

Chicago Open 2020 2021: “We probably needed the extra year to finish it anyways.”

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Packet by The Editors (3)

TOSSUPS

1. **Historian Hanna Batatu argued that a holder of this title was murdered with British assistance, citing the fact that when that holder died driving his sports car into a lamp-post, the car was barely damaged. The first holder of this title was advised on education reform by the secular nationalist Sati al-Husri and on archaeological preservation by Gertrude Bell. The regent for another holder of this title was forced to flee by the Nazi-backed Golden Square Coup, which also temporarily ousted Prime Minister (*) Nuri al-Said. The last holder of this title was executed during the 14 July Revolution, which was carried out by Abd al-Karim Qasim. Its second holder, Ghazi, awarded medals to troops who participated in massacres of Christian Assyrians during the 1930s. For 10 points, give this title held by two non-Jordanian Hashemite dynasty members named Faisal (“FYE-sul”), who governed from palaces in Baghdad.**

ANSWER: king of Iraq [or monarch of Iraq; prompt on answers that indicate a ruler of Iraq; do not accept or prompt on “President of Iraq” or “dictator of Iraq”]

<World History, Will Alston>

2. **Scan line artifacts are removed from the output of these instruments by scanning the target in orthogonal directions in the basket-weaving technique. In the Dicke (“dick-eh”) switching technique, gain variations are minimized in these instruments by taking differential measurements between the signal and thermal noise. When taking measurements with many of these instruments, the closure phase method removes electrical path-length errors. These instruments observe signals within the (*) water hole. All components of Earth’s orientation can be accurately determined by making time difference measurements between many of these devices in VLBI. China’s FAST, also called Tianyan, is a large one of these typically-terrestrial instruments, many of which are found at the Very Large Array. These instruments often observe at the 21-centimeter line. For 10 points, name these instruments that use a dish and antenna to observe light with wavelengths larger than infrared.**

ANSWER: radio telescopes [prompt on specific parts of radio telescopes before mentioned such as: radio antennae or dishes or parabolic antennae with “as a part of what larger instruments?”; prompt on telescopes]

<Other Science: Astronomy, Jonathen Settle>

3. **A letter by Charles Dickens defends this male character as an extravagant relief from “realities of life” which would lose its hold upon the people if “made moral and instructive.” In an episode from *Tom Jones*, a man in the Upton Inn denounces this character’s “idle trumpery,” preferring instead that he take the “fine and serious Part of the Provok’d Husband.” The characters Codlin and Short from *The Old Curiosity Shop* exemplify interpreters of this character called “professors,” who often were aided by a device called a “swazzle.” This character often gives a string of (*) sausages to a crocodile to make it go away and outwits the hangman Jack Ketch. He is based on a red-nosed clown from the *Commedia dell’arte*. For decades, a publication named for this character employed Lewis Carroll’s illustrator John Tenniel. For 10 points, name this puppet character paired with Judy who names a satirical London magazine.**

ANSWER: Mr. Punch [prompt on Pulcinella or Pulecenella]

<Misc. Lit, Will Alston>

4. This critic wrote that the “monster of beauty is not eternal” in an essay proclaiming “science remakes and unmakes what already exists.” Daniel-Henry Kahnweiler used the term “drawings in space” to describe four black sculptures of metal wire made by Julio Gonzalez that were inspired by the anniversary of this writer’s death. This critic discusses works which borrow “not from the reality of sight, but from the reality of insight” in his essay “On Painting,” which is from his (*) 1913 book examining the “scientific” work of Albert Gleizes (“glez”) and the “orphic” style of Robert Delaunay (“deh-low-NAY”). The “aesthetic meditations” from this author’s book *The Cubist Painters* advocate the work of his friend Pablo Picasso, who depicted him in *The Three Musicians* after he died during World War I. For 10 points, name this critic who coined the term “surrealism” and may be better known for creating “form poems” in such collections as *Calligrammes*.

ANSWER: Guillaume Apollinaire

<Painting/Sculpture, Will Alston>

5. In one book, the discovery of one of these objects by moving “backwards through time” is analogized to the Greeks who “enter into death backwards.” In another section, that book compares these object’s relations to the rest of the world to groups of sharks “which navigate in convoy, as though united by an eternal coitus.” That book argued that the *noeme* (“NOH-eh-may”) of these objects is equivalent to the “that has been” and thus is “simple” and “banal.” These objects are said to be able to turn “people into objects that can be symbolically possessed” in a book that referred to creating these objects as (*) “subliminal murder.” These objects are presented as the object of the *Operator*, the *Spectator*, and the *Spectrum* in a book written to commemorate the death of the author’s mother. That book analyzed these objects through their *studium* and *punctum*. For 10 points, name these artworks analyzed in a 1977 Susan Sontag essay collection and Roland Barthes’ *Camera Lucida*.

ANSWER: photographs [prompt on artworks or equivalents]

<Philosophy, Brad McLain>

6. A poet serving this family is sent to investigate a strange bird-song coming from a black cloud, which turns out to be a monster with the head of a monkey, the body of a dog, and the legs of a tiger. Another warrior in this family’s army was born with a full set of teeth and knee-length hair after his mother ate iron every day. After unhorsing and beheading a beautiful prince, another warrior in this family’s army discovers the flute he had earlier heard before battle. As a leader of this family retreats to commit suicide, one of his servants experiences a “standing death” by being impaled with hundreds of arrows. That retainer of this family was outfitted with a (*) mallet, rake, and sickle as part of his seven weapons. After a victory by this family, a child emperor and his grandmother drowned themselves, losing the imperial regalia. The loyal retainer Benkei served, for 10 points, what Japanese clan which, in the *Tale of the Heike*, is victorious over the Taira?

ANSWER: Minamoto clan [or Genji clan; or Genke clan]

<Legends, Ike Jose / Brad McLain>

7. Controversy over whether this compound has a direct or indirect bandgap was resolved by Gil et al. who showed it has an indirect bandgap at 5.955 e·V and a previously-posed direct bandgap at 5.76 e·V was attributed to free-exciton recombination. Films of this compound’s amorphous form are the first-reported pore-free materials with dielectric constant less than two. This compound can encapsulate transition metal di-chalcogen-ides, acting as a tunnelling barrier and gate dielectric. This compound is used as a charge-leak barrier for the photo drum of laser printers and as a non-conductive alternative to graphite and moly for gun barrel lubrication. This compound forms a two-dimensional (*) “white graphene,” and its cubic form has comparable hardness to diamond. It can also form carbon-free nanotubes. For 10 points, name this compound which forms structures that are iso-electronic to carbon lattices, with formula B·N.

ANSWER: boron nitride [or BN before mention]

<Chemistry, Eric Mukherjee>

8. **Ralph Koltai designed an abstract set evoking this play’s craggy setting for a 1978 National Theatre production of a translation of this play by Geoffrey Hill. While sitting on a beach, a woman in this play delivers a soliloquy about how she ignores the “world’s vain wandering” and gazes on a “vaster world” whose voices command her to “people this creation!” In this play, a gipsy-woman’s daughter tells a father that prioritizing his child is “idol worship,” convincing him to ignore a doctor’s advice to leave his (*) mountain home. At the end of this verse drama, a man asks God how salvation is possible if not through human will, to which a voice answers “He is deus caritatis” as the man dies amidst the “ice church” of Gerd. While standing in a fjord, this play’s title character states his motto “All or nothing,” after which the painter Einar is left by his fiancée Agnes. An avalanche kills the title priest at the end of, for 10 points, what play by Henrik Ibsen?**

ANSWER: **Brand**

<Drama, Will Alston>

9. **Some of these workers demonstrated their skill by easily winning a race against Cornish miners who were placed on the opposite side of an obstacle. The eyepatch-wearing James Strobridge, who was at first skeptical of one group of these workers, honored them with a wine dinner after an event commemorated in Andrew Russell’s “Champagne Photo.” The food supply of about 5,000 of these workers was cut off to break a strike near the town of Truckee. Charles (*) Crocker hired many immigrants as these workers after few local whites responded to his ads seeking labor for Theodore Judah’s projects. In 2019, Utah governor Gary Herbert spoke before descendants of some of these workers called “celestials” to mark the 150th anniversary of their ancestors’ unrecognized achievements at Promontory Point. Leland Stanford employed many Chinese immigrants as, for 10 points, what infrastructure-building workers?**

ANSWER: Chinese **railroad** workers [accept any answer that refers to people who built **rails** or **railroads** or the **Transcontinental Railroad**; do not accept or prompt on “train drivers”; prompt on **migrant** laborers or **immigrant** laborers or **Chinese** laborers or **miners** or **coolies** by asking “in what industry?”]

<American History, Will Alston>

10. **An E-flat major Ludwig van Beethoven piece for this ensemble opens with three tonic chords in a slow, dotted rhythm and ends with a 6/8-time *rondo* presenting six variations in major and one in minor. Franz Schubert’s only piece for this ensemble is a concerto-like piece in F minor titled *Adagio and Rondo Concertante*. Another piece for this ensemble includes a short *Intermezzo* whose theme is the five-note “Clara motif” and ends with a *rondo* drawing on lively Roma dances the composer learned from the Hungarian violinist Ede Reményi (“REH-men-ee”). An illustration of *The Sorrows of Young Werther* was printed with the last piece for this ensemble by (*) Johannes Brahms. A G minor *Rondo alla Zingarese* (“zing-ah-REH-zay”) closes the first of Brahms’ three pieces for this ensemble. Gustav Mahler’s only piece of chamber music is an A minor piece played by, for 10 points, what type of ensemble which usually contains a keyboardist and three string players?**

ANSWER: **piano quartets** [prompt on **quartet**; do not accept or prompt on “string quartet”] (The first clue is from Beethoven’s Piano Quartet No. 1.)

<Classical/Opera, Will Alston>

11. In 2017, the president of this country proclaimed the New Year's festival of Yennayer to be a public holiday celebrated on January 12. A large example of a traditional horsemanship contest called a *fantasia* is put on yearly by the Shawi people who inhabit this country's Awras region. Outside of Oman, this country is home to the world's second-largest Ibadi community, which is centered in a valley whose chief town is Ghardaia. This country is home to the Ouled Naïl ("OO-led nah-EEL") confederacy as well as the (*) Mozabites, the latter of which speak a Zenati language and include the author of its national anthem, titled "Kassaman." This country contains the region of Kabylia ("kah-BILL-ee-uh") and a pair of "Grand Ergs" labeled Occidental and Oriental. For 10 points, name this country where many Berbers live in the [emphasize] *eastern* reaches of the Atlas Mountains, which it shares with its neighbor Morocco.

ANSWER: Algeria [or People's Democratic Republic of Algeria, or l-Jumhūriyya al-Jazā'iriyya ad-Dīmuqrāṭiyya aš-Ša'biyya, or République algérienne démocratique et populaire] (The second clue refers to the Berber flag.)
<Geography, Will Alston>

12. A tool developed for an especially challenging form of this task disconnects rather than removes filigree edges to preserve information; that tool is the "meta" form of the "St. Petersburg" tool for this task developed by a team led by Pavel Pevzner. For large input, MaSuRCA ("mazurka") and Canu are good choices for this task, while SPAdes ("spades") is a better choice for smaller input. Optical mapping data is used to validate the results of this task. Errors in the input to this process create structures in the output called either bubbles or bulges. Finding an Eulerian path in a (*) de Bruijn ("bruyn") graph is an alternative to the overlap layout consensus approach to this task. N50 and other Nx values are quality metrics used to compare the results of this task. Without mate-pair data, doing this task *de novo* is nigh impossible. During this task, scaffolds are created from contigs. For 10 points, name this task of constructing a genome from DNA sequencing data.

ANSWER: genome assembly [or sequence assembly; accept metagenome assembly; accept word forms like "assembling a genome"] (The lead-in refers to metaSPAdes. SPAdes is the St. Petersburg genome assembler)
<Other Science: Applied/Data Science/Engineering, Jonathen Settle>

13. At a banquet set in one of these locations, a man is dissuaded from leaving by the appearance of a menacing mounted warrior carrying a halberd, who is later bribed by a sumptuous offering of pearls. In a scene set in another of these places, a man points his finger at a rival and declares, "The only heroes in the world are you and I." Examples of these places include one of "Warmth and Brightness," as well as one to which several characters bring a black bull and a white horse as offerings for a sacrifice during which they burn (*) incense sticks. In that example of these locations, the same characters state a desire to "avenge the nation from above, and pacify the citizenry from below" and to die "on the same day, in the same month and in the same year" before heading off to crush the Yellow Turban Rebellion. Zhang Fei, Guan Yu, and Liu Bei ("l'yoo bay") swear an oath of fraternity in, for 10 points, what sort of place?

ANSWER: gardens [accept Wenming garden or Garden of Warmth and Brightness or plum garden or peach garden; accept Peach Garden Oath; accept orchard for "garden"; prompt on estate or villa by asking "what specific place within the estate?" and do not accept or prompt on "forest"]

<Long Fiction, Will Alston>

14. The scholar Julia Stern points out how this text has been misused as a primary source, since all published editions of it do not include the flowers, ribbons, newspaper clippings, and political campaign buttons found across its forty-eight volumes. Key moments described in this text include the death of the five-year old “Little Joe,” who accidentally fell from a window, as well as the petty squabbling of an executive council designed to curb the power of governor Frances Pickens. In *Roll, Jordan, Roll*, Eugene Genovese extensively quotes from this work’s description of (*) Mulberry House. This text, first published in abridged form by its author’s friend Isabella Martin in 1905, was the subject of a Pulitzer-Prize winning edit made by C. Vann Woodward. Some of its early entries describe Major Robert Anderson’s unwillingness to surrender. A wife to a South Carolina senator authored, for 10 points, what vivid depiction of southern life by a Confederate bluestocking?
ANSWER: Mary Boykin Chesnut’s diary [accept equivalents mentioning Mary Chesnut and her journal, diary, etc; accept A Diary from Dixie]
<Historiography, Ike Jose>

15. A reference to this other book titles a work which defines a notion of “grounded normativity” in ethical frameworks among Canadian Indigenous peoples, and was written by Glen Sean Coulthard. This book tells the story of several men arriving at the gate of heaven, where the last man tells St. Peter with a wide smile: “I’m just carrying these gentleman’s bags.” This book expands upon Alfred Adler’s idea that neuroses represent an “imaginary fictitious goal” in a chapter which explains how a “comparison society” is created by social (*) recognition. This book asserts that “the rifle...is not a penis, but a genuine rifle” in opposition to Octave Mannoni’s interpretation of the dreams of Malagasy people. It illustrates contradictions in Antillean society by reading a Mayotte Capécia (“kah-PEH-see-ah”) novel as an example of desire for “lactification.” For 10 points, name this book about the psychology of people of African descent in slaveholding societies, written by Franz Fanon.
ANSWER: Black Skin, White Masks [or Peau noire, masques blancs] (The book in the first two sentences is *Red Skin, White Masks*.)
<Social Science: Socio/Anthro, Jonathen Settle>

16. The color of the speaker’s hair evokes a “sing of something living tinged with fire” in a poem titled for one of these works, written by Lucie Brock-Broido. Asterisks punctuate the phrases “Now only...stop signs” and “Love, grief, etc...for good reason” in another poem titled for one of these works from *A Scattering of Salts*, whose speaker wanders “vaguely imbecile emporia” full of “cassettes of whalesong and rain-forest whistles.” The speaker likens a city to “the gibbous / Mirrored eye of an insect” in a poem describing one of these works which claims that a certain body part cannot “know it knew,” except “in (*) cold pockets / Of remembrance, whispers out of time.” The speaker muses on how “reflection / Is the reflection once removed” in that *ekphrasis* on one of these works, which describes a “right hand” which is “bigger than the head, thrust at the viewer.” John Ashbery described, for 10 points, what sort of painting by Parmigianino “in a Convex Mirror?”
ANSWER: self-portraits [accept “Self-Portrait with Her Hair on Fire” or “Self-Portrait in Tyvek Windbreaker” or “Self-Portrait in a Convex Mirror”; prompt on paintings]
<Poetry, Will Alston>

17. Sagas tell of a Dane from this territory who renounced his Christian faith and became a sorcerer of black magic, named Brodir. William Parvus writes of how this territory's bishop Wimund became a bloodthirsty warlord who sought to claim an earldom before retiring to Rushen Abbey. A parish named for Saint Maughold contains one of this territory's numerous ringed stone crosses inscribed with runestones. The *Lanercost Chronicle* describes how, after the death of Magnus Olafsson of the Crovan dynasty, this (*) island was absorbed during the reign of Alexander III, though it was later lost to the English after the Battle of Neville's Cross. This non-Icelandic island claims to be home to the world's oldest functioning parliament, the Tynwald. A triskelion appears on the flag of, for 10 points, what British island whose capital is Douglas, and which is home to a namesake breed of short-tailed cat?

ANSWER: The Isle of Man [or Mann; prompt on The Isles; reject "Manx"]
<Euro History, Will Alston>

18. A performance created by this choreographer and inspired by Cuban dance opens with a baby crawling onto the stage in an oversized diaper. Casts of performers aged 65 and older commonly perform a piece by this choreographer which consists of nearly three hours of dancing to jazz and *schlager* ("SHLAH-gur") music. This choreographer of *Danzón* and *Courtyard of Contact* created a piece in which three women and three men frantically gesture and run around a room filled with randomly-strewn chairs litter while the aria "When I am Laid In Earth" plays. This choreographer died during the filming of a (*) Wim Wenders biopic which showcases performances in the Wuppertal ("VUP-pur-thal") Theater. This creator of *Café Müller* required the stage to be covered with soil for her choreography to Stravinsky's *Rite of Spring*. For 10 points, name this German choreographer, an Expressionist in the *Tanztheater* tradition.

ANSWER: Pina Bausch [or Philippine Bausch; prompt on Pina]
<Other Arts: Dance, Will Alston>

19. After the *Heilinger* case found New York's system of these things to be unconstitutional, the city created a new system of them called S-7001A, which GOP mayoral candidate Nicole Malliotakis sought to reform. A law limiting the growth of these things was held to not violate the equal protection clause in *Nordlinger v. Hahn*. "Circuit breaker" programs typically limit the value of these things below a given income threshold, while conservationists and farmers often seek to reduce them by employing "current use (*) valuation." Abatements are often given for these things to incentivize renovation. Thanks to a successful "people's initiative" led by Howard Jarvis, the total assessment for these things can only grow at 2 percent per year under Proposition 13 in California. For 10 points, what taxes provide most funding for local public schools in the United States?

ANSWER: property taxes [accept property tax rates or property tax laws or property tax statutes; accept property taxes after "taxes"; prompt on taxes or levies or impositions or real estate taxes; do not accept or prompt on "laws" or "statutes" or "mortgages"]
<Other Academic, Will Alston>

20. **This phylum is the only known taxon to completely lack canonical micro-R·N·A machinery. Members of this phylum possess spiral filaments and granule organelles within their colloblast cells, which they use to capture prey. One member of this phylum from the genus *Mnemiopsis* (“nem-ee-OP-sis”) is the only known species to possess a "transient anus," which appears only during defecation. Members of this phylum possess “triad” synapses as part of a nerve net that exclusively signals using L-glutamate. In a 2014 Nature paper, Moroz et al. used molecular phylogeny to conclude that this phylum, and not *Porifera* (“po-RIFF-uh-ruh”), is the sister taxon to all other (*) animal life; it and *Porifera* are also the only known animal phyla to lack Hox genes. Unusually, members of this phylum's *Nuda* class completely lack tentacles and instead subdue prey with macro-cilia. For 10 points, name this basal phylum of animals, whose common name references its resemblance to a certain Cnidarian (“nye-DARE-ee-un”).**

ANSWER: *Ctenophora* [or *Ctenophores*; accept comb jellies; reject “jellies” or “jellyfish”]

<Biology, Brad McLain>

BONUSES

1. This story is interrupted by a series of “extracts” from a man’s journal, which note that it would be impossible to start a brontosaurus dairy farm due to the lack of nearby ladders. For 10 points each:

[10h] Name this story, written partly to honor the author’s recently-deceased wife Livy and to satirize anti-suffrage arguments. Its title character says “I love you...you are BEAUTIFUL—and that is enough!” after discovering fire.

ANSWER: “**Eve’s Diary**”

[10m] The author of “Eve’s Diary” wrote this story whose title place, often likened to the Garden of Eden, is home to the Richardses and 18 other model couples. This story climaxes as several people each claim to have been the one who was told “you are far from being a bad man” by a stranger years ago.

ANSWER: “The **Man that Corrupted Hadleyburg**”

[10e] “Eve’s Diary” and “The Man That Corrupted Hadleyburg” are stories by this author, who described Satan coming to earth in his novel *The Mysterious Stranger*.

ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

<Short Fiction, Will Alston>

2. This technique was first given its name in a 1630 treatise by Johann Dannhauer, in which he suggested that one should ask questions such as “who is the author?” and “what is the subject matter?” For 10 points each:

[10e] Name this theory and methodology of textual interpretation, whose philosophical application was pioneered by Wilhelm Dilthey and Hans Georg Gadamer.

ANSWER: **hermeneutics**

[10m] Early theories of hermeneutics are rooted in this philosopher’s claim that language “is the organ of thought,” an idea he explicated in *Treatise on the Origin of Language*.

ANSWER: Johann Gottfried von **Herder**

[10h] In the 20th-century, one of the most widely-used approaches to hermeneutics is this methodology developed by theologian Rudolf Bultmann, which calls for interpreting the Bible’s stories while disregarding folkloric content.

ANSWER: **demythologization** [accept **demythologize** or **demythologizing**]

<Philosophy, Ike Jose>

3. Probably the most famous producer of this product in 19th century America was Amos Owens, who was put in stockades for not paying taxes leveled on it during the Civil War. For 10 points each:

[10h] Identify this product. Tom Wolfe’s essay “The Last American Hero” profiles Junior Johnson, who worked in his family’s business making this product before becoming a NASCAR driver.

ANSWER: **moonshine** [accept **Cherry Bounce**, or **white lightning**, or **hooch**, or **white whiskey**; prompt on **alcohol** or **hard alcohol** or **liquor** or **whiskey**; prompt on **Mountain Dew**]

[10e] Unfortunately for patrons of these venues, many of them initially had to turn to serve customers moonshine early during the Prohibition era. These secretive venues, such as the Crazy Kat Klub, served illegal booze.

ANSWER: **speakeasies** [or **blind tigers** or **blind pigs**]

[10m] This county’s bootlegging tradition, celebrated in the “Ballad of Thunder Road,” included Maggie Bailey, who sold moonshine from the Prohibition era until the 1990s. The song “Which Side Are You On?” was created during an event in this county in which UMW members clashed with the National Guard and Sheriff J. H. Blair.

ANSWER: **Harlan** County [accept **Harlan** County War]

<American History, Will Alston>

Note to moderator: read the answer line to the first part carefully.

4. For 10 points each, answer the following about medical devices used for respiratory conditions.

[10m] This wearable device is used to administer chest physio-therapy for cystic fibrosis patients. It functions by vibrating the lungs to aid in mucus clearance.

ANSWER: High-frequency chest wall oscillation **vest** [accept percussion **vest**; accept **high frequency chest wall oscillation** device; accept **HFCWO** device; accept “The **Vest**”; accept brand names such as Afflo**Vest** or **Frequencer** or **Monarch** Airway Clearance System or Smart**Vest** or **Vest** Airway Clearance System or ABI **Vest** or ThAIRapy **Vest** or **Respin11** Bronchial Clearance System or **InCourage Vest/System**]

[10e] Patients commonly have both a “rescue” and “maintenance” one of these devices. One of these is used to administer a combination of fluticasone (“flu-TICK-uh-zone”) and salmeterol (“sal-MEE-tur-all”).

ANSWER: **inhalers** or **nebulizer** [accept specific types such as metered-dose **inhalers** or dry powder **inhalers** or soft mist **inhalers**; prompt on **spacers** by asking “Spacers are attached to what other medical device?”]

[10h] Peak flow meters can be used for home monitoring of C·O·P·D and asthma. That is because peak expiratory flow is correlated with this other quantity, which is the maximum amount of air that can be vigorously exhaled in one second.

ANSWER: **FEV1** [or **Forced expiratory volume** in **1 second**; prompt on **FEV**]

<Biology, Noah Chen>

5. Experts in this task can create “chatoyancy” effects through their work on cabochons (“KAH-boh-shons”). For 10 points each:

[10m] Identify this artistic task which today typically employs machines for such subtasks as faceting, which is done after the material is fixed to a dop stick using dopping wax or cement.

ANSWER: **gem cutting** [or **lapidary** work or **taglieria**; accept answers which indicate **cutting** or **carving** either **gems** or **precious stones**; accept **lapidarists** or **gem cutters**; prompt on answers referring to working with **stones**]

[10e] Expert 18th century gem cutters in southern Italy made “micro” examples of these artworks, using small gems as *tesserae*. A massive example of these works at Pompeii depicts Alexander’s victory at Issus.

ANSWER: **mosaics** [accept microm**osaics** or Alexander **Mosaic**]

[10h] Unlike micromosaics, these artworks are made by custom-cutting gemstones to fit precisely in a predefined pattern, then gluing them together. Many of these artworks were made for export by Florence’s Opificio (“oh-pee-FEE-chee-oh”) inspiring Mughal artists to create one that decorates the tomb of Itimad ad-Dawla in Agra.

ANSWER: **pietra dura** [or **pietre dure**, or **opere di commessi**, or **parchinkari**; prompt on **Florentine mosaics**; prompt on **hard stone**]

<Other Arts, Will Alston>

6. Jill Dawson’s biographical novel *The Great Lover* is about this poet, who called himself “one-half outright heterosexual, one-quarter outright homosexual and one-quarter sentimental homosexual.” For 10 points each:

[10m] Name this poet whose best-known poem predicts that he will lie with friends “and gentleness / hearts at peace, under an English heaven.”

ANSWER: Rupert **Brooke** (The poem is “The Soldier.”)

[10e] This poet described Brooke as “the handsomest young man in England” before Brooke died in World War I. His own poems about World War I include “An Irish Airman Foresees His Death.”

ANSWER: W. B. **Yeats** [or William Butler **Yeats**]

[10h] This Alan Hollinghurst novel fictionalizes Brooke as Cecil Valence, who engages in dalliances with men in the English countryside before heading off to war. Its title refers to a figure from Tennyson’s “In Memoriam, A.H.H” who dwells in a garden, where “year by year the landscape grow[s] / familiar.”

ANSWER: *The **Stranger’s Child***

<Poetry, Will Alston>

7. The Karaite Jews of Crimea are often viewed as descendants of these people, who controlled the northern branch of the Silk Road from the 7th through 10th centuries. For 10 points each:

[10e] Name these Turkic people who adopted Judaism as the state religion of their khaganate.

ANSWER: **Khazars** (“KUZ-ers”) [accept **Khazar** khaganate]

[10h] This mysterious community of multilingual medieval traders, many of whom were Jewish, is sometimes credited with introducing Judaism to the Khazars. The Persian historian Ibn Khordadbeh (“khor-DAHD-beh”) records that these tycoons traveled both land and sea routes from the Rhone Valley to China.

ANSWER: **Radhanites** [or **Radhanim**, or ar-**Radhaniyya**]

[10m] One known Radhanite is a certain Isaac, who served as a translator on one of these two rulers’ embassies to the other. Gifts exchanged by these two rulers include a fancy water clock and the elephant Abbou Abbas.

ANSWER: **Charlemagne** AND Caliph **Harun** al-Rashid [accept **Carolus Magnus** or **Charles the Great** for “Charlemagne”]

<CW / International History, Will Alston>

8. This property is possessed by proofs about a Turing degree D that carry over to degrees above D . For 10 points each:

[10h] Name this property that is [emphasize] *not* possessed by the proof that $IP=PSPACE$ because the proof uses arithmetization. Baker, Gill, and Solovay showed that proofs of $P=NP$ could [emphasize] *not* have this property.

ANSWER: **relativizable** [accept word forms of **relativize**]

[10m] An equivalent definition of relativization is that the proof is valid if all the Turing machines in the original proof were to be given one of these things. These things answer certain decision problems in a single operation.

ANSWER: **oracles**

[10e] An oracle Turing machine that solves this problem for standard Turing machines cannot solve it for equivalent machines. This undecidable problem asks if a Turing machine will stop for a given input.

ANSWER: **halting** problem

<Other Science: Computer Science, Jonathen Settle>

9. This composer collaborated with Elfriede Jelinek (“el-FREE-duh YELL-ih-nek”) on a multimedia opera adaptation of Leonora Carrington’s play *Baa-Lamb’s Holiday*. For 10 points each:

[10h] Name this contemporary Austrian composer of several “video-operas” including *Lost Highway*, an adaptation of the David Lynch film of the same name. The premiere of this composer’s 2019 opera *Orlando* featured Justin Vivian Bond yelling the line “fuck the patriarchy!”

ANSWER: Olga **Neuwirth** (“NOY-vurt”)

[10e] Neuwirth’s more conventional operas include an “American” version of this other Austrian composer’s opera *Lulu*. With Arnold Schonberg, he was one of the leading composers of the Second Viennese school.

ANSWER: Alban **Berg** [or Alban Maria Johannes **Berg**]

[10m] Neuwirth’s *Les Encantadas* is an homage to this musical teacher of hers. Works by this avant-garde Italian composer of the Darmstadt school include the anti-capitalist cantata *Suspended Song* and the opera *Intolleranza*.

ANSWER: Luigi **Nono**

<Classical/Opera, Will Alston>

10. You signed up to play quiz bowl, but here is a bonus about Bible Bowl. For 10 points each:

[10e] The vast majority of Bible Bowl competitions use either the NIV or this other translation of the Bible. This translation completed in 1611 was overseen by Richard Bancroft and is the official version for the Anglican Church.

ANSWER: **King James** Version [or **KJV**; or **Authorized** King James Version; or **King James** Bible; or **KJB**

[10h] Unlike most Bible Bowl organizations, the Assemblies of God Bible Quiz uses the New Living Translation, or NLT, for their competitions. The NLT is a notable example of this sort of Biblical translation pioneered by Eugene Nida, which he contrasted with "formal equivalence."

ANSWER: **dynamic equivalence** [prompt on sense for sense or thought for thought]

[10m] Contestants in the Pathfinder Bible Achievement program of this denomination use the New King James Version Bible. This denomination's practitioners also revere the *Conflict of Ages* by Ellen Gould Harmon.

ANSWER: **Seventh Day Adventist** Church [accept **Seventh Day Adventism**; prompt on Adventism or Adventist]
<Misc Belief, Brad McLain>

11. Measurements of the Earth's gravity field anomalies from the GRACE satellite have been used to identify patterns in this quantity called its "fingerprints." For 10 points each:

[10e] Name this quantity that greatly rose due to Meltwater Pulse 1A during the last deglaciation. Ocean thermal expansion and glacier mass loss are the major contributors to the global rise in this quantity

ANSWER: **sea level** [accept any answer containing **sea level**, such as: global mean **sea level** and relative **sea level**; accept **sea surface height**]

[10m] Accurate models of changes in sea level must remove effects caused by this phenomenon. Forebulges are created as a result of the crustal deformation induced when this phenomenon displaces the mantle laterally.

ANSWER: glacial **isostatic adjustment** [or glacial **isostasy**; or **glacioisostasy**; or **post-glacial rebound**; or **isostatic rebound**; or **crustal rebound**; prompt on rebound; reject "isostatic depression"]

[10h] The magnitude of sea level rise could be considerably larger if this hypothesis holds true for the West Antarctic ice-sheet. This hypothesis states that, when the bedrock below an ice sheet slopes downward towards the ice sheet interior, ice outflow increases as the grounding line retreats.

ANSWER: **marine ice sheet instability** hypothesis [or **MISI**]

<Other Science: Earth Science, Jonathen Settle>

12. Speaking from beneath a summit, this character claims that a desire to be "experienced of the world" overcame his reverence for his father, fondness for his son, and "due affection" to his wife. For 10 points each:

[10h] Name this character. While contemplating how to translate this character's lines into French, the protagonist of a novel hears a "blast of a trumpet, like the voice of God" after reciting this character's line "you were made men / To follow after knowledge and excellence" from memory.

ANSWER: **Ulysses** [or **Ulisse** or **Odysseus**; accept The Canto of **Ulysses**]

[10m] This novel's narrator recites Dante's Canto of Ulysses to his companion Jean, using the line "and over our heads the sea closed up" to illustrate the author's notion of the "drowned" and "saved."

ANSWER: **Survival in Auschwitz** [or **If This is a Man** or **Se questo è un uomo**]

[10e] *Survival in Auschwitz* is by this Italian Jewish author of the short story collection *The Periodic Table*.

ANSWER: Primo **Levi**

<Misc. Lit, Will Alston>

13. The general consensus is that this object was moved to its present location by Akbar to coincide with a major pilgrimage site at the confluence of the Ganges, Yamuna, and Saraswati rivers. For 10 points each:

[10h] Name this object which contains four major inscriptions, including one by Akbar's advisor Birbal, one by Akbar's son Jahangir, and a panegyric *prashasti* inscription attributed to the poet Harisena.

ANSWER: **Allahabad pillar** [or **Allahabad Pillar**; prompt on pillar; reject "Iron Pillar"]

[10m] Harisena's *prashasti* praises this ruler, who revived many Hindu practices such as the *ashvamedha*, or horse sacrifice. The second emperor from his dynasty, he conquered many of the Indo-Scythian Western Satraps.

ANSWER: **Samudragupta** [prompt on Gupta]

[10e] The earliest of the inscriptions on the Allahabad pillar is one of the rock edicts of this ruler, who also prosecuted the bloody conquest of the Kalinga kingdom.

ANSWER: **Ashoka** Maurya [or **Asoka** Maurya]

<World History, Will Alston>

14. Rembrandt often evoked this technique by lighting his paintings with a single candle. For 10 points each:

[10e] Name this compositional technique with an Italian name. It was frequently imitated by the Dutch Caravaggisti ("kah-rah-vah-JEES-tee"), as Caravaggio used it to create strong contrasts against dark backgrounds.

ANSWER: **chiaroscuro** ("kyah-roh-SKOO-roh")

[10m] Like Caravaggio, Hendrick ter Brugghen painted two versions of this scene, one featuring a maid in a white turban bringing food, and one without her. Both of Caravaggio's paintings of this scene feature a man with a white cap looking down at Jesus, who gestures over a table.

ANSWER: *The **Supper at Emmaus*** [or *The **Dinner at Emmaus***]

[10h] This artist used a *chiaroscuro*-like technique in numerous *trompe-l'œil* ("tromp loy") paintings which use dark backgrounds to highlight their figures. The Fijnschilder ("FINE-shill-dur") guild in Leiden contained many followers of this artist of *The Dutch Housewife*.

ANSWER: Gerrit **Dou** ("HAIR-it DOE")

<Painting/Sculpture, Will Alston>

15. A brief diplomatic crisis with the U.S. resulted in 1997 when this practice was to be applied on Michael Fay, causing Bill Clinton to petition for clemency. For 10 points each:

[10m] Identify this practice which also caused a diplomatic row with the U.K. in 2020 when it was performed on Ye Ming Yuen. It is commonly done to people who vandalize the Mass Rapid Transit system.

ANSWER: **caning** in Singapore [accept anything involving beating with a **cane**; prompt on beating or any less specific form of corporal punishment; prompt on punishment]

[10h] Statutorily, judicial canes in Singapore must be made of this material, which was historically used to make shields used by soldiers from southern China, as well as fine baskets and furniture throughout Southeast Asia.

ANSWER: **rattan** [prompt on wood or palm wood]

[10e] Rattan canes are routinely used to beat criminals in this other country's region of Aceh, which follows *sharia* in both civil and criminal law. It is the most populous majority-Muslim country in the world.

ANSWER: **Indonesia** [or Republic of **Indonesia**]

<Modern World, Will Alston>

16. After a White officer named Nikolaev found platinum in this region, he told the Red Army in hopes of being spared, but Nikolaev disappears from the records after that, so he was probably shot anyway. For 10 points each: [10h] Name this region of Siberia where the Dalstroy trust was established to mine gold by exploiting gulag prisoners, who are commemorated by the Mask of Sorrow sculpture in Magadan. It is named for a river.

ANSWER: **Kolyma** [accept **Kolyma** river or **Kolyma** valley]

[10e] The Dalstroy trust was established on an order by Genrikh Yagoda, the head of this Stalin-era secret police organization which preceded the KGB. Its other heads include Lavrentiy Beria.

ANSWER: **NKVD** [or **People's Commissariat for Internal Affairs** or **Narodnyi komissariat vnutrennikh del**]

[10m] Kolyma's population skyrocketed during the later years of the Great Purge, which were overseen by this other NKVD leader. Upon realizing the purges had killed most of his top generals, Stalin accused this man of weakening the nation through excess and had him shot in 1940.

ANSWER: Nikolai **Yezhov**

<Euro History, Will Alston>

17. Symmetries of a theory generate Ward–Takahashi identities between these functions. For 10 points each:

[10m] Name these functions computed via diagrammatic expansions. In the path integral formulation, these functions contain physical information about fields. Propagators are examples of these functions.

ANSWER: **correlation** functions [accept **Green**'s functions; accept **two-point** functions; accept **n-point** functions]

[10h] For an arbitrary quantum field, this representation writes a two-point correlation function as a convolution between the free-field propagator and the spectral density function. The spectral density obtained from this representation, usually written as rho of mu-squared, contains information about the excited states of the theory.

ANSWER: **Källén–Lehmann** spectral representation [or **Lehmann–Källén** spectral representation; or **Lehmann** spectral representation; or **KL** spectral representation]

[10e] The LSZ reduction formula links correlation functions and elements of this matrix. In states and out states of scattering processes are related by this matrix.

ANSWER: **S**-matrix [prompt on **scattering** matrix]

<Physics, Jonathen Settle>

18. The anthropologist Fei Xiaotong (“shao-tong’z”) discusses how this concept manifests itself in the social networks that underlie the rural economy in his book *From the Soil*. For 10 points each:

[10m] Give the Chinese term for this concept of reciprocal personal relationships, which is central in studies of Chinese business and is exemplified by the “bamboo network” of Overseas Chinese investors.

ANSWER: **guanxi** (“gwan-shee”) [or **gwāan haih** or **koan-hē**]

[10e] *From the Soil* argues that both Chinese socialism is thoroughly rooted in *guanxi* and the ideas of this thinker, whose writings emphasize a notion of virtue called *ren*.

ANSWER: **Confucius** [or Master **Kong** or **Kong** Fuzi]

[10h] In her book *Russia's Economy of Favors*, Alena Ledeneva (“leh-deh-NYEH-vah”) draws a direct comparison between *guanxi* and this Russian concept, which collectively denotes the set of informal and especially corrupt methods used to achieve personal goals.

ANSWER: **blat**

<Social Science: Socio/Anthro, Will Alston>

19. In his text, *The Universal Man*, Abd al-Karīm al-Jīlī described the creation of a person with this title through the three stage process of *bada'ah*, *tawassut*, and *khitam*. For 10 points each:

[10h] Give this title which Ibn Arabi said was held by men who formed an "isthmus" between Allah and humans. Ibn Arabi argued that achieving this title was possible for contemporary people because every person was a reflection of the divine essence of Allah.

ANSWER: Al-**Insān al-Kāmil** [or The **Perfect Man** or the **complete person**]

[10e] This sect extends al-Jīlī's definition of the Perfect Man to include all Imams starting with a namesake son of Ja'far al-Sadiq. This Shi'a sect's largest branch is the Nizaris and they historically included the Seveners.

ANSWER: **Isma'ilism** [or **Ismailis**]

[10m] Ibn Arabi's equating of the Perfect Man with Muhammad was largely based on a haddith claiming that he was a prophet when this figure was "between water and clay." In the Quran, Iblis is cast out of heaven after he arrogantly refused to bow before this figure.

ANSWER: **Adam**

<Theology / Practice, Brad McLain>

20. In a Nobel Lecture titled "In the Forest of Paradoxes," the author dedicates part of his prize to Abhimanyu Unnuth, an author from this country who wrote the epic *Blood Red Sweat* about its cane fields. For 10 points each:

[10h] Name this country which that author used as the setting for *The Prospector*, a novel in which Alexis searches for the treasure of The Unknown Corsair. In the 2017 novel *Alma*, the narrator travels here to find his roots.

ANSWER: **Mauritius**

[10m] *The Prospector* and *Alma* are novels by this author, whose father was born on Mauritius. This author regards his novel about the amnesiac Adam Pollo as being "close to a joke."

ANSWER: J. M. G. **Le Clezio** (The novel is *The Interrogation*.)

[10e] Le Clezio's African-born wife Jemia inspired his novel titled for one of these places, which intertwines the stories of Leila and Nour in Morocco. The title character of *The Little Prince* crashes a plane in one of these places.

ANSWER: **desert** [or **Désert**; accept Sahara **Desert**]

<Long Fiction, Itamar Naveh-Benjamin>