

[10] Michaelis-Menten kinetics relies on this assumption that the concentration of the intermediate complex remains steady on the timescale of product formation

ANSWER: Briggs-Haldane [or quasi-steady-state or pseudo-steady-state]

5. This language uses loanwords from Bantu, Arabic, and French, and made the switch from Ajami script to the Latin alphabet in 1823. For 10 points each:

[10] Name this official language of Madagascar which also named an autonomous republic within the French Community in 1958.

ANSWER: Malagasy

[10] Madagascar is known for these primitive primates, endemic to the island. Varieties of them like the Sifaka often hop sideways on the ground since they are adapted for climbing.

ANSWER: **lemurs**

[10] This nearby island nation northeast of Madagascar has its capital of Victoria on its largest island of Mahe. Its flag has several oblique bands of color that converge in its lower left-hand corner.

ANSWER: **Seychelles**

6. This process involves techniques like substitution, affective memory, and archetype work. For 10 points each:

[10] Name this technique developed by Lee Strasberg, which emphasizes that actors should use their own experiences to identify with characters.

ANSWER: **method acting** [accept “the **method**”]

[10] Konstantin Stanislavski's “system” inspired Strasberg’s “method”; Stanislavski introduced a theory of theater praxis in this book written in the form of a fake diary.

ANSWER: *An **Actor Prepares*** [or ***Rabota aktyera nad soboy***]

[10] This author and William H. Macy based their system of practical aesthetics off of Stanislavski’s teachings. This executive producer of *The Unit* and wrote *Glengarry Glen Ross*.

ANSWER: David **Mamet**

7. A recent tor.com article notes that a surprising amount of action movie posters seem to be based on this painting and its trope of a dramatic, black-clad man turned away from the viewer. For 10 points each:

[10] Name this painting, whose title character holds a cane and stands on a mountainous outcropping.

ANSWER: *The **Wanderer Above the Sea of Fog*** [or *The **Wanderer Above the Mists***; or *Der **Wanderer über dem Nebelmeer***]

[10] *Wanderer Above the Sea of Fog* was by this German Romantic, who showed five ships and five people of different ages in *The Stages of Life*. He showed a shipwreck dwarfed by icebergs in *The Sea of Ice*.

ANSWER: Caspar David **Friedrich**

[10] This British surrealist paid homage to Friedrich’s *The Sea of Ice* in his painting *Totes Meer*, or *Dead Sea*, where a metallic junkyard of downed planes look like ice floes. His WWI and WWII paintings include *Battle of Britain*.

ANSWER: Paul **Nash**

8. These molecules can form hairpins and are important in silencing and regulation of gene expression. For 10 points each:

[10] Name this nucleic acid that uses uracil instead of thymine unlike the closely related DNA.

ANSWER: **RNA** [anti-prompt on specific types of RNA if they cut you off before “uracil”; or **ribonucleic acid**]

[10] Animal microRNAs recognize the seed region on this end of the target messenger RNA. This is also the end where a 7-methylguanylate cap is added to many immature RNAs.

ANSWER: **5'** [read as “**five prime**”]

[10] Morin et al’s research on embryonic stem cells led to the creation of this term, which refers to the sequences with variations like trimming, addition, and substitution on the reference microRNA.

ANSWER: **IsomiR**

9. Answer some spooky questions, for 10 points each.

[10] Seeing Korean “egg ghosts,” named for their lack of limbs or facial features, is said to predict this event. In Ireland, hearing the scream of the Banshee is also supposed to foretell this event.

ANSWER: your **death** [or **dying**]

[10] These Buddhist ghosts of Southeast Asia are two stories tall, extremely thin, and have needle holes for mouths. It is literally translated as “hungry ghost” because they crave eating cadavers or feces.

ANSWER: **preta**

[10] In Mexican myth, the ghostly woman La Llorona weeps constantly because she regrets committing this action. Because she did this thing, La Llorona cannot enter heaven and is caught between the spirit and living worlds.

ANSWER: **killing** her **children** [or **drowning** her **children**; prompt on incomplete answers like **murder**; do NOT accept or prompt on “abortion”]

10. Mozart often improvised these things during his concerts and often did not fully write them in for his solo concerti. For 10 points each:

[10] Name these short musical phrases designed to show off the soloist’s skills. Benjamin Britten wrote one for Sviatoslav Richter to play for Mozart’s 22nd Piano Concerto.

