

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

Editors: Will Alston, Brad McLain, Eric Mukherjee, and Jonathen Settle, with assistance from Ike Jose

Writers: Noah Chen, Ryan Humphrey, Kirk Jing, Joseph Krol, Caroline Mao, Jack Mehr, Matt Jackson, and Itamar Naveh-Benjamin

Logistics: Jacob O'Rourke

Packet by The Editors (5)

TOSSUPS

1. Amitav Ghosh’s writings about the “encounter” with this industry include an episode from *The Glass Palace* in which Rajkumar gets a job in it with the help of a loan from Saya John. This industry titles a novel in which the journalists Rufus and Zaq search for a white woman kidnapped by a militia. In another novel, three Americans in this industry are called devils after their tractors “attack” a family orchard. Wealth from a boom in this industry is contrasted with the slums traversed by Elvis in the picaresque novel *GraceLand*. Its arrival spurs (*) Miteb to leave his hometown in a trilogy including *The Trench* and *Divisions of Night and Day*, which labels cities built on its money as “cities of salt.” In another novel, James Arnold Ross argues about this industry with his socialist son Bunny. Ogoni author Ken Saro-Wiwa was executed for leading protests against, for 10 points, what title industry of an Upton Sinclair novel which inspired *There Will Be Blood*?

ANSWER: oil industry [or petroleum industry; accept petrofiction or Oil on Water or Oil!]

<Long Fiction, Jack Mehr>

2. *Description acceptable.* This non-U.S. policy prompted Congress to propose the Bloomfield Bill, which was shot down on the advice of Frank Carlucci. During an Oxford Union debate on this policy with Jerry Falwell, the leader who passed it told a student “hold your breath just for a moment.” Secretary of State George Shultz quipped that the country which created this policy was a “friend, not an ally” and suspended some U.S. obligations under a tripartite alliance, after this policy caused the *USS Buchanan* to be denied a visit. It was anticipated by an (*) ICJ case brought by Norman Kirk’s government and was formally implemented in 1984 by the Labour government of David Lange. The country which implemented this policy backed it up by prosecuting the DGSE agents who killed Fernando Pereira by sinking the ship he was aboard, the *Rainbow Warrior*. For 10 points, identify this policy under which a certain Pacific nation disallows WMDs within its jurisdiction.

ANSWER: New Zealand’s nuclear-free zone [accept answers which indicate the government of New Zealand or Aotearoa opposing nuclear weapons or tests within its jurisdiction, or nuclear-powered vessels; prompt on any less specific answer designating anti-nuclear policies or nuclear test bans by asking “which country?”]

<Other History, Will Alston>

3. A useful approximation for this quantity in numerical and analytical work on real gases sets it equal to sixteen over five times viscosity over the square root of the following: two pi times density times RT. In Chapman–Enskog theory, the distribution function is expanded to the second order using a small parameter epsilon, which is a ratio of this microscopic quantity to a property of the system. When this quantity is large relative to the system, the system exhibits molecular flow. When the continuum hypothesis is valid, a dimensionless number defined using this microscopic quantity is at most 0.01. (*) Ballistic transport of charge carriers occurs when this quantity is large relative to the scale of the material. The diffusion coefficient of an ideal gas is proportional to this quantity times average velocity. In the kinetic theory of gases, molecule diameter is much smaller than this quantity. For 10 points, name this average distance traveled by particles between collisions.

ANSWER: mean free path [or mfp] (In Chapman–Enskog theory, epsilon is the ratio of mean free path to the system’s length scale. The dimensionless number is the Knudsen number.)

<Physics, Jonathen Settle>

4. A map of the world published in the Belgian journal *Variétés* depicts this culture's homeland grossly exaggerated in size. A nude woman glances at an artifact from this culture dressed in rich clothes in an image from Max Ernst's collage novel *A Week of Kindness*. In his book *Nadja*, André Breton included the caption "Je t'aime, je t'aime" ("zhuh-TEM zhuh-TEM") beneath a photograph of an artifact from this culture that he bought as a teenager. This culture produced wooden carvings of emaciated male figurines with protruding ribs called *kavakava*. Petroglyphs of curled up humans decorate rocks from this culture's (*) crater-side village of 'Orongo. A ritual practiced by this culture inspired the paintings found in the "Cave of the Cannibals," which depict the *tangata manu* or "bird-man" who first retrieved the season's sooty tern egg. Volcanic scoria rock was used for the carved *pukao*, or topknots, that adorn their most famous monoliths. For 10 points, which culture created giant *moai* ("moh-eye") heads?

ANSWER: **Rapa Nui** culture [or **Easter Island** culture; prompt on Polynesians]

<OArts: Visual, Itamar Naveh-Benjamin>

5. In one book, this concept is said to be "everywhere, not because it embraces everything, but because it comes from everywhere," and is "permanent, repetitious, inert, and self-embracing." A book by Hubert Dreyfus and Paul Rabinow concludes by examining the title thinker's claim that this concept underlies the "practical operation of 'the truth'." A book proclaiming that this concept "comes from below" and is not something that "can be acquired, seized, or shared" argues against the "juridico-discursive" (*) picture of this concept. So-called "micro" forms of this concept are said to originate from different levels of experience and to standardize behavior, as exemplified by the doctor-patient relationship. Another form of this concept is used to describe the ability of nation states to regulate and subjugate human populations on large scales. For 10 points, name this concept that, according to Michel Foucault, is based on and reproduces scientific forms of knowledge.

ANSWER: **power** [accept **micropower**, or **biopower**, or **power-knowledge**]

<Philosophy, Ike Jose>

6. The only German state-funded museum outside of Germany is a former apartment in this city whose collection includes a drawing of an author "at a window" here. A letter written in this city and addressed to Charlotte von Stein speaks of the author's discovery of a "primordial plant" that might "be the most marvellous creation of the world." Poems set in this city include one which asks "Genius, art thou alive?" and one whose speaker counts hexameters on the back of his naked lover. Those poems, from a cycle of (*) twenty-four named for this city, were written after their author met his future wife Christiane Vulpius. An author who worked as a magistrate in Weimar visited this city as the capstone of his extended vacation from 1786 to 1788, during which he was painted by his housemate, Johann Tischbein, in its "Campagna" ("kahm-PAHN-yah"). For 10 points, what Italian city names a cycle of erotic elegies by Johann Goethe ("GUR-tuh")?

ANSWER: **Rome** [or **Roma**; accept **Roman Elegies**]

<Misc. Lit, Will Alston>

7. This world leader brought the TOTCO pipeline project to a halt by forcing Petronas and Chevron to leave the country after they failed to hand over a share of royalties from the Doba oil fields. This leader set up the Truth Commission to investigate the crimes of the preceding government, such as the use of a converted swimming pool by “El Djonto” to torture dissidents. After graduating from the World Revolutionary Center in Benghazi, this leader assembled the Patriotic Salvation Movement, primarily from members of his Zaghawa ethnic group. This so-called (*) “Great Survivor” led the coup that overthrew his brutal predecessor Hissène Habré (“ee-SEN ah-BRAY”) in 1990. At age 68, this leader commanded a campaign against the FACT rebel group in the Tibesti region and was mortally wounded in a skirmish, after which his son Mahamat succeeded him. For 10 points, name this recently-deceased President of Chad.

ANSWER: Idriss Déby Itno (“ee-DREES day-BEE”) [prompt on Déby or Itno]

<World History, Will Alston>

8. A paper titled for physics and this historical development by Philip Mirowski notes how one of its proponents considered his concept of *rareté* (“rah-reh-TAY”) to be a logical extension of Newtonian motion. Nikolai Bukharin’s critique of the “leisure class” lambasts the pioneers of this development as equating the “psychology of the consumer” with that of the “rentier” (“rent-ear”). A publication named for this development publishes sets of “assorted links” several times per week and bills itself as advocating (*) “small steps toward a better world.” This development is regarded as having resolved Adam Smith’s “diamond-water paradox” through the application of a “subjective theory of value” and differential calculus in such books as *Elements of Pure Economics*. Alex Tabarrok and Tyler Cowen’s economics blog is named after, for 10 points, what development pioneered by Carl Menger, William Jevons, and Leon Walras, which involves analyzing incremental units?

ANSWER: the marginal revolution [or marginalist revolution; accept “Physics and the Marginalist Revolution”]; accept marginal analysis; prompt on marginal or answers referring to the use of marginal utility]

<Social Science: Economics, Will Alston>

9. Plotting amplitude versus duration of these non-astronomical phenomena generates a linear relationship called the main sequence. Peter Hallet’s experiments on these phenomena led him to devise a test for the ability to suppress them, called the anti-*these phenomena* task. Poor integration causes them to be hypo- or hypermetric. Omnipause neurons do NOT fire while these phenomena are occurring. They can be modelled as a “pulse” and a “step,” the former of which is generated by long- or medium-lead burst neurons in the (*) paramedian pontine reticular formation. An error signal from the superior colliculus (“co-LICK-yew-lus”) generates these phenomena in response to cortical signals. An involuntary analogue of these phenomena comprises the fast phase of nystagmus. Their “micro” variety occurs during fixation in order to maximize the use of the fovea. For 10 points, name these quick voluntary eye movements, named for the French word for “jerk.”

ANSWER: saccade [prompt on things like eye movements, fast/rapid/etc eye movements]

<Biology, Eric Mukherjee>

10. This symphony's first movement was originally intended to end after a melancholy bassoon solo played over dissonant ninetuplets in the strings. James Hepokoski's monograph on this symphony argues that its G major slow movement, which presents variations on a descending theme introduced by flutes, then pizzicato strings, exemplifies its "rotational form." It begins with a timpani roll on low B-flat, followed by a rising theme in the horns, before woodwinds introduce the rising theme [read slowly] "E-flat, F, C." Six loud, isolated *tutti* chords conclude this symphony, whose most salient theme is introduced by (*) four horns playing the tied half notes [read slowly] "B-flat, up a fifth to E-flat, back down to B-flat." This symphony's composer merged its slow first movement with its second-movement *scherzo* in a late 1915 revision and centered its finale on a theme inspired by the flight of sixteen swans. For 10 points, name this E-flat major symphony by Jean Sibelius. ANSWER: Symphony No. 5 by Jean Sibelius [accept equivalent answers like Sibelius's Fifth; accept 5 or Fifth after "Sibelius"; prompt on Symphony No. 5 in E-flat or Fifth Symphony]

<Classical/Opera, Will Alston>

Note to moderator: moiety is pronounced "MOY-uh-tee"

11. A preservative named for the number 15 and the fact that it contains this moiety is a formaldehyde releaser and common contact allergen. A compound with two aromatic rings both with this moiety at the para position is an herbicide with a similar structure to M·P·P, and like M·P·P increases the risk of Parkinson's disease. It's not palmitoyl, but a phospho-lipid with this moiety at the free end of its head group is a major component of (*) pulmonary surfactant. That phospholipid is lecithin ("less-uh-thin"), which has this moiety on its choline head group. Phosphonium salts, crown ethers, and this moiety are the most common phase-transfer catalysts. This moiety is eliminated, after being created through exhaustive methylation, in the Hoffman elimination. For 10 points, name this positively-charged functional group consisting of a nitrogen atom bonded to four other groups.

ANSWER: quaternary amine or quaternary ammonium salt [prompt on partial answer; prompt on quat, paraquat, or quaternium since those are chemical names clued that have "quat" in them, prompt on choline before mention with "what functional group is on the free end of the choline group?"]

<Chemistry, Eric Mukherjee>

12. A man in this play laments the irony of shooting the birds which are pooping on a sacred garden, since birds bear the messages of the gods. When startled by a mention of the Long Rocks, or Makrai Petrai, a woman in this play claims to know of a "vile deed" done there. In this play, an old retainer suggests using two drops of blood that Erichthonius collected from the dead Gorgons as a poison. This play's title character refers to himself as *tou theou doulos* ("too THAY-oo DEW-lohss") or (*) "slave of the god," referring both to his belief that he was born to a slave woman and to his occupation as an attendant at Delphi. It climaxes when Athena appears to explain that the title character's father was not Xuthus, but rather Apollo, who sired him in a cave with the noblewoman Creusa. For 10 points, name this Euripides play about the mythological namesake of the race of Greeks who lived near the coasts of the Aegean Sea.

ANSWER: Ion [reject "Ionia" or "Ionians"]

<Drama, Will Alston>

13. A six-foot long artifact made of this material shows thirteen black figures with their hands clasped together and was made on the orders of George Washington. A common design on artifacts made of this material consists of a pentagonal pine tree in the center linked by white lines to two squares on each side. Two dark stripes of this material against a white background form the “two row” design, which commemorates a 17th-century agreement made with the New (*) Netherland Company. In the Massachusetts Bay Colony, a string of eight pieces of this material was equivalent to one shilling. This material, which is traditionally made from clam shells, was used to record treaties and official records by the Onondaga nation. For 10 points, name this material used by the Iroquois and many indigenous New England peoples as currency, which was also used to make namesake “belts.”

ANSWER: wampum [accept wampum belts or Hiawatha wampum or Two-Row wampum; prompt on beads; prompt on shells or clam shells or mollusks before “clam shells”]

<American History, Will Alston>

14. *Description acceptable.* Departing from the “Master of the Brussels Initials,” the Limbourg Brothers bestowed this distinguishing trait to a figure who holds a yellow banner in a painting where he meets his horseback-mounted companions. Kristen Collins curated a 2019-2020 Getty Center exhibition centering on this trait of a specific artistic figure, which notes that depictions using it likely stem from a text by the friar John of Hildesheim. Paintings which use this trait include one set in the ruins of a church by Jan Gossaert (“GOSS-art”), in which the figure who has it also bears an elaborate headdress with the artist’s signature. This (*) physical trait is *NOT* used in Gentile da Fabriano’s Strozzi Altarpiece, unlike many contemporary paintings of the same scene, which use it to distinguish the companion of Gaspar and Melchior. For 10 points, in *Adoration* scenes, what trait was often used to depict king Balthazar’s exotic origin?

ANSWER: making Balthazar the Magus have black skin [accept making Balthasar black; accept making Balthasar’s skin dark; or making him from Africa or African]

<Painting/Sculpture, Ike Jose>

15. A stele found at this place recognizes its inhabitants for aiding a nascent dynasty at the Battle of Hulao. This place’s inhabitants were granted a special dispensation to consume copious amounts of meat and alcohol since they rescued the emperor Li Shimin when he was kidnapped as a child. A text called the *Yijin Jing* or *Muscle Change Classic*, which was legendarily found within the walls of this place, outlines numerous techniques for *qigong* (“chee-gong”). That text, like the *Shi Shui Ching* (“shee shway ching”), was written by a (*) “blue-eyed barbarian” visitor who was concerned that the inhabitants of this place were badly out of shape, since they had spent so much time in meditation. Later, this place’s inhabitants routinely helped the Ming combat bandits and *wokou* (“woh-koh”) pirates using their several different *taolu*, or forms, which were later standardized into *wushu* sports. For 10 points, name this Zen monastery where Bodhidharma promulgated martial arts techniques, including kung fu.

