

2022 ARCADIA □

Edited by Michael Bucknall, Vincent Du, Jacob Egol, Ganon Evans, Jim Fan, Henry Goff, Eric Gunter, Kevin Jiang, Hasna Karim, Caroline Mao, Grant Peet (head), Payton Schubel, Jonathan Shauf, Ashish Subramanian, Kevin Thomas, and Justin Zhang

Written by Josh Abel, Diego Almaraz, Rasheeq Azad, Daniel Cronin, Michael Eng, Ian He, Evan Knox, Ryan Rosenberg, Maya Spencer, Brandon Weiss, Annabelle Yang, Ivonne Zhou, and the editors

Packet 5: well thank god “so true bestie” is gender neutral

Tossups

1. This concept is analyzed through repeatedly adapting hypotheses in Hans Herzberger and Anil Gupta’s “Revision Theory” of it. Material adequacy and being definable through “normal” definitions are two of the three conditions given for a proper definition of this concept in a 1933 essay. Following Ramsey, A.J. Ayer asserts that this concept is (*) “logically superfluous,” taking a more extreme view of this concept’s “deflationary” theory. Pragmatic theories of this concept by philosophers like C.S. Peirce (“purse”) and William James hold it to be “the end of inquiry.” Bertrand Russell and G.E. Moore adopted this concept’s “correspondence” theory. This concept is often analyzed with namesake “tables.” For 10 points, name this property, which holds for p if p is the case.

ANSWER: truth [accept word forms like true] (The essay in the second line is *The Concept of Truth in Formalized Languages*.)

<MB, Philosophy>

2. Studies of facial fear recognition in two distinct groups possessing one of these structures suggest that changes in its EFHC2 region is linked to poor social cognition. Ataluren, a read-through enhancer, and Eteplirsen, an antisense drug, promote translation of dystrophin to treat a condition associated with this structure. This structure’s PAR (“par”) regions escape a process mediated by Tsix (“T-six”) and (*) Xist (“exist”). CGG repeats in this structure’s FMR1 region indicate a namesake intellectual disability. A form of mosaicism results from random lyonization of one of these structures in each cell that contains two of them during development. People with one of these structures are more susceptible to diseases linked to them, explaining red-green color blindness’s higher prevalence in males. For 10 points, female sexual characteristics are generally produced by two of what sex chromosome?

ANSWER: X chromosome [accept X-linked disease or disorder; prompt on sex chromosome] (The distinct groups referenced in the first line are women with Turner syndrome and males, whose genotypes are XO and XY, respectively.)

<EG, Biology>

3. It’s not rock art, but Kevin Sudeith collects a style of these artworks that use helicopters and drones as motifs. A motif common in one style of these artworks is a woman with her hands on her hips known as *elibelinde* (“eh-lee-beh-leen-DEH”). William Morris collected examples of these artworks made using the Vase technique from Kerman. These artworks may feature keyhole shapes like those painted by Gentile Bellini or octagonal elements called (*) gulfs. Two differently-sized lamps point outwards from an ornate medallion in one of these artworks sold to the Victoria and Albert Museum from Ardabil. A variety of these artworks that lack piles are called *kilim* and are compared to Turkish knotted varieties. For 10 points, name these textiles from Persia that decorate floors.

ANSWER: rugs [or carpets; accept specific answers like a Persian rug or Iranian rug; accept prayer rugs; accept tapestry rugs but reject “tapestries”]

<AS, Other Arts: Visual>

4. Note to moderator: read the answerline carefully.

Description acceptable. Étienne Zangato's findings that this practice was first done at Oboui have sparked controversy due to flawed dating techniques. Bantu practitioners of this practice ritually buried medicine underneath certain objects to ensure productivity. The Haya used swamp grass and earth from termite mounds in this practice as evidenced by Peter Schmidt's findings from the KM2 and KM3 sites. This practice may have independently arisen in the Termit Massif of Niger. Tuyere fragments excavated from the (*) Nok culture provide evidence for this practice, which is central to the Yoruban worship of Ogun. The wealth of Meroë ("MEH-ro-ee") derived primarily from this practice. Specialist guilds in this industry produced hundreds of plaques that the British looted from Benin. For 10 points, what practice makes use of bloomeries and blast furnaces?

ANSWER: metallurgy [or metalworking; or smithy or forging; or smelting; accept descriptions like sculpting metal or working metal or creating metal or shaping metal; accept trading metal; accept iron or bronze or brass or carbon steel or copper or tin in place of "metal"; accept blackssmithing; prompt on mining metal]

<AS, Other History: Ancient>

5. After a prayer to the Virgin Mary, the protagonist of this poem sees a place that seems "cut from paper" with "uncountable chimneys the color of chalk." A man mourns "the faults and the frailty of the flesh" in a tirade from this poem that blames Delilah and Bathsheba for the downfalls of Samson and David. A montage from this poem that describes a man's outfit mentions his shield depicting a pentangle. In exchange for a man's spoils of a (*) doe, a boar, and a fox, this poem's protagonist gives him the kisses he received from that man's wife. A man in this poem refuses a gold ring from a woman who offers him a magic girdle. The protagonist thrice prepares for a blow from a man who reveals himself to be Lord Bertilak in this poem by the Pearl Poet. For 10 points, name this medieval poem about the involvement of King Arthur's nephew in a beheading contest.

ANSWER: Sir Gawain and the Green Knight

<MB, British Literature>

6. Alan Parkinson blew the whistle on a substandard response to one of these events recommended by the McClelland Royal Commission for Maralinga. To the dismay of Alvin C. Graves, one of these events was publicized by the Lucky Dragon incident. The United States conducted Project 4.1 to study the impacts of one of these events on the people of Rongelap ("RONG-guh-lap"). En route to a planned protest against one of these events in (*) Moruroa, the *Rainbow Warrior* was sunk. The term "downwinders" was given to people exposed to long-term health issues following these events. The Castle Bravo example of these events prompted Japanese media to coin the colloquial name for "death ash," and it directly inspired *Godzilla*. For 10 points, name these scientific operations that the United States carried out on Bikini Atoll.

ANSWER: nuclear tests [or nuclear bomb tests; accept atomic bomb tests; accept hydrogen bomb tests; accept "weapons" in place of "bomb"]

<AS, World History>

7. It's not a snake, but a boy swallows a marble while kissing one of these creatures and gains the knowledge of the earth. A brother uses magic bottles containing thorn bushes, water, and fire to ward off one of these liver-eating creatures. The corpse of one of these creatures became a stone that killed anyone who touched it. A portion of these creatures' souls are contained in bright "star balls." A king constructed a "forest of meat" to please one of these creatures who crafted (*) torture devices such as the "Bronze Toaster." That one of these creatures was the favorite consort of King Zhou. These messengers of the *kami* of rice, Inari, are commonly portrayed as devoted wives in Japanese folklore. For 10 points, the Korean *kumiho* and Japanese *kitsune* take the form of what nine-tailed animal?

ANSWER: fox spirits [or foxes; accept kitsune or kumiho or gumiho until "kumiho" is read; accept húlijīng or jǐūwěihú; prompt on Tamamo-no-Mae and Dáji by asking, "What animal form do they take?"]

<MB, Beliefs>

8. Hobbyists use the LTZ1000 and the older LM199 to produce a reference for this quantity. The primary metrological standards for this quantity are superconducting devices that produce values for this quantity in multiples of the input frequency times the magnetic flux quantum via the Josephson effect. A reference for this quantity can be obtained by reverse-biasing a discrete (*) Zener diode. To stabilize this quantity's value, capacitors are placed across the power connections of devices. The charge stored on an ideal capacitor is equal to the capacitance multiplied by this value. For 10 points, name this quantity that can be multiplied by charge to get its associated energy, and that typically measures around 1.5 for a triple-A battery.

ANSWER: voltage difference [accept electric potential difference; reject "electric potential energy"]

<RA, Physics>

9. *Description acceptable.* This person's "aquavivid skin" is equated to "drydust in God's eye" in a poem that describes his age as "so much older" and "thirty years past you." Another poem calls this person "my joy, my magazine of earthly store" and is titled for his absence "upon publick employment." The narrator notes that this person "will listen while you read a song" and asks the addressee, "Moved you not, restless, (*) waiting for [this person]?" in a poem by John Berryman. A poem titled for this person claims, "My love is such that rivers cannot quench" and describes "all the riches that the East doth hold;" that poem begins, "If ever two were one, then surely we." For 10 points, identify this man, the addressee of his spouse's poem "To My Dear and Loving Husband."

ANSWER: Simon Bradstreet [or Anne Bradstreet's husband; prompt on Bradstreet; prompt on "(To) My Dear and Loving Husband"]

<HG, American Literature>

10. A copper outline of this figure appears on a melting ice sheet in an installation by John Quigley. Hutan Ashrafian argued that this figure was modeled on a corpse due to a lethal inguinal hernia. This figure appears on a grid in an illustration by Cesare Cesariano ("che-ZAR-ay che-zar-ee-AH-no"). This figure inspired the use of a silhouette with a raised arm to illustrate Le Corbusier's (*) modular system. Backward notes surrounding this figure describe a line through the navel "24 palms" long. A square and circle that inscribe this figure were based on measurements from the book *De Architectura*. For 10 points, name this figure, a representation of ideal body proportion with two pairs of arms and legs, drawn by Leonardo da Vinci.

ANSWER: Vitruvian Man [or L'uomo Vitruviano]

<GE, Visual Arts>

11. A group of "Manichean" heretics in this city executed on the orders of Robert II were the first to be put to death since the fall of the Western Roman Empire. Tanneguy ("TAHN-gee") du Châtel staged a bridge meeting to kill John the Fearless as retribution for the murder of a duke of this city responsible for the *Bal des Ardents*. French forces attempted to destroy a supply convoy headed for this city in the Battle of the (*) Herrings. A duchy centered on this city was often granted to younger brothers of French kings. A seven-month siege of this city during the Hundred Years' War was lifted after the arrival of a peasant whom the English later burnt at the stake. Explorer Jean-Baptiste Bienville founded a North American colony as a "new" version of this city. For 10 points, name this city whose so-called "maid" is Joan of Arc.

ANSWER: Orléans [accept New Orleans or Nouvelle Orléans]

<GP, European History>

12. A political theorist who deemed a global construct described by this word as "bound to fail" proposed, with Stephen Walt, that it should be replaced by "offshore balancing." John Ikenberry casts a global construct described by this word as "resilient" and points to growing interdependence brought by globalism to defend claims of its impending demise. This word describes the current (*) international order, which has

existed since the end of World War II. A type of government described by this adjective is considered the “final form” according to a 1992 book that prompted Samuel Huntington’s article “The Clash of Civilizations.” A negative prefix attached to this word is commonly used to classify backsliding democracies in Hungary and Poland. For 10 points, name this ideology often contrasted with conservatism.

ANSWER: liberal [or liberalism; accept liberal hegemony; accept liberal world order or liberal international order; accept liberal democracy; accept illiberal democracy or illiberalism; accept “Bound to Fail: The Rise and Fall of the Liberal International Order”] (John Mearsheimer and Stephen Walt developed “offshore balancing” and Mearsheimer penned the article “Bound to Fail.”)

<GP, Social Science>

13. By Osgood’s lemma, if this property holds for each variable separately, then it holds for a function of several variables. Morera’s theorem gives sufficient conditions for a function to have this property on an open set. One can prove the fundamental theorem of algebra like so: if $p(z)$ (“p-of-z”) has no roots, then $1/p(z)$ (“one over p-of-z”) is bounded and has *this* property everywhere, and therefore must be constant.

Contour integrals can be computed by summing (*) residues at points where this property fails. Complex functions with this property satisfy the Cauchy–Riemann equations. The Weierstrass function has this property nowhere. This property fails for complex functions at poles, and for real functions at cusps and corners. For 10 points, identify this property of functions that have a derivative at every point.

ANSWER: differentiable [or complex differentiable; accept analytic or holomorphic; accept entire; prompt on meromorphic]

<JF, Other Science: Math>

14. This is the most common instrument that features a technique in which consecutive *legato* notes overlap as they resonate, called *campanella*. The Sabionari is one maker’s only instrument of this type that is still playable. The piece “Canarios” is from one of three pedagogical volumes for this instrument by Gaspar Sanz, who created the Alfabeto system for it. An early form of this instrument had five re-entrant courses and was likely influenced by the *vihuela*. Players of this instrument may use a (*) footstool to elevate one leg. A mustache-shaped element on older forms of this instrument has been parodied by modern makers such as Gibson. *Punteado* and *rasgueado* (“rahss-gay-AH-doh”) are fingerstyle ways of playing this instrument that is also played with a pick. For 10 points, name this instrument with six strings and steel frets.

ANSWER: guitar (Antonio Stradivari built the Sabionari.)

<IZ, Auditory Arts>

15. One member of this group insists that the presence of a “fecundating matrix” allows figures like Sancho Panza and Don Abbondio to live forever. A different member of this group is upset when they cannot get a divan for the parlor that is “yellow, ornamented with large flowers.” One member of this group is offended that another member doesn’t recognize that she is in mourning before asking her to undress. Despite some members of this group having names like (*) “Rosetta” or “Amalia,” they are usually referred to by titles instead. People argue about whether one member of this group is dead or if it is just pretense after the youngest member of this group drowns in a fountain and her brother shoots himself. For 10 points, name this title group “in search of an author” in a play by Luigi Pirandello.

ANSWER: the six characters [accept Six Characters in Search of an Author or Sei personaggi in cerca d'autore]

<PS, European Literature>

16. Aryl-substituted forms of this moiety can form radical cationic intermediates that undergo 3-electron S_N2 (“S-N-2”) processes in addition reactions. The Furukawa modification introduced the use of diethyl zinc when creating these structures, drastically increasing the reproducibility of this structure’s synthesis. This moiety can be a feedstock for 1,3-difunctionalization (“1-3-di-functionization”) reactions due to its ethylene-

resembling (*) Walsh orbitals. A common reaction for creating these structures uses di-iodomethane and a zinc-copper couple, and was developed by Simmons and Smith. This group has the most ring strain out of any cycloalkane due to its 60-degree bond angles. For 10 points, name this simplest cyclic hydrocarbon with a 3-carbon ring.

ANSWER: cyclopropane [accept arylcyclopropane; accept donor cyclopropanes; prompt on rings and cycloalkanes until “ring” is read; reject “cyclopropene”]

<JZ, Chemistry>

17. This leader’s weakening of the agency FUNAI has been blamed for indirectly contributing to the murder of British journalist Dom Phillips. Almir Surui and Raoni Metuktire sued this politician for a type of crime proposed to the ICC by Vanuatu and the Maldives in 2019. In 2020, Joe Biden offered this man \$20 billion to prevent, among other things, niobium exploration around the Xingu (“sheen-GOO”) River. This leader’s support of illegal gold mining and cattle ranching in (*) R ndonia has bolstered his support in an “Arc of Deforestation” exacerbated by his inaction during 2019 wildfires and his support of changes to the Forest Code previously vetoed by Dilma (“JEEW-mah”) Rousseff. For 10 points, name this politician whose 2022 defeat by Luiz In cio Lula da Silva will end his deforestation of the Amazon Rainforest.

ANSWER: Jair Bolsonaro [or Jair Messias Bolsonaro] (Bolsonaro has been sued for “ecocide,” which is still under proposal at the ICC.)

<AS, Current Events>

18. Jo Viens and Joe Mendi performed slapstick comedy outside of this event, which was moved to a lawn after John Raulston feared a floor collapse. Maynard Metcalf was excluded from this event. A central participant in this event who described six days as periods rather than exact times died six days after its conclusion. George Rappleyea (“rap-LEE-ay”) convinced Walter White and Sue Hicks to organize this event to generate tourism for the town of Dayton by violating the (*) Butler Act. H.L. Mencken dubbed this first-ever radio broadcast of legal proceedings a “universal joke.” William Jennings Bryan and Clarence Darrow debated the book of Genesis against the textbook *A Civic Biology* during this event. For 10 points, name this 1925 scandal caused by a Tennessee educator teaching evolution.

ANSWER: Scopes Trial [or the Scopes Monkey Trial; or *The State of Tennessee v. John Thomas Scopes*]

<GE, American History>

19. Poems by this author describing bread, salt, and water appear in the section “Matter” from a collection whose title refers to felling trees. In an eight-poem cycle from that collection, this author follows her late mother through a series of black mountains. A ten-stanza poem by this author includes instructions such as “each act of creation shall leave you humble” and “you shall love beauty.” This author promises to “leave singing my beautiful (*) revenge” in a poem whose speaker places a “broken, childlike body” into the “sunny earth.” This poet used a pseudonym inspired by the author of the Occitan poem *Mir  io* (“mee-RAY-oh”). This poet of “Decalogue of the Artist” described an “icy niche where men placed you” in a poem about the suicide of her lover Romelio Ureta. For 10 points, name this Chilean author of *Sonnets of Death*.

ANSWER: Gabriela Mistral [or Lucila Godoy Alcayaga; or Lucila Godoy Alcayaga]

<HG, World Literature>

20. These people are often described as being either *nadh r* or *bash r*. The Qur’an’s description of a woman as being among those who exhibit devout obedience using the masculine plural, *qan   n*, is one linguistic argument for the belief that the woman in question belongs to this group of people. Along with the Ahl-al-Bayt and the imams, Shias consider these people to have the quality of * ismah*. Ibn Hazm argued that (*) women could be these kinds of people, but could not attain the more stringent category of *rissala*. After belief in Allah, the angels, and the revealed scriptures, belief in these people is the fourth pillar of faith. Muhammad referred

to himself as the “seal” of this people, as Islamic tradition holds that he is the last of them. For 10 points, ‘Isa, Musa, and Muhammad all share what title of people charged to spread the word of Allah?

ANSWER: **prophets** [accept **messengers**; accept **rasul** or **nabi**; accept **nabiyyūn** or **’anbiyā’**; accept Seal of the **Prophets**] (The woman whose status as a prophet is most frequently debated on Qur’anic linguistic grounds is Mariam, mother of ‘Isa.)

<JF, Beliefs>

Bonuses

1. A 1698 *enconchado* painting by Miguel González depicts an image of this figure using mother-of-pearl inlays inspired by Japanese lacquerware. For 10 points each:

[10e] Name this religious figure whose frequent depiction standing on a moon and outlined by golden light is based on images of Our Lady of Guadalupe.

ANSWER: Virgin Mary [or Madonna or Virgen María]

[10h] *Biombo* folding screens were also popular in New Spain, such as one by Juan Correa depicting these entities. The largest fresco in the world, by Giovanni Battista Tiepolo on the ceiling of the Würzburg Residence, depicts these entities as women.