ANSWER: cadenzas

[10] Mozart's original first movement cadenza for this piano concerto is thought to be lost; the *Andante* second movement of this piece opens with muted strings playing softly and was used in the Swedish film *Elvira Madigan*.

ANSWER: Piano Concerto No. 21 in C major [or K. 467]

[10] In his 1903 essay "The Classical Concerto," this British musicologist identified movements from Mozart's concerti that best manifested the "concerto principle." This writer's *Essays in Musical Analysis* dissect the works of Bach and Beethoven.

ANSWER: Sir Donald Tovey

11. He was called "our baby" and "our star" at the start of his rule, and he had over 160,000 animals during his reign. For 10 points each:

[10] Name this Roman emperor whose nickname means "little boots." He allegedly tried to make Incitatus, his super-qualified horse, a Roman consul, and was eventually deposed by the Praetorians in favour of Claudius.

ANSWER: Caligula [or Gaius Julius Caesar Germanicus]

[10] This emperor, like Caligula, was known for his sexual excesses. This emperor from the Severan dynasty named himself after the god Sol Invictus, set that god as head of the Roman pantheon, and married a Vestal Virgin.

ANSWER: Elagabalus [or Heliogabalus; or Marcus Aurelius Antoninus Augustus; or Sextus Varius Avitus Bassianus]

[10] Elagabalus infamously buried guests at a dinner-party-slash-orgy in a pile of these things, as shown in the *Augustan History* and depicted by Alma-Tadema in painting.

ANSWER: flower petals [accept either underlined; also accept rose or violet petals]

12. Identify the following bizarrely specific patron saints, for 10 points each:

[10] This Saint's lesser-known attributes include being patron saint of beekeeping and epilepsy. According to the Diocese of Terni, which this saint was from, he was martyred in 273, partly for performing Christian marriages.

ANSWER: Saint Valentine of Terni

[10] Veneration of this collective group of saints became popular during the Black Death. Its members include Saint Blaise, who protects against sore throats, Saint Elmo, who handles stomachaches, and Saint Denis, for headaches.

ANSWER: the Fourteen Holy Helpers [or the Auxiliary Saints; or Nothelfer; or any phrase that indicates a group of fourteen saints]

[10] Another of the Fourteen Holy Helpers is this patron saint of England; he's also worshipped as the patron saint the Boy Scouts, which presumably offers a badge in dragon-slaying.

ANSWER: Saint George of Lydda

13. This book says that anthropologist would only continuously contradict their findings with the phrase "but also" when studying the subject of this book. For 10 points each:

[10] Name this book, which was commissioned by the U.S. War Office and researched without any fieldwork; it distinguished between "guilt" and "shame" cultures.

ANSWER: *The Chrysanthemum and the Sword: Patterns of Japanese Culture*

[10] *The Chrysanthemum and the Sword* was written by this anthropologist who stated in *Patterns of Culture* that culture was "personality writ large."

ANSWER: Ruth Benedict

[10] This Japanese psychoanalyst criticized *The Chrysanthemum and the Sword* in his book *The Anatomy of Dependence*, which discusses the concept of *amae*, or the need to be in good favor with others.

ANSWER: Takeo Doi

14. This activity consists of a "highly developed secret language drawing upon several sciences and arts, but especially mathematics and music." For 10 points each:

[10] Name this activity, which is practiced by Joseph Knecht in Castalia. People advanced enough in this activity are given the title of *Magister Ludi*.

ANSWER: the glass bead game [or das Glasperlenspiel]

[10] *The Glass Bead Game* was written by this author of *Siddhartha* who wrote about Harry Haller going to a theater "for madmen only" in *Steppenwolf*.

ANSWER: Herman Hesse

[10] In *The Glass Bead Game*, this man argues against the game, criticizing its mental life without action in the “real world.” He studies at Waldzell as a *hospitant*, similar to auditing a course, and his son Tito watches Knecht drown.
ANSWER: Plinio Designori [accept either underlined part]

15. This former MI6 agent during WWII once defended a young Naomi Campbell from the unwelcome attentions of Mike Tyson. For 10 points each:

[10] Name this English philosopher who defined knowledge as “the right to be sure.” He helped popularize the verification principle with *Language, Truth, and Logic*.

ANSWER: A.J. Ayer

[10] Ayer worked in this field of philosophy, the study of knowledge. Along with philosophy of language, philosophy of mind, and metaphysics, it makes up the “core” of analytic philosophy.

ANSWER: epistemology

[10] In a 1993 paper, Susan Haack combined foundationalism with this other epistemological theory of justification. Objections to this theory include the isolation objection, the alternative systems objection, and the regress problem.

ANSWER: coherentism

16. This explorer discovered several landmasses which he named after friends Joseph Baker, Alleyne Fitzherbert and Peter Puget. For 10 points each:

[10] Name this Pacific explorer and captain of the HMS *Discovery*, which he named after the ship of his mentor, James Cook. He jointly named an island with the Spanish explorer Bodega y Quadra.

ANSWER: George Vancouver

[10] Another explorer of the Pacific Northwest was this 16th century Greek captain who sailed for Philip II. He claimed to have sailed the Strait of Anián, which was later named for him.

ANSWER: Juan de Fuca [or Ioannis Phokás]

[10] This elusive path was the goal for many of the Pacific expeditions, including the McClure Arctic Expedition of 1850. This route was hoped to be an alternative to using the Drake Passage below South America.

ANSWER: Northwest Passage

17. These representations depict antiparticles as moving backwards along their time axes. For 10 points each:

[10] Name these diagrams that model the behavior of subatomic particles when they interact with each other.

ANSWER: Feynman diagrams

[10] When an electron and a positron annihilate, this massless particle is produced. In Feynman diagrams, it is generally shown as a wavy line.

ANSWER: photon

[10] Feynman diagrams are used as a part of this result, which is used to express the production of creation and annihilation operators as the sum of a series of contractions.

ANSWER: Wick's theorem [accept Wick's expansion or obvious equivalents]

18. Name some things about works set in the Sunshine State, for 10 points each:

[10] This ex-basketball player and MagiPeeler salesman is finally “at Rest” after moving to Florida, where he saves his granddaughter Judy from drowning. In earlier John Updike novels, he “Runs” and “is Rich.”

ANSWER: Rabbit [or Harry Angstrom, or Harry; prompt on incomplete answers such as Mr. Angstrom]

[10] In this Karen Russell novel, the Bigtree family runs a failing alligator-wrestling theme park. The spiritualist Osceola tries to elope with the ghost Louis Thanksgiving, and Ava is raped by the Bird Man.

ANSWER: Swamplandia!

[10] Home to Loggerhead sea turtles, the “Wide” Sargasso Sea lies to Florida’s east; it titles a postcolonial prequel to *Jane Eyre* by this Dominican author of *Good Morning, Midnight*.

ANSWER: Jean Rhys [or Ella Gwendolyn Rees Williams]

19. This character claims that “I’m the bull in my own herd/ and a braver bull in the next one” and prophesies “Singing I’ll die, singing they’ll bury me.” For 10 points each:

[10] Name this character, the titular hero of an epic by Jose Hernandez. This gaucho insults a woman in a bar and kills her boyfriend in the ensuing duel; he and Sergeant Cruz go to live among the natives, but are taken prisoner.

ANSWER: Martin Fierro

[10] *Martin Fierro* is written with the verse structure of this type of rural ballad. Fierro has a singing duel of this type of song with the younger brother of the man he killed previously.

ANSWER: payada

[10] *Martin Fierro* is set in this country, home to the authors Manuel Puig and Julio Cortázar. Its nationalist poetry claimed to represent its gauchos and to reflect the nature of the Pampas.

ANSWER: Argentina [or the Argentine Republic; or Republica Argentina]

20. This civilization built Uxmal and Palenque, the latter of which was ruled by Pacal the Great. For 10 points each:

[10] Name this Mesoamerican civilization, which developed the only pre-Columbian writing system in the Americas. It built the pyramid at Chichen Itza.

ANSWER: Mayan civilization [or Mayas]

[10] This two-word phrase names a Mayan calendar that repeated its rounds about every 52 years. It was the base for an Aztec calendar of the same name that was used to calculate when to celebrate the New Fire Ceremony.

ANSWER: Mesoamerican Long Count Calendar

[10] These units, consisting of 20 *katun*, comprised the longest units of the Mayan calendar. One of them came to an end on December 21, 2012, causing people to incorrectly predict the end of the world.

ANSWER: baktun