ANSWER: Shaolin Temple [or Shaolin Monastery]

<Other Academic, Will Alston>

16. In an Estonian myth, a cave dwelling magician teaches a boy to speak the language of birds in order to locate this object, which the boy then uses to slay the Dragon of the North. With a staff, this object is wielded by the Beast of the Earth, who uses it to make the faces of believers “shine brightly” while marking the noses of unbelievers. In another tale, this object was used to banish a spirit who was stealing a young man's life force by sucking his thumb. This object was said to be imprinted with the “Most Great Name of God” and either a (*) pentagram or a hexagram. After this object was stolen by Asmodeus, its owner was forced to wander the earth as a beggar until recovering it from the belly of a fish. This object granted its owner the ability to speak to animals, inspiring the title of a zoology book by Konrad Lorenz. For 10 points, name this magical object that a wise king of Israel used to command demons and djinn to build the Temple in Jerusalem.

ANSWER: Seal of Solomon [accept King Solomon's signet ring; accept pentangle of Solomon; or equivalents; prompt on Star of David; prompt on just seal or signet ring; prompt on pentagram or hexagram before read]
<Misc Belief, Brad McLain>

17. Lap splices are commonly used to transmit forces through this material, though mechanical splices are preferred for more demanding designs. Tension-controlled sections of this material, for which the ACI requires a strength-reduction factor of 0.90, are preferred to compression-controlled sections because the latter fail explosively. If this material's development length is inadequate, it will fail a pull out test. Cover is required in this material to ensure bonding, to protect from overheating, and to reduce (*) chloride ingress from ocean spray and de-icing salts. The alkaline environment of one of the components of this material creates a passivation layer on the other component. This material improves the tensile strength and ductility of a material with good compressive strength by inserting another material with a similar coefficient of thermal expansion. For 10 points, name this building material created by embedding rebar in a mixture of water, aggregates, and cement.

ANSWER: reinforced concrete [prompt on concrete; prompt on steel or rebar with “as a part of what composite material?”; prompt on cement]
<Other Science: Applied/Data Science/Engineering, Jonathen Settle>

18. Women among this group could benefit from “prefection,” in which the king legally designated them as a son so they could inherit property. A member of this group, Amadeus Aba, led a breakaway state after most of its members failed to recognize the legitimacy of king Charles Robert. Before the Counter-Reformation, members of this group converted *en masse* to Lutheranism and Calvinism at the encouragement of Gabriel Bethlen. This group was granted the right of resistance by the Golden Bull of 1222 issued by king (*) Andrew II. In an early implementation of “salami tactics,” the privileges of this group were abolished in 1947 by a Communist government. This group was swelled with ranks of immigrant Frankish and German knights called *advena* during the reign of the Arpad dynasty. For 10 points, identify this unusually numerous elite class of people in a Central European kingdom governed from Budapest.

ANSWER: Hungarian nobility [or Magyar nobility; accept Hungarian knights or Magyar knights; accept equivalents for “nobility” such as nobles; accept Hungarian barons or főnemesség; accept Transylvanian for “Hungarian”; prompt on Hungarians or Magyars; prompt on nobility or nobles or barons]
<Euro History, Will Alston>

19. This poem's main character kneels in a cathedral during a storm that proclaims something "harsher" than "hearing signboards whimper in cold night." In a letter to Hi Simons, this poem's author says it evokes a sound like crickets following St. Francis, as suggested by lines about an "auditor of insects" who greatly had "grown in his demesne." This poem is often read as a response to Romanticism, as its main character becomes a "watery realist" and confronts the "veritable *ding an sich*" undeterred by the interference of "negligible Triton." This poem's opening (*) "Nota," which declares that man is the "intelligence of his soil," is inverted at the start of its fourth section, which outlines a plan for a colony of poets. Its first section, "The World Without Imagination," describes a planned sea voyage from "Bordeaux to Yucatan, Havana next / And then to Carolina." For 10 points, name this poem about Crispin, a comic epic written by Wallace Stevens.

ANSWER: "The Comedian as the Letter C"

<Poetry, Will Alston>

20. This city's Fairground Pavilion features a "floating roof" and an entryway that is decorated with terracotta sculptures of farm animals. A former hospital in this city is home to Leonard McMurray's giant bronze statue of *Praying Hands*, and is now part of a trio of triangular skyscrapers called the CityPlex Towers. A 75 foot tall statue of an oil worker named the Golden Driller is found in this city, as is a university whose prayer tower is meant to look like a cross from any view, but is often described as looking like a UFO. The entrepreneurs J. B. Stradford and (*) O. W. Gurley helped develop a neighborhood in this city where mayor G. T. Bynum publicly funded a search for graves in 2018. This city is home to Oral Roberts University, as well as an area that was largely burned down after the shoeshiner Dick Rowland was accused of assaulting a white woman. For 10 points, what city's Greenwood District contained the "Black Wall Street" destroyed by a race riot in 1921?

ANSWER: Tulsa, Oklahoma

<Geography, Brad McLain>

BONUSES

1. This group titles a 2020 book by Jill Watts which profiles six of its members, including Bill Hastie, who went on to become Governor of the Virgin Islands and a federal judge. For 10 points each:

[10m] Name this informal group of advisors to FDR led by Mary McCleod Bethune, who concurrently served as a director in the National Youth Administration.

ANSWER: **Black Cabinet** [or **Black Brain Trust**, or **Federal Council of Negro Affairs**; reject “Brain Trust” or “Cabinet”]

[10e] Black Cabinet member Robert Weaver became head of this department in 1966, making Weaver the first African-American in the formal Cabinet. This department’s goals include making mortgages more affordable.

ANSWER: Department of **Housing and Urban Development** [or **HUD**]

[10h] Another Black Cabinet member, Robert Lee Vann, edited this leading Black newspaper and encouraged his readers to switch their vote to the Democrats. During World War II, this paper started the “Double V campaign,” which encouraged African-Americans to enlist and fight for freedom, both at home and abroad.

ANSWER: *The **Pittsburgh Courier*** [prompt on **Courier**]

<American History, Will Alston>

2. New clouds just dropped! Answer the following related to the 2017 update to the International Cloud Atlas.

[10e] The literally and totally tubular volutus clouds are a species mostly associated with a genera of clouds containing this prefix. The atmospheric layer containing this prefix is located between the troposphere and mesosphere.

ANSWER: **strato** [accept **stratosphere**; accept **stratocumulus**]

[10m] The wavy fluctus clouds render this phenomenon visible. A velocity difference across the interface between two immiscible fluids causes this phenomenon.

ANSWER: **Kelvin–Helmholtz instability** [or **K–H instability**; prompt on **instability**; prompt on **turbulence** with “what phenomenon leads to the onset of turbulence?”]

[10h] The base height of accessory clouds called flumens is the same as the base of the main one of these features in supercells. Bounded weak echo regions created by these features are indicative of supercells and other severe convective weather.

ANSWER: **updrafts**

<Other Science: Earth Science, Jonathen Settle>

3. According to one model of this process, immigrants may either become separated, integrated, assimilated, or marginalized. For 10 points each:

[10e] Name this process, which refers to the ways that immigrants adapt to the dominant culture. It was defined as “psychological changes induced by cross-cultural imitation” by the man who coined its name, John Wesley Powell.

ANSWER: **acculturation**

[10h] The fourfold model of acculturation was proposed in this Canadian psychologist’s paper, “Immigration, Acculturation, and Adaptation.” This psychologist defined the “general form” of intercultural communication in the book *Mutual Intercultural Relations*.

ANSWER: John **Berry**

[10m] In the article “Cross-cultural psychology,” Berry used differences in this activity as an example of cross cultural comparison. Diana Baumrind’s model of this activity includes “propagative” and “permissive” types.

ANSWER: **parenting** [or **child rearing** or **raising children**]

<Social Science: Psychology, Brad McLain>

4. Though Katherine Anne Porter insisted that she never read this series of books, she probably did borrow a title from it for her own novel *Old Mortality*. For 10 points each:

[10m] Name this series of novels which purports to consist of stories from the Wallace Inn compiled by editor Jedediah Cleishbotham (“KLEESH-bahth-um”). This series’s author dictated most of its entry *The Legends of Montrose* to its actual editor, John Ballantyne.

ANSWER: **Tales of My Landlord** [prompt on Waverley novels]

[10e] Sir Walter Scott’s *Tales of My Landlord* include this novel, which is set during the aftermath of the “15 rising” and is titled for the nickname of the outlaw Frank Osbaldistone (“uz-BALD-iss-tun”).

ANSWER: **Rob Roy**

[10h] The first of the *Tales of My Landlord*, titled *The Black Dwarf*, fictionalizes the life of a quarryman who lives in this region. The novel draws heavily on a collection of *Minstrelsy of [this place]* compiled by Scott.

ANSWER: Anglo-Scottish **border** [or Scottish **borderlands**; accept *Minstrelsy of the Scottish Border*; accept **border** ballads; accept **Liddesdale** Hills or **Peebles**, Scotland; prompt on English border; reject “Highlands” because those are well north of the border]

<Long Fiction, Will Alston>

5. When life gives you lemons, make art. For 10 points each:

[10e] This artist took that idea to its extreme, since he painted his first canvas, *Still Life with Lemons*, after his father’s death in 1906. This Greek-born Italian artist painted *Melancholy and Mystery of a Street*.

ANSWER: Giorgio de **Chirico**

[10m] This Baroque painter’s best-known genre painting is titled *Still Life with Lemons, Oranges, and Rose*. A small scroll reading “B. Serapius” appears at the right of this painter’s dark *Martyrdom of Saint Serapion*.

ANSWER: Francisco de **Zurbarán**

[10h] The most expensive artwork from this country ever sold by a living artist, titled *My Lemon*, doesn’t actually show any lemons, but rather a bright array of multicolored flowers. Another artist from this country painted several versions of *The Egg*, which shows a purple snake wrapping around the title object and a red spike.

ANSWER: **Brazil** [or Federative Republic of **Brazil** or República Federativa do **Brasil**] (*The Egg* in question is by Tarsila do Amaral.)

<Painting/Sculpture, Will Alston>

6. The physicist Wilhelm Weber and the Brothers Grimm were among a group of seven professors in this city who led a celebrated protest against a constitutional abolition. For 10 points each:

[10h] Name this city whose university and school of 18th century historiography were established by Baron Gerlach Adolph von Münchhausen, the real-life cousin of the fictional Baron Münchhausen.

ANSWER: **Göttingen** [accept **Göttingen** Seven]

[10m] The Göttingen School criticized this historian’s *Essay on the Customs and the Spirit of the Nations* for its over-emphasis on “philosophical spirit.” This writer advised Catherine the Great on the *Nakaz* law code.

ANSWER: **Voltaire** [or François-Marie **Arouet**]

[10e] The Göttingen School held a more favorable opinion of this historian, who used Voltaire as a model for constructing an “Enlightened Narrative” in *The Decline and Fall of the Roman Empire*.

ANSWER: Edward **Gibbon**

<Euro History, Will Alston>

7. One of these objects named for Baie Chaleur (“bye shuh-LOOR”) is said to appear as a mysterious arc of light and may be depicted on the flag of New Brunswick. For 10 points each:

[10m] Identify these supernatural objects. A famous one of them was first spotted by John MacDonald during a storm near the Cape of Good Hope.

ANSWER: **ghost ship** [or **phantom ship**; or **ghost boat**; prompt on just **ships** or **boats**; prompt on ghost **lights** or **St. Elmo’s fire**]

[10e] This vessel is likely the world's most famous ghost ship. This vessel’s captain was cursed to never come to harbor again, forming the basis for a Richard Wagner opera.

ANSWER: **The Flying Dutchman** [or **De Vliegende Hollander**]

[10h] This other ghost ship is based off of the wreck of the *Princess Augusta* near Block Island, Rhode Island. Native Block Islanders claim that a woman on this ship refused to leave the ship as it sank, and can now be heard screaming through the waves.

ANSWER: **Palatine** light [accept answers which refer to **Palatine**]

<Brad McLain, Legends>

8. This disease may be complicated by progression to Charcot joint or osteomyelitis commonly caused by *Pseudomonas*. For 10 points each,

[10h] Name this disease, which can be identified via the Semmes-Weinstein monofilament test. It is caused by many contributing factors, including peripheral neuropathy and peripheral artery disease caused by A·G·Es.

ANSWER: **diabetic foot disease** [or **diabetic foot syndrome**; accept answers that indicate **foot ulcers** in **diabetics** and prompt on partial answer; prompt on type I/type II/gestational **diabetes** mellitus]

[10m] Diabetics are advised to avoid this practice in order to prevent foot disease. This practice is also a major risk factor for developing hookworm infection.

ANSWER: walking **barefoot** [accept answers indicating **not wearing shoes** or **socks** or other **footwear**]

[10e] Diabetic foot disease can be treated with an experimental form of wound debridement using these agents. Francesco Redi’s finding of these specific organisms on the top of a gauze-covered jar provided evidence against the theory of spontaneous generation.

ANSWER: **maggots** [or **fly larvae** or **Diptera larvae**; prompt on **flies**, **diptera**, **grubs**]

<Biology, Noah Chen>

9. This author assembled 99 paragraphs written by various writers, including Kafka, Flaubert, and Beckett, into five short stories for his experimental book 99. For 10 points each:

[10h] Name this author whose stories include “The English Garden” a depiction of a German town that is built on the remains of a concentration camp. His volume of stories *In the Future Perfect* reflects his Austrian heritage.

ANSWER: Walter **Abish**

[10e] Abish used constrained alphabetical sentences, such as ones whose words all begin with the letter “a” or “z” in a novel titled “Alphabetical [this place]”. It also titles a memoir by Isak Dinesen.

ANSWER: **Africa**

[10m] Abish often participated in overseas readings of his writings alongside this fellow writer, whose first volume of short fiction is *Come Back, Dr. Caligari*. This author’s story “Robert Kennedy Saved From Drowning” appeared the same year that RFK was killed.

ANSWER: Donald **Barthelme**

<Short Fiction, Ike Jose>

10. According to exegesis by Ibn Kathir, a passage in the Quran about this sin implies that those who commit this sin are actually Shaitan (“shy-TAHN”) worshippers. For 10 points:

[10e] Give this Arabic term for the unforgivable sin of associating Allah with another being.

ANSWER: **shirk** [or **sirk**; prompt on idolatry; prompt on polytheism]

[10m] Unlike other sins, shirk is described as unforgivable and a “sin most heinous indeed” in this fourth Surah of the Quran, whose final verse explicitly refutes the trinity. The majority of this surah discusses the customs and roles of the title group.

ANSWER: an-**Nisa** [or The **Women**]

[10h] This Persian polymath provoked accusations of shirk by claiming that, in addition to Allah, four other principle “eternals” make up the universe. This thinker was also criticized by Abu Hatim for allegedly denying the usefulness of revealed religion and miracles in works like *The Book of the Philosophical Life*.

ANSWER: Abu Bakr al-**Razi** [or Muhammad ibn Zakariya al-**Razi**; or **Rhazes**; or **Rasis**]

<Theology/Practice, Brad McLain>

11. The villain in one of these films is John, a drug addict whose pet hawk Marsha once saved him from crucifixion by gnawing off his entire hand. For 10 points each:

[10h] Name this subgenre. Many films in this genre, such as Damiano Damiani’s *A Bullet for the General* and a trilogy by Sergio Sollima, feature a European gun runner and a peasant or farmer as deuteragonists.

ANSWER: **Zapata Westerns** [prompt on westerns or Spaghetti Westerns] (The film in the leadin is *Companeros* by Sergio Corbucci)

[10m] This Sergio Leone (“SAIR-jee-oh lay-OH-nay”) film critiques the leftism of Zapata Westerns and includes an eerie montage of the mouths of upper class Mexicans expressing their disgust at the poor. It begins with a shot of the bandit Juan urinating on some ants, and is titled for a phrase that Juan is often told before an explosion goes off.

ANSWER: ***Duck You Sucker!*** [or ***Giù la testa***, accept A ***Fistful of Dynamite*** or ***Once Upon a Time...the Revolution***]

[10e] Zapata Westerns influenced this director so much that he had Bennie wear a patch stating “Viva Zapata!” in his film *Bring Me the Head of Alfredo Garcia*. Mexico partly provides the setting to his film *The Wild Bunch*.

ANSWER: Sam **Peckinpah**

<Other Arts: Film, Ike Jose>

12. Critics of this historian claim that he has mis-interpreted a Ugaritic inscription to date a solar eclipse during the reign of Akhenaten to 1012 B.C.E, 350 years later than the conventional dating scheme. For 10 points each:

[10h] Name this Egyptologist and former rock musician who, in the book *A Test of Time*, put forth a highly controversial New Chronology which shifts the reigns of dozens of pharaohs forward by centuries.

ANSWER: David **Rohl**

[10e] Under Rohl’s scheme, the long gaps in records after this event, usually dated to the 12th century, are barely gaps at all. This term refers to the rapid decline of the Mycenaean, Hittite, and other Mediterranean cultures.

ANSWER: Late **Bronze Age Collapse** [prompt on BAC or partial answers]

[10m] This polymath’s book *Ages of Chaos*, which puts forth a “Revised Chronology” that lines up Egyptian and Biblical history, was an inspiration for Rohl’s work. This Russian theorized that “cultural amnesia” has caused humanity to forget past major events, such as a war with other planets, in the book *Worlds in Collision*.

ANSWER: Immanuel **Velikovsky**

<Historiography, Will Alston>

13. One of this poet's speakers sees "arrows and wagon wheels, obsidian tools, buffalo" and vows, "I want to try and be terrific. Even for an hour." For 10 points each:

[10h] Name this poet of Mexican American heritage behind *The Carrying*. She included her poem "During the Impossible Age of Everyone" in the collection *Bright Dead Things*.

ANSWER: Ada **Limón**

[10e] In the first poem in Limón's collection *The Carrying*, Eve gives these things to the animals and wonders if "she ever wanted / them to speak back." In the Bible, Adam instead gives these things to animals in Genesis 2.

ANSWER: **names** [accept **naming**]

[10m] Another poem by Limón describes [emphasize] *this other poem* as "something to get through before the pummeling of youth" and remarks how a line from its third stanza, "no refuge could save the hireling and the slave," is rarely heard.

ANSWER: "The **Star-Spangled Banner**" [prompt on U.S. national anthem] (Limon's poem is "We Need A New National Anthem.")

<Poetry, Caroline Mao>

14. This theorem's corollaries include the fundamental theorem of finite abelian groups because any abelian group can be very naturally viewed as a module over the ring of integers. For 10 points each:

[10h] Name this theorem that states, for an integral domain R in which proper ideals can be generated by a single element and an R -module M with a certain property, the invariant factors of M are unique up to units.

ANSWER: **fundamental theorem of finitely-generated modules over a PID** [or **structure theorem for finitely generated modules over a PID**; accept **principal ideal domain** for **PID**; accept **fg** for **finitely-generated**]

[10m] The fundamental theorem of finite abelian groups states that every finite abelian group is equal to this operation applied to cyclic groups with prime-power order. This operation applied to any two groups gives a new group whose set is formed from a Cartesian product and whose elements are ordered pairs.

ANSWER: **direct product** [accept **direct sum**; reject partial answers]

[10e] The fundamental theorem of finite abelian groups has parallels with this other fundamental theorem, which says that every integer has a unique prime factorization.

ANSWER: fundamental theorem of **arithmetic**

<Other Science: Math, Jonathen Settle>

15. In this passage, a general journeys into the heavens but still fixates his gaze upon the planet he has left, exasperating the spirit of his grandfather, who explains "the earth is totally insignificant." For 10 points each:

[10m] Name this episode from Cicero's *De Re Publica*. It is the subject of a commentary by Macrobius, who used it to elucidate his doctrines on the nature of the soul.

ANSWER: **Scipio's Dream** [or **Somnium Scipionis**; accept equivalents such as The **Dream of Scipio**]

[10e] Macrobius's commentary on Scipio's Dream was a key text in this tradition of late Greco-Roman philosophy, whose other thinkers include Plotinus and Porphyry. It built on ideas from the creator of the Theory of Forms.

ANSWER: **Neoplatonism** [prompt on **Platonism**]

[10h] Book VII of Macrobius's *Saturnalia* remarks that people jest about this philosophical problem, even though it is "one of importance." Plutarch's *Symposiacs* presents several arguments regarding this problem, such as that one of its subjects was made "vigorous and perfect...self-sufficient and entire." A description is fine.

ANSWER: the **chicken** and **egg** question [accept logical equivalents such as "Which came first, the **chicken** or the **egg**?"]

<Philosophy, Will Alston>

16. In a 2017 photo essay titled “Hidden America,” ABC News depicted substandard housing in these communities, whose residents are frequently lured in with false promises of future service installation. For 10 points each:

[10h] Identify these slums found along the US-Mexico border, especially in the Rio Grande Valley, which are home to over 800,000 residents. These slums proliferated in the wake of the establishment of *maquiladora* factories.

ANSWER: **colonias** [prompt on neighborhood]

[10e] Estimates suggest that at least 50% of colonia residents lacked safe access to this resource. In 2021, former governor Rick Snyder was charged with neglect for his handling of a crisis regarding this resource.

ANSWER: drinking **water**

[10m] The bulk of colonias are found in Hidalgo County, in the peri-urban areas surrounding this Rio Grande Valley city. This city's transnational metro with Reynosa rapidly grew with the expansion of *maquiladoras* in the region.

ANSWER: **McAllen**

<Modern World, Brad McLain>

17. The overture to this play was originally written for the opera *Alfonso und Estrella*. For 10 points each:

[10m] Name this play written by the Hungarian librettist Helmina von Chézy (“KEH-zee”). The composer of its incidental music re-used the theme from its Entr’acte No. 3 for his String Quartet No. 13 and Impromptu in B-flat.

ANSWER: **Rosamunde** (“ROH-zah-MOON-duh”)

[10e] It is thought that the first Entr’acte from Franz Schubert’s incidental music to *Rosamunde* was originally written as the finale of this Schubert piece, whose third-movement scherzo was only scored for piano.

ANSWER: “**Unfinished**” Symphony [or Symphony No. **8** in B minor]

[10h] The incidental music to *Rosamunde* includes a chorus of these people, who sing “Wie lebt sich’s so fröhlich im Grünen” (“vee LEBT seeshs zoh FROE-leesh am GRUE-nen”). These people sing of their “princely enjoyment and manly employment” in another chorus whose arrangement for solo violin features in the Suzuki books.

ANSWER: **hunter**s [or **Jäger**en] (The latter *Hunters Chorus* is from *Der Freischütz*.)

<Classical/Opera, Will Alston>

18. This equation is equivalent to the Boltzmann transport equation without collisions because its derivation uses the ensemble averaged electric field to smooth out local effects. For 10 points each:

[10m] Name this equation that is often coupled with Maxwell’s equations to study plasma waves.

ANSWER: **Vlasov** equation [or **Vlasov–Maxwell** equations; accept **Vlasov–Poisson** equation]

[10h] When calculating the dielectric function from the linearized Vlasov equation, a contour integral is evaluated with this theoretical prescription, which is pithily summarized as: integrate below the pole at ω over k . This prescription was introduced by considering the Laplace transform of the problem and ensuring causality is satisfied.

ANSWER: **Landau** prescription [or **Landau** contour]

[10e] Landau damping is observed by solving the dispersion relation for this type of wave, which just sets the dielectric function to zero. Sound is this type of wave in which propagation is parallel to displacement.

ANSWER: **longitudinal** waves

<Physics, Jonathon Settle>

19. Taira no Kiyomori ordered the creation of one of these locations in Kobe called Kyogashima, which is near a more recently created one called Rokko. For 10 points each:

[10m] Identify these sorts of locations. Due to the *sakoku* policy, the only place where Dutch people were allowed to conduct business in Japan was a trading post found on one of these locations called Dejima.

ANSWER: **artificial islands** [or **man made islands**; prompt on **islands**]

[10e] Japan's oldest artificial island, Wakae ("wah-kai"), was built to facilitate trade in this city's Sagami Bay. This city names a government dominated by the Hojo clan which governed from the 12th through 14th centuries.

ANSWER: **Kamakura** [accept **Kamakura** shogunate]

[10h] This artificial island near Tokyo was built in 1853 to house a set of defenses against foreign ships. A non-musician Shinichi Suzuki pushed for the redevelopment of this island into "Teleport Town" in the 1980s and 90s, including building the "Rainbow Bridge" to connect it to Tokyo.

ANSWER: **Odaiba** (It is named for *daiba*, or forts.)

<World History, Will Alston>

20. The narrator of *In Search of Lost Time* first sees Odette de Crecy, she is described as a mysterious "Lady in" this color who has some form of relationship with her uncle Albert. For 10 points each:

[10m] Name this color. Roberto Calasso titled his study of Tiepolo after a phrase from Proust in which he compares Albertine's sleeves to Tiepolo's use of this color.

ANSWER: **pink** [accept Tiepolo **pink**, or Lady in **Pink**; prompt on **rose**]

[10e] Odette de Crecy makes her first appearance as "The Lady in Pink" in this volume. This first novel of the series includes an "overture" describing its narrator's youth in Combray.

ANSWER: **Swann's Way** [or **Du côté de chez Swann**; or **The Way of Swann**]

[10h] An oft-remarked passage from *Swann's Way* praises these plants for their "tips of ultramarine and pink," supposing that these plants' "celestial hues" revealed themselves as "delicious creatures who had merrily metamorphosed themselves into vegetables."

ANSWER: **asparagus**

<Misc. Lit, Will Alston>