ANSWER: continents [accept *The Four Continents*; accept Europe, America, Asia, AND Africa; prompt on *The Four Parts of the World* or *Las Cuatro Partes del Mundo*]

[10m] *Two answers required.* In Puebla, the Talavera pottery style syncretized native Mexican materials, Moorish patterns, and these two colors popular in high-quality Jingdezhen (“jing-duh-JUN”) ware produced in dragon kilns.

ANSWER: blue AND white [or azul AND blanco; or lánsè AND báisè]

<AS, Visual Arts>

2. This physical region was the terminus of the *katorga* system, in which community officials could enroll “undesirable” members of society instead of incarcerating them locally. For 10 points each:

[10e] Name this subnational region in the Soviet Union where the Gulag forcibly imprisoned most of their political prisoners.

ANSWER: Siberia [accept Russian Far East]

[10h] The first three letters of the word *katorzhnye* (“kuh-TORZH-n’yeh”) were used for this practice in Russian labor camps until it was banned by a set of rehabilitative penal reforms in the 1860s. In Nazi concentration camps, only prisoners immediately condemned to gas chambers did not experience this dehumanizing practice.

ANSWER: tattooing [accept branding; accept descriptions like getting a tattoo or being branded; prompt on being registered or receiving a number by asking, “How was that practice visually represented?”]

[10m] Mikhail Speransky, an advisor to this ruler, reformed the legal system to use Siberian exile as a punishment. This ruler freed peasants in the Baltics, but was outdone by his nephew who abolished serfdom entirely.

ANSWER: Alexander I [prompt on Alexander]

<GP, European History>

3. The protagonist of a novella by this author hears an incessant ringing of a suzu bell in her head as she tries to cope with the death of her boyfriend Hitoshi. For 10 points each:

[10h] Name this contemporary Japanese author of the novella *Moonlight Shadow*, as well as a novel in which Mikage (“mee-KAH-gay”) cooks meals for her friend Yuichi and his trans mother.

ANSWER: Banana Yoshimoto [or Yoshimoto Banana] (*The novel is Kitchen.*)

[10e] Yoshimoto has repeatedly denied that her decision to take “banana” as a pen name was in any way inspired by this 17th-century haiku master, who took his pen name from the banana tree outside his hut.

ANSWER: Matsuo Bashō [or Matsuo Bashō; or Matsuo Kinsaku; or Matsuo Chūemon Munefusa]

[10m] A female hiker finds an ominous black stone in a Yoshimoto story titled for this adjective. A novel by a different Japanese author pairs a place named for this adjective with “The End of the World.”

ANSWER: hardboiled [or Hādoboirudo; accept Hardboiled *Wonderland and the End of the World* (by Haruki Murakami)]

<HG, World Literature>

4. This lossless algorithm was submitted as an alternative to taking a final exam at MIT, and it in turn replaced the less-effective Shannon-Fano algorithm. For 10 points each:

[10m] Name this greedy algorithm used to determine minimum-cost prefix-free codes. This algorithm constructs a binary tree whose leaf nodes are symbols, and each path is a minimally-redundant binary codeword for that symbol.

ANSWER: **Huffman** coding

[10h] The “Deflate” algorithm, which generates PNG and ZIP files, uses a combination of Huffman coding and this other collection of algorithms. This popular lossless compression algorithm does not depend on the distribution of the source sequence.

ANSWER: **Lempel-Ziv** compression [accept **Lempel-Ziv**-Welch algorithm or **LZW**-algorithm]

[10e] One type of Lempel-Ziv compression, the Lempel-Ziv-Welch algorithm, is used to create this bitmap image format often used for short animations.

ANSWER: **GIF** [or **Graphic Interchange** Format]

<KJ, Other Science: Computer Science>

5. A report by the Poverty Action Lab found that while access to this service did not significantly reduce household poverty, it did increase freedom in money management. For 10 points each:

[10e] Name this service pioneered in Bangladesh by Muhammad Yunus’s Grameen Bank. This service entails offering small loans to low-income borrowers with little collateral or credit history.

ANSWER: **microcredit** [or **microfinance** or **microlending**; prompt on **credit** or **finance**]

[10m] Grameen Bank utilizes a system of solidarity lending, which may be susceptible to this type of group member who does not repay their loans, representing a market failure. These individuals often do not pay for public goods from which they benefit.

ANSWER: **free riders**

[10h] This economist argued that, due to free riders, a focus on individual benefit will outweigh a majority societal interest in *The Logic of Collective Action*.

ANSWER: Mancur (“MAN-sur”) **Olson** [or Mancur Lloyd **Olson**, Jr.]

<AS, Social Science>

6. As part of an early 20th-century reaction against this technique, Arthur Rubinstein only applied it sparingly in his interpretations of Chopin. For 10 points each:

[10m] Name this expressive technique in which a musician “steals” time by slowing down part of a phrase and then speeding up the remainder of it.

ANSWER: tempo **rubato**

[10h] Chopin’s students recorded that he felt time should be strictly kept in this manner when using *rubato*. Erich Korngold’s only concerto for one instrument is played solely in this manner and was revived by Gary Graffman.

ANSWER: with the **left hand** [accept Piano Concerto for the **Left Hand**, Op. 17; prompt on playing with **one hand**]

[10e] Chopin often dwelled on the first note for a while when playing his mazurkas, leading Charles Hallé to suggest counting four beats instead of *this* many beats per measure. The time signature of a waltz has this many beats.

ANSWER: **three** [accept **3/4** or **three-four**; accept **triple** meter or **triple** time]

<AY, Auditory Arts>

7. In one story, a creator and his friend hide in a ravine after the title machine seeks revenge for the abuse it suffered when it stubbornly insists on incorrectly answering this question. For 10 points each:

[10m] Name this question that Trurl asks the title device in “Trurl’s Machine.” In 1984, Winston ultimately accepts an incorrect answer to this question after earlier saying that “freedom is the freedom to” answer it correctly.

ANSWER: **two plus two** (Trurl’s machine insists the answer is 7. Winston is persuaded that the answer is 5.)

[10h] “Trurl’s Machine” appears in this short story collection. Other machines can write the universe’s best poetry and divine the future from particle collisions in this collection by Stanisław (“stah-NEE-swahf”) Lem.

ANSWER: *The **Cyberiad***

[10e] Stanisław Lem is an author from this country. This country is also home to the author of *Quo Vadis*, Henryk Sienkiewicz (“shen-KYEH-vich”).

ANSWER: **Poland** [or **Polska**]

<EG, European Literature>

8. John Higham coined the term for this approach in an article that contrasts it with the approach of progressive historians like Charles Beard. For 10 points each:

[10h] Name this approach to American history that emphasizes a unity of common values and ideals. It was popularized after World War II by a group including Daniel Boorstin and Edmund Morgan.

ANSWER: **consensus** school [or **consensus** approach]

[10m] This American historian’s introduction to his book *The American Political Tradition* was the genesis of consensus history, but he later rejected the association. He also wrote *The Paranoid Style in American Politics*.

ANSWER: Richard **Hofstadter**

[10e] Hofstadter was a professor at this university, where William Dunning taught a flock of historians critical of Reconstruction. This university was originally named King’s College.

ANSWER: **Columbia** University [or **Columbia** University in the City of New York]

<RR, American History>

9. Celebrations of this country’s Esala Perahera festival are marked by fire dancers and whip-crackers. For 10 points each:

[10m] Name this oldest continuously Buddhist country in the world, which celebrates Esala Perahera to pay homage to the sacred relic of the Buddha housed in its Temple of the Tooth.

ANSWER: **Sri Lanka** [or **Shrī Lankā** Prajātāntrika Samājavādī Janarajaya; or **Ilangai** Jananāyaka Sōsalisa] Kudiয়ারাসু]

[10e] This oldest branch of Buddhism is most prevalent in Sri Lanka and Southeast Asia and derives from Sri Lanka’s Mahāvihāra order. The Pali Canon is the basis for the doctrines of this school that is contrasted with Mahayana Buddhism.

ANSWER: **Thēravāda** Buddhism

[10h] In Sri Lanka, lamps called *kuudu* and ornately-lit *pandals* called *thorana* mark this holiday. The first World Fellowship of Buddhists conference, held in Sri Lanka in 1950, formalized this holiday as a celebration of the Buddha’s birth, enlightenment, and death.

ANSWER: **Vesak** [or **Vesākha** or **Buddha Javanti** or **Buddha Purnima** or **Fodan** or **Hanamatsuri** or **Phật Đản**; reject “Vaisakhi”]

<AS, Beliefs>

10. In a version of this technique, analytes are incubated with TMB before a stop solution like sulfuric acid is added and turns well contents yellow. For 10 points each:

[10h] Name this assay that detects an analyte’s concentration within a liquid using antibodies conjugated to enzymes like horseradish peroxidase or alkaline phosphatase.

ANSWER: **ELISA** [or **enzyme-linked immunosorbent assay**; or **enzyme-linked immunoassay**]

[10e] ELISAs can detect antibodies in serum and can therefore diagnose these conditions by detecting elevated IgE levels when more common skin patch tests can’t be used. EpiPens treat these conditions in emergencies.

ANSWER: **allergies** [accept specific kinds of allergies; accept word forms like **allergic** responses or **allergic** reactions; accept **allergy** testing; accept **type I hypersensitivity** reactions; prompt on **anaphylactic shocks**; prompt on **hypersensitivity**; reject answers that involve “autoimmunity” or non-type I hypersensitivities]

[10m] This disease’s two-tiered diagnostic algorithm follows a positive ELISA with a Western blot. Co-infections of this disease and anaplasmosis or babesiosis may occur due to multiply-infected *Ixodes* vectors.

ANSWER: **Lyme** disease [or **Lyme** borreliosis; accept **Borrelia burgdorferi** infection; prompt on **borreliosis** or **Borrelia**]

<KT, Biology>

11. *Aspects of the Novel* contrasts Marcel Proust's "particularly careful" Princess of Parma with the less easily "summed up" Becky Sharp as examples of these two types of characters. For 10 points each:

[10m] Give these two contrasting terms. One indicates a simple and predictable character, whereas the other indicates a multifaceted, developing character.

ANSWER: flat AND round characters [or static AND dynamic characters]

[10e] This author first used those terms in *Aspects of the Novel*. Dr. Aziz's warmth and passion help make him a round character in this author's novel *A Passage to India*.

ANSWER: E. M. Forster [or Edward Morgan Forster]

[10h] This author claimed Forster was "genially snobbish about flat characters" in the book *How Fiction Works*. An essay by this author critiques an "improbable" novel ending in which Irie does not know her child's father because she had sex with two twins twenty minutes apart.

ANSWER: James Wood [or James Douglas Graham Wood] ([The book that he critiqued is Zadie Smith's *White Teeth*.](#))

<CM, British Literature>

12. The Murmū brothers led an 1855 rebellion of the Santhāl people against the corruption of this class in Jhārkhand, but their demands were largely ignored following the Sepoy Mutiny. For 10 points each:

[10h] Name this class of elites who served as semi-autonomous local rulers, tax collectors, and moneylenders in British India, namely in Bengal.

ANSWER: zamīndārs [or zōmindars or jamīdārs or jōmidars]

[10m] Two decades earlier, ādivāsī in Jhārkhand unsuccessfully rose up against land seizure and a British tax against this good. A later protest against British monopolization of this good ended in the village of Dāndī.

ANSWER: salt

[10e] The British granted those ādivāsīs basic land rights after a revolt by folk hero Birsā Mundā, who created one of these things called "Birsait." European missionaries tried to spread one of these things to India.

ANSWER: religions [accept answers like belief systems or cult of personalities]

<AS, World History>

13. This university houses the Omohundro Institute, which published the book *Virginia 1619* a few months before the publication of Nikole Hannah-Jones's *The 1619 Project*. For 10 points each:

[10h] Name this university that established the Lemon Project, named for a former slave, to reconcile its proximity to Point Comfort and its history as a slaveholding institution.

ANSWER: William & Mary [or The College of William & Mary]

[10e] The Lemon Project began a series of talks named for these places to encourage historical conversation. Joe Biden's "basement campaign" was adapted from a type of campaigning named for a "front" example of this part of a house outside the entrance.

ANSWER: porches [accept Lemon's Legacies Porch Talks; accept front porch campaign]

[10m] As part of the Lemon Project, William & Mary celebrates academic achievements of Black students in a ceremony that involves donning stoles made of this Akan and Ewe cloth.

ANSWER: kente cloth [accept "Donning of the Kente"]

<GP, Other Academic>

14. Answer the following about the physical chemistry of photoprotection mechanisms in plants, for 10 points each.

[10e] Excess light is harmful because excited triplet-state chlorophyll reacts with this species to form radicals. This diatomic gas has a triplet ground state and is produced as a product of photosynthesis.

ANSWER: molecular oxygen [or O₂]

[10m] Plants photoprotect by dissipating excess light energy as heat via a set of poorly-understood “non-photochemical” processes of this type. This term can mean any process that decreases fluorescence intensity.

ANSWER: quenching

[10h] Chlorophyll relaxation processes are investigated with laser techniques that are “resolved” with respect to this quantity. Spectra of intensity versus wavelength *and* this quantity are analyzed using global and target analysis.

ANSWER: time

<VD, Chemistry>

15. Arne Næss drew on this thinker’s substance monism for his “deep ecology” which argues that individualism radically separates individuals from the rest of nature. For 10 points each:

[10m] Name this thinker, who developed the idea of the single substance, of which everything is either an attribute or mode.

ANSWER: Baruch Spinoza

[10e] Spinoza formed his idea of the single substance in this work that identifies everything with God, whom he identifies with nature.

ANSWER: Ethics

[10h] Næss’s deep ecology developed partly in response to this field of ethics that will change “the role of *Homo sapiens* from conqueror...to citizen” according to an essay about a fictional Wisconsin county.

ANSWER: conservation ethics [accept answers like land ethics or environmental ethics or green ethics; accept “The Land Ethic;” accept conservation biology or conservation science; accept word forms] ([The essay is “The Land Ethic” from Aldo Leopold’s A Sand County Almanac.](#))

<AS, Philosophy>

16. *Description acceptable.* A musical theater company that performs in this manner collaborated with the LA Philharmonic to develop a 2022 production of *Fidelio*. For 10 points each:

[10h] Name this manner in which the 2003 Broadway revival of *Big River* was performed. Musical theater performances of this type feature pairs of actors in the same role to expand their viewing audience.

ANSWER: performed in American Sign Language [or performed by deaf actors, or performed for deaf audiences; accept answers like the performance is made accessible to deaf viewers; prompt on performed in another language or bilingual performances]

[10m] Deaf West Theatre earned a Best Revival Tony nomination for its production of this musical based on a Frank Wedekind play. Wendla dies from a botched abortion in this musical after having sex with Melchior in a hayloft.

ANSWER: Spring Awakening

[10e] The first wheelchair-using actor to perform on Broadway, Ali Stroker, appeared in Deaf West’s *Spring Awakening* and in the 2019 revival of this duo’s musical *Oklahoma!*. This duo wrote *The Sound of Music*.

ANSWER: Richard Rodgers AND Oscar Hammerstein II [or Richard Charles Rodgers AND Oscar Greeley Clendenning Hammerstein II]

<EG, Other Arts: Auditory>

17. This algorithm, which applies a Hadamard transform on the input and output to create a superposition of states, was one of the first to be proven as exponentially faster than its classical analogue. For 10 points each:

[10h] Name this quantum computing algorithm which outputs a ket 1 or ket 0 to indicate whether the boolean function on an input string of bits is constant or balanced.

ANSWER: Deutsch-Jozsa algorithm [accept DJ algorithm]

[10m] This other quantum algorithm is also notably exponentially faster than its classical analog. This algorithm’s factoring ability poses a sometimes overexaggerated threat to the secureness of current encryption schemes like RSA.

ANSWER: Shor’s algorithm

[10e] Quantum algorithms can also take advantage of this phenomenon between paired qubits to reduce the amount of processing needed. In this “spooky action at a distance,” separate quantum states cannot be described independently.

ANSWER: quantum **entanglement**

<JF, Physics>

18. A model by Anne Treisman suggests that humans decide the level of this capacity to dedicate to a message based on context, meaning, and importance. For 10 points each:

[10e] Name this capacity that is selectively focused by separating stimuli into streams according to the cocktail party effect.

ANSWER: **attention** [accept selective **hearing**]

[10h] Treisman and Donald Broadbent paired this experimental method with dichotic listening to show that participants could often identify parts of an unattended message. In a Stanley Milgram experiment, the cyranoid performs this function.

ANSWER: speech **shadowing**

[10m] Broadbent’s model of attention posits that, to prevent the overload of this function, parallel processing of stimuli rarely occurs. The Atkinson–Shiffrin model characterizes this function by its encoding capability and limited duration and capacity.

ANSWER: **short-term memory** [prompt on **memory**]

<KJ, Social Science>

19. The eccentric Italian John Damian attempted to fly with feathered wings from the highest point of this castle to France, but he crashed and broke his leg. For 10 points each:

[10m] Name this castle targeted by the Earl of Surrey and Hugh de Cressingham before they were defeated at a nearby bridge that one commander legendarily sabotaged to collapse according to Blind Harry.

ANSWER: **Stirling** Castle

[10e] The revival of Stirling Castle to serve the Scottish monarchy was orchestrated by the fourth, fifth, and sixth Stuart kings with this name, the latter of whom also ruled England.

ANSWER: **James** [accept **James** IV; accept **James** V; accept **James** VI or **James** I]

[10h] One of the earliest recorded guests at Stirling Castle was Spanish diplomat Pedro de Ayala, who came to undermine support for this English pretender who claimed to be Richard of Shrewsbury.

ANSWER: Perkin **Warbeck**

<GP, Other History: British>

20. Yusef Komunyakaa envisioned people whose “guitars & harmonicas chas[ed] away ghosts” and whose “dream-footed work rattled their bones” in a poem titled for an “African” one of these places. For 10 points each:

[10h] Name this type of place, which titles a poem that claims, “Reason’s self shall bow the knee / to shadows and delusions here” and begins, “In spite of all the learned have said, / I still my old opinion keep.”

ANSWER: a **burying ground** [or **burial ground**; accept “The Indian **Burying Ground**” or “The African **Burial Ground**”; prompt on answers like **cemetery** or **graveyard**]

[10e] Philip Freneau’s poem “The Indian Burying Ground” was written in the aftermath of this conflict, whose first battle is memorialized in the poem “Concord Hymn.”

ANSWER: American **Revolutionary** War [or the **American Revolution**]

[10m] Freneau’s *Sketches of American History* claims that the Indians “were here long before ye all” and that their “druggist was [this concept].” An essay titled for this concept introduces the “transparent eyeball” metaphor.

ANSWER: **nature** (The essay is “Nature” by Ralph Waldo Emerson.)

<CM, American Literature>