

2022 Winter Closed

Co-Head Editors: Tim Morrison and Tejas Raje

Editors: Justine French, William Golden, Hasna Karim, Itamar Naveh-Benjamin, Hari Parameswaran, Jonathen Settle, Ethan Strombeck, Jon Suh, and Annabelle Yang

Writers: Jacob Egol, Ganon Evans, Natan Holtzman, Aseem Keyal, Rahul Keyal, Amogh Kulkarni, Steven Liu, Chauncey Lo, Douglas Meeker, and Kai Smith

Logistics: Aidan Leahy

Packet C

Tossups

1. **This adjective titles a 2006 study of Shakespeare by Gabriel Egan that builds on criticism by William Rueckert and Lawrence Buell. An author whose surname is a homophone of this word lambasted Shakespeare as an “upstart crow” in a tract titled for a *Groatsworth of Wit*. In *Hamlet*, Claudius states of the king’s death, “The memory be [this adjective].” Northrop Frye’s *Anatomy of Criticism* labels the archetypal setting of Shakespeare’s comedies this sort of “world.” After describing a (\*) concept with this adjective, a man says “That cuckold lives in bliss / Who, certain of his fate, loves not his wronger.” Cleopatra calls herself “[this word] in judgment, cold in blood” during her “salad days.” Othello is told to “beware” a concept described by this color “which doth mock the meat it feeds on.” For 10 points, Iago likens jealousy to a “monster” with eyes of what color?**

ANSWER: **green** [accept **green**-eyed; accept Robert **Greene**; accept **Green** World; accept **Green** Shakespeare]  
<R. Keyal, Drama>

2. **A joint declaration supporting this cause called the Three Doctors’ Pact was signed by Monty Naicker and Yusuf Dadoo. This cause was supported by communist politician Joe Slovo, one of many people charged with violating the Suppression of Communism Act in the 1956 Treason Trial. Slovo’s wife Ruth First wrote the book *117 Days* about her imprisonment for supporting this cause and was assassinated in a mail bombing ordered by Craig Williamson. One proponent of this cause was arrested at (\*) Liliesleaf Farm and gave the speech “I Am Prepared to Die” at the Rivonia Trial. The militant group Umkhonto we Sizwe (“oom-KON-toh way SEEZ-way”) supported this cause, many of whose proponents were imprisoned on Robben Island. For 10 points, name this cause supported by Nelson Mandela that involved ending a policy of legalized racial separation in South Africa.**

ANSWER: **anti-apartheid** [accept answers involving **opposition** to **apartheid**; prompt on **anti-racism** or similar answers that do not mention “apartheid”]

<Raje, World History>

3. **In one dialogue, this thinker acknowledged that, while water has no preference for flowing east or west, it certainly prefers to flow down rather than up. This thinker warned one ruler that seeking greatness by invading his neighbors was “like looking for a fish by climbing a tree.” This thinker chastised that same ruler for showing compassion to a sacrificial ox but not extending that compassion to his people. According to this thinker, humans ought to use their (\*) “heart-mind,” or *xīn* (“sheen”), to cultivate the four instincts that he called “seeds” or “sprouts.” This thinker used the example of a man who sees a child about to fall in a well to argue that human nature is basically good. This student of Zǐsī (“TZUH-suh”) wrote a namesake text considered one of the Four Books. For 10 points, name this Chinese philosopher who is called the Second Sage of Confucianism.**

ANSWER: **Mencius** [or **Mengzi** (“MUNG-tzuh”); or **Meng Tzu**; or Master **Meng**; reject “Micius” or “Mozi” or “Mo Tzu” or “Master Mo”]

<French, Philosophy>

4. Taking the Laplace (“luh-PLOSS”) transform of the equation governing this phenomenon produces a second-order transfer function. Of the two phenomena used to introduce action-angle variables, this phenomenon’s phase space trajectory is closed. The central potentials governing this phenomenon and inverse-square forces are the only two for which all bound orbits are closed by Bertrand’s theorem. This phenomenon reaches equilibrium in minimum time when a parameter denoted zeta is equal to one, where zeta is one over twice the (\*)  $Q$  factor. This phenomenon is described by the differential equation:  $m \ddot{x}$  equals negative  $kx$ . This kind of motion is produced from a potential energy proportional to the square of displacement. For 10 points, name this periodic motion described by Hooke’s law.

ANSWER: oscillation [or vibration; accept simple harmonic motion or SHO or SHM; accept driven damped harmonic motion or harmonic oscillation; accept libration; prompt on the motion of a spring or pendulum; prompt on a system with a linear restoring force; prompt on Hooke’s law motion until “Hooke’s” is read]  
<Liu, Physics>

5. A character in this musical shakes a tambourine while sitting on top of a grand piano in a song about a “magic shield of love.” In this musical, one character confesses how unfulfilling her marriage is in a song that ends, “I didn’t raise you to give away your days like me.” This musical’s protagonist, who often watches scenes unfold while behind a desk on the sidelines, was originated on Broadway by Beth Malone. A “small” version of this musical’s protagonist sings about a deliverywoman’s “short hair, dungarees, and lace-up boots” in (\*) “Ring of Keys.” Many scenes in this musical are preceded with the word “caption,” including one in which, after sleeping with Joan, the protagonist reflects on her gay father Bruce’s suicide and her newfound lesbianism. For 10 points, name this musical adapted from a graphic memoir by Alison Bechdel.

ANSWER: Fun Home  
<Lo, Other Arts>

6. This place locks “memory” in a “grey vault” with “your monuments, your battles, [and] martyrs” in a poem whose title says that this place “is history.” A bird called this place’s “swift” reminds a man of the “homesick shame / and pain of his Africa” in a poem by an author who was featured in Henry Swanzy’s BBC program on this place’s “Voices.” At the start of a long poem, tourists photograph trees being carved into canoes along this body of water by a sailor with a (\*) leg wound. The pilot of a “schooner beating up” this body of water is likened to “Odysseus / home-bound on the Aegean” in a poem that ends “The classics can console. But not enough,” titled for its “grapes.” A seven-book epic centers on two fishermen on this body of water who vie for Helen’s love and are named Achille (“ah-SHEEL”) and Hector. For 10 points, *Omeros* adapts Homer’s *Iliad* to Derek Walcott’s home of St. Lucia (“LOO-sha”), an island in what sea?

ANSWER: Caribbean Sea [or the Caribbean; accept Caribbean Voices; prompt on sea or “The Sea is History” or sea-swift or “Sea Grapes” by asking “which sea?”; prompt on Atlantic Ocean or the Atlantic]  
<R. Keyal, Poetry>

7. **Many workers preparing for one of these events were housed in a 100,000-person compound called Labour City. Prior to one of these events, many homeless people were forced to move to the “Tin Can City” to make way for the “Calabash.” One country has failed to assuage fears that attendees of another of these events will be forced to take the “GCC homosexuality test.” The (\*) kafala system was forced to undergo reform after reports of mistreated Nepalese workers preparing for one of these events were published. A 2015 *Onion* article about an impromptu one of these events was cited by Trinidadian politician Jack Warner in an attempt to show American hypocrisy. Chuck Blazer was arrested for bribes related to one of these events in 2010 that popularized the *vuvuzela*. For 10 points, Qatar is hosting the 2022 iteration of what global sporting event sponsored by FIFA?**

ANSWER: FIFA **World Cups** [prompt on sports or sporting events; prompt on soccer or football tournaments]  
<Parameswaran, Current Events>

8. **A pioneering invention in this initiative involved a wooden T-bar strung together by a spring-loaded brass wire. It’s not related to weapons, but facilities for this initiative were built on Gorodomlya Island thanks to Operation Osoaviakhim (“OH-so-AH-vee-ah-KEEM”). A mural depicting a shirtless man with his arms spread out horizontally greets visitors to this initiative’s most prominent facility, which also contains a memorial for the Nedelin (“ned-YELL-in”) disaster. After heading this initiative’s precursor, (\*) Sergei Korolev scouted for his country’s version of Operation Paperclip. Alexei Leonov was one of twenty people to train others for this initiative. Donald B. Giles reprogrammed the ILLIAC I (“ILL-ee-ack one”) computer to monitor the intermittent beeping noise produced by one of this initiative’s creations in 1957. For 10 points, name this program that launched the Vostok and Sputnik probes.**

ANSWER: **Soviet space** program [or **USSR space** program; or **Soviet satellite** program; or **Soviet space shuttle** program; accept descriptions of **Soviets sending people to space**; accept **Soyuz** program or **Buran** program; accept **Sputnik** program until “Sputnik” is read; accept **Vostok** program until “Vostok” is read; prompt on space program by asking “of what country?”; prompt on Soviet rocketry; reject “Russian space program” or “Roscosmos”]  
<Parameswaran, European History>

9. **One type of this condition is treated with “guideline-directed medical therapy.” The symptoms of this condition are graded as one of four NYHA (“N-Y-H-A”) classes. The presence of an S3 confers a positive likelihood ratio of 13 for this condition. Two types of this condition differ in a quantity calculated as EDV minus ESV, all divided by EDV. The formation of an AV fistula for dialysis can lead to a form of this condition characterized by “high output.” The major (\*) Framingham criteria for this condition include orthopnea, or shortness of breath when lying flat. Patients with this condition are broadly categorized as either having a preserved or reduced ejection fraction. If this condition involves dysfunction of the left ventricle, blood may back up into the lungs, leading to pulmonary edema. For 10 points, a buildup of fluid occurs in what “congestive” cardiac condition?**

ANSWER: congestive **heart failure** [or **CHF**; accept **heart failure** with preserved or reduced ejection fraction or **HFpEF** or **HFrEF**; prompt on heart disease until “NYHA” is read; reject “heart attacks”]  
<Naveh-Benjamin, Biology>

10. Chris Tomlin recorded a version of this song with a bridge that begins “My chains are gone.” According to the last verse of this song, “the earth shall soon dissolve like snow, the sun forbear to shine.” The opening lyrics of this song are quoted in the pre-chorus of “Broken Vessels” by Hillsong. This is the most famous song included in a collection named for the town of Olney, England, which its author wrote with the help of poet (\*) William Cowper (“cooper”). This song was written 25 years after its author survived a violent storm off the coast of Ireland while working on a slave ship. This song’s speaker claims that the title concept both relieved his fears and “taught [his] heart to fear” and describes himself as a “wretch” who “once was lost, but now [is] found.” For 10 points, name this Christian hymn by John Newton, which remarks “how sweet the sound” of the title concept. ANSWER: “**Amazing Grace**” [or “**1 Chronicles 17:16–17**, Faith’s Review and Expectation”]

<Suh, Religion>

11. The amplification of this property in polyisocyanates (“poly-iso-cyanates”) occurs via the “sergeants and soldiers” effect in which a few monomers with this property induce it in other monomers. A molecule with this property that exhibits a maximum in an ORD curve near an absorption band is said to display a positive Cotton effect. Compounds with this property are purified by using macrocyclic antibiotics as the stationary phase for HPLC. Light from a photoelastic modulator is differentially absorbed by a sample with this property in (\*) circular dichroism (“di-CROW-ism”) spectroscopy. Molecules with this property are classified as dextrorotatory (“dextro-rotatory”) or levorotatory (“levo-rotatory”) based on their optical activity. Compounds with this property exist as two enantiomers (“en-ANT-ee-oh-mers”). For 10 points, name this property of compounds that cannot be superimposed on their mirror images.

ANSWER: **chirality** [accept **optically active** or **optical activity** or **optical rotation** or **optical rotatory** until “optical activity” is read]

<Settle, Chemistry>

12. In *The Lost Painting*, Jonathan Harr wrote about the quest to find a painting titled after this figure that was attributed to Gerritt van Honthorst by the Mattei family. In a painting housed in the Brera gallery, an innkeeper’s wife appears behind this figure as he sits pensively and gestures upwards with his index finger. An old woman in a black habit, a younger woman holding a white handkerchief, and another woman hysterically (\*) raising her arms appear in a painting titled for this figure. A figure with a seashell on his tunic attempts to embrace this figure, who, in that painting, sits at the center of a dinner table. In a different painting, this figure points at a man counting coins who is illuminated by a lone window. For 10 points, name this subject of the *Supper at Emmaus* who picks one of his disciples in Caravaggio’s *The Calling of St. Matthew*.

ANSWER: Jesus **Christ** [or **Jesus** Christ] (The paintings are *The Taking of Christ* and *The Entombment of Christ*.)

<Parameswaran, Painting and Sculpture>

13. A businessman from this state sold a product depicting a raven feeding off of “Elijah’s Manna” as part of a disastrous PR campaign. Eccentric therapies practiced in a city in this state were fictionalized in the novel *The Road to Wellville*; those therapies were inspired by the Seventh-Day Adventists, who set up their first headquarters in this state. Celebrities such as Thomas Edison participated in the “biologic living” program at a (\*) sanitarium in this state’s city of Battle Creek, where industrialist C. W. Post founded his namesake cereal company. During World War II, this state’s River Rouge Plant manufactured bombers. A business founded in this state employed Taylorism in manufacturing a product that could be “any color so long as it’s black.” For 10 points, John Harvey Kellogg was from what state, whose early 20th-century automotive industry was spurred by Henry Ford?

ANSWER: **Michigan**

<Parameswaran, American History>

14. *Note to players: Specific terms acceptable but not required.* These objects float by the faces of a group of yōkai under a tree near a shrine at Oji in one of Hiroshige's ("hee-ro-SHEE-geh's") *One Hundred Famous Views of Edo*. In a *kaidan* ("kye-dahn"), one of these objects adorned with peonies ("PEE-uh-nees") accompanies the ghost Otsuyu when she visits her lover. Hokusai depicted a droopy-eyed, ghostly Oiwa as one of these objects confronting Iemon ("ee-AY-mohn") in one popular scene. Ashes and rice cakes can be thrown into the sea to placate the souls of the dead, or funayūrei, that appear as these objects. Sunshowers and processions of these objects mark the weddings of (\*) kitsune ("kit-SOO-neh"). Inoue Enryō ("ee-NO-eh EN-ryoh") attributed these objects to phosphorus reactions and compared them to similar marsh-dwelling European objects. During Tōrō Nagashi, these objects are set afloat on rivers to guide spirits of the dead. For 10 points, many regional Japanese stories describe variants of what objects exemplified by will-o'-the-wisps?

ANSWER: atmospheric ghost **lights** [or stone **lanterns**; or fox**fire**; or **will-o'-the-wisps** until read; or **jack-o'-lanterns**; or **ignis fatuus**; or **hinkypunks**; or **irrlight**; accept **chōchin**-obake; or **chōchin**-oiwa; accept **Tōrō** Nagashi until read; or Botan **Dōrō**; or kitsune**bi**; or **hitodama**]

<Yang, Mythology>

15. This character uses the French phrase "*faire la lessive*" ("fair la lay-SEEV") to refer to his habit of secluding himself for a day to address outstanding debts. This man halts an awkward discussion of a painting of Pilate ("pilot") and Christ to praise the artist's smaller painting of two boys fishing. While at a provincial election, this character receives a letter exaggerating his daughter's illness to get him to return home. Ashamed of his love, this character shoots himself in the chest, after which he departs for (\*) Italy with the protagonist. While distracted by news of a woman's pregnancy, this man breaks the back of his expensive horse in a racing accident. This cousin of Princess Betsy pursues a member of the Oblonsky family whom he meets at a train station after first flirting with Kitty. For 10 points, name this nobleman who has an affair with Anna Karenina.

ANSWER: Count **Vronsky** [or Count Alexei Kirillovich **Vronsky**; prompt on **Alexei** or **Alyosha**]

<Evans, Long Fiction>

16. This technique underscores an F minor version of a chorale-like passage whose first form was deemed "more like Haydn than church music." A jaunty oboe solo and challenging piccolo flourishes interrupt a movement that heavily features this technique and proceeds quasi *attacca* into a *fortissimo* F major chord. Descending eighth notes played using this technique accompany the second statement of Friar Laurence's theme in the *Romeo and Juliet Fantasy Overture*. This technique is used to play the opening chords before the celesta melody of "The (\*) Dance of the Sugar Plum Fairy." A scherzo ("SCARE-tsoh") played entirely with this technique in Tchaikovsky's Fourth Symphony alternates the use of the thumb and index finger, and ends with most of the orchestra reaching for their bows. For 10 points, name this technique in which a string instrument is plucked.

ANSWER: **pizzicato** [prompt on answers involving **plucking** strings until read]

<Egol, Classical Music>

17. *Krama* and *ngoko* exemplify Javanese's stringent enforcement of this phenomenon, which may explain why Bahasa Indonesia is supplanting Javanese. People employ verbal strategies named for this phenomenon when FTAs are likely, per Brown and Levinson's theory of it. Four axes for understanding this phenomenon pair speakers with bystanders, addressees, referents, and settings. Same-age friends may "drop speech" to (\*) *banmal*, shifting the amount of this sociolinguistic phenomenon in Korean, which stratifies it in seven ways. "V" pronouns denote more of this phenomenon and contrast with "T" pronouns, which were lost in most modern English dialects. In Spanish, "usted" and "tú" mark two different levels of this phenomenon, which is also marked by honorifics. For 10 points, name this linguistic phenomenon in which people show more or less respect in their speech.

ANSWER: **politeness** [or **formality**; or **familiarity**; or **respectfulness** until read; accept any description of different **levels** of **politeness**; accept **politeness** strategies; accept **honorifics** until read; prompt on **register**; prompt on **face**; prompt on **social distance**; prompt on **humility**]

<Karim, Social Science>

18. A seminal paper on this process introduced Larson's Laws, the second of which states that it occurs in regions in virial equilibrium. Recently, theories of this process have taken into account supersonic turbulence, which may explain why it occurs in regions with filamentary structure. The magnetically supercritical conditions required for this process are achieved when ambipolar diffusion increases the mass-to-flux ratio. The most used tracer of this process is the ground state rotational transition of CO. The rate of this process is related to (\*) gas surface density by the empirical Kennicutt-Schmidt law. At the end of this process, hydrostatic equilibrium takes hold and evolution along the Hayashi track begins. This process mostly occurs in giant molecular clouds. This process begins when gas in the ISM undergoes gravitational collapse. For 10 points, name this process that creates objects that fuse hydrogen.

ANSWER: **star formation** [accept descriptions of **star**s being **created**; prompt on gravitational **collapse** until read]  
<Settle, Other Science>

19. This book's narrator twice describes the "wine-stained and urine-splashed hallways" of his youth. The narrator of this book debates the feasibility of a separate twenty-billion-dollar economy after reflecting on the uselessness of a leader's phrase "protect your women." This book's narrator muses that, if the concept of God cannot make us freer, "then it is time we got rid of Him" amid a critique of organized Christianity. A dinner hosted by (\*) Elijah Muhammad inspires much of this book's criticism of the Nation of Islam. This book ends by quoting the line "God gave Noah the rainbow sign" from the spiritual from which this book takes its name. This book's first section inspired Ta-Nehisi ("tah-nuh-HAH-see") Coates's *Between the World and Me*. The essays "My Dungeon Shook" and "Down at the Cross" make up, for 10 points, what book on race relations by James Baldwin?

ANSWER: *The **Fire Next Time***

<A. Keyal, Misc. Literature>

20. A church based in this province remembered Christian persecution during Diocletian's reign as the "Era of Martyrs." Procopius claimed that a port in this province was the origin of Justinian's plague. Excavations at Kom el-Dikka in this province have unearthed well-preserved Roman mosaics. Followers of a theologian from this province held the so-called "Council of Robbers" to reaffirm the union of Christ's divine and human natures. This province's patriarch (\*) Cyril spurred mobs to kill Hypatia, who also worked in it. This province was the greatest source of grain for the Romans. To stamp out paganism in this province, Theodosius I had a temple dedicated to the syncretic god Serapis destroyed. Edward Gibbon attributes the destruction of this province's most famous learning institution to Theodosius. For 10 points, name this province where the Coptic Church was founded in Alexandria.

ANSWER: **Egypt** [or **Aegyptus**]

<Parameswaran, Other History>

Bonuses

1. Miraculously, this monastery's founder, Aidan, knelt in prayer to prevent a fire from ravaging Northumbria. For 10 points each:

[M] Name this island monastery of England that abandoned the Celtic Christianity practiced at Iona ("eye-OH-nuh") in favor of Roman Christianity. This monastery names an 8th-century illuminated manuscript of the Gospels.

ANSWER: **Lindisfarne**

[H] This Bishop of Lindisfarne attended the Synod of Whitby. This saint's body was discovered to have been uncorrupted ten years after his death, leading Durham Cathedral to become a pilgrimage site.

ANSWER: **Cuthbert**

[E] The Synod of Whitby also established the usage of Dionysian tables for calculating this holiday's date. The date of this holiday, which commemorates the resurrection of Jesus, was also discussed at the First Council of Nicaea.

ANSWER: **Easter** [or **Pascha**; or **Resurrection Sunday**]

<Raje, European History>

2. *Two answers required.* One of these types of chemical reactors is less flexible and generally smaller than the other type, which is preferred in the pharmaceutical industry. For 10 points each:

[H] Name these two types of reactors. The first type includes stirred-tank reactors, while "semi" examples of the other type allow the reactant to be added over time.

ANSWER: **continuous** reactors AND **batch** reactors [accept **flow** reactors or **continuous** stirred-tank reactors or **plug flow** reactors or **continuous** tubular reactors in place of "continuous reactors"; prompt on **CSTRs** or **CTRs** in place of "continuous reactors"]

[M] This condition applies to continuous, but not batch reactors. Michaelis–Menten kinetics are derived using this condition that assumes the time derivative of an intermediate's concentration is zero.

ANSWER: **steady state** [accept quasi-**steady-state** approximation or **Briggs–Haldane** approximation]

[E] Continuous reactors can handle more energetic reactions than batch reactors because they have better properties with respect to the transfer of this form of energy. The amount of this quantity required to change a sample's temperature equals the product of  $m$ ,  $c$ , and "delta  $T$ ."

ANSWER: **heat** [prompt on  $Q$ ]

<A. Keyal, Chemistry>

3. This character breaks off her betrothal to Simon to marry Erlend, who is later killed in a skirmish by a spear to the groin. For 10 points each:

[H] Name this character who moves back to her parents' farm after their death. This character leaves that farm to tend to the sick in a convent at the end of her last appearance.

ANSWER: **Kristin** Lavransdatter [prompt on **Lavransdatter**]

[M] This author chronicled medieval life in her historical trilogy about Kristin Lavransdatter, which consists of the novels *The Wreath*, *The Wife*, and *The Cross*.

ANSWER: Sigrid **Undset**

[E] Undset grew up in this country whose other authors have included Knut Hamsun and the playwright of *Hedda Gabler*.

ANSWER: **Norway** [or Kingdom of **Norway**; or Kongeriket **Norge**] (The playwright is Henrik Ibsen.)

<French, Long Fiction>



4. Answer the following about mensural (“MEN-sur-al”) notation, for 10 points each.

[E] Mensural notation developed to accommodate this complex musical texture that developed out of the organum. A mass by Giovanni Palestrina legendarily prevented a ban on this many-voiced musical texture.

ANSWER: **polyphony** [or word forms like **polyphonic**]

[H] This “white note” in mensural notation is often replaced by a half note when updating music to modern notation. Though obsolete, this note has double the duration of a whole note and its shape is either a wide rectangle or a whole note surrounded by two vertical lines in modern notation.

ANSWER: **breve** (“breev”) [or **brevis**; prompt on **double whole** note; reject “semibreve”]

[M] Mensural notation uses an empty circle to denote this meter, which was used in many Medieval and Renaissance sacred pieces for its supposed perfection. The sarabande is a slow dance in this meter.

ANSWER: **triple** meter [accept  $\frac{3}{4}$  (“three-four”) or  $\frac{3}{2}$ ; accept time signatures mentioning **three** beats]  
<Strombeck, Classical Music>

5. A series of seven tweets responding to the documentary *Kony 2012* begins “From Sachs to Kristof to Invisible Children to TED, the fastest growth industry in the US is” a complex named for this figure. For 10 points each:

[H] Name this figure who “supports brutal policies in the morning, founds charities in the afternoon, and receives awards in the evening” according to an “industrial complex” coined by novelist Teju Cole.

ANSWER: **white savior** [accept **white savior** industrial complex; prompt on **savior**; prompt on **white** person or equivalents]

[E] Cole continues by stating “The banality of evil transmutes into the banality of sentimentality,” riffing on this thinker’s book *Eichmann in Jerusalem*.

ANSWER: Hannah **Arendt**

[M] Cole expanded the tweets into an article for this publication, which later added “A Small Note” by its editor-in-chief Jeffrey Goldberg. Ta-Nehisi (“tah-nuh-HAH-see”) Coates left this publication in 2018.

ANSWER: *The Atlantic*

<R. Keyal, Other Academic>

6. The millionaire James Howe established a Madison Street college for these people where professors from the University of Chicago and Northwestern taught. For 10 points each:

[M] Name these people who popularized “mulligan stew” during the Great Depression.

ANSWER: **hobos** [prompt on the **homeless**; prompt on **tramps** or **bums**]

[H] Ben Reitman wrote the autobiography *Sister of the Road* about this fictional hobo, who recounts her experience freighthopping and meeting with labor leaders and gangsters. Her story was turned into a 1972 Martin Scorsese film.

ANSWER: Bertha **Thompson** [or **Bertha** Thompson; accept **Boxcar Bertha**]

[E] Hobos referred to their own communities with this term. The terrible conditions of Chicago’s Union Stockyards and the meatpacking industry are depicted in an Upton Sinclair novel named after one of these places.

ANSWER: **jungles** [accept *The Jungle*]

<Parameswaran, American History>

7. The 2021 winner of the John Bates Clark Medal, Isaiah Andrews, is known for his contributions to this economic subfield, including research into the use of weak instruments. For 10 points each:

[M] Name this subfield of economics whose tools include difference-in-difference and instrumental variables. Undergraduates who study this subfield may use an influential textbook by Jeffrey M. Wooldridge.

ANSWER: **econometrics** [prompt on **metrics**]

[H] This author of *Mostly Harmless Econometrics* co-wrote a paper with Alan Krueger that used quarter of birth as an instrument for schooling. With Victor Lavy, this MIT economist used Maimonides' rule to estimate the effect of class size.

ANSWER: Joshua **Angrist** [or Joshua David **Angrist**]

[E] Krueger and David Card used a difference-in-difference analysis to study the economic impact of changes in this quantity, which provides a price floor for the labor market.

ANSWER: **minimum wage**

<Suh, Social Science>

8. The open-source software Snort is used to build these systems. For 10 points each:

[H] Name these systems that monitor network traffic for attempts to compromise confidentiality, integrity, or availability. These systems are generally classified as either anomaly- or signature-based.

ANSWER: **intrusion detection** systems [or **IDS**; accept **intrusion prevention** systems or **IPS**; accept **breach detection** systems]

[M] An intrusion detection system, or IDS, can detect an adversary using nmap ("N-map") to scan these things, which are often analogized to apartment numbers or doors. HTTP conventionally uses one of these things with the number 80.

ANSWER: **ports** [accept **port** numbers]

[E] An IDS detects these things by monitoring interactive access on non-standard ports. The US government controversially asked Apple to create one of these mechanisms that give attackers unauthorized access to a system.

ANSWER: **backdoors**

<Settle, Other Science>

9. *Piers Plowman* is typically grouped with a loose 14th-century "revival" named for this literary device, which included an account of the death of King Arthur usually titled for this device. For 10 points each:

[H] Name this literary device that was used to join two half-lines divided by a caesura ("suh-ZHUR-uh") in most Old English poetry.

ANSWER: **alliteration** [or word forms such as **alliterative**; accept **Alliterative** Revival; accept **Alliterative Morte Arthure**]

[E] Alliteration was supplanted by this other technique, which names a prototypical 87-line poem found in the Exeter Book. This technique may be assigned "schemes" such as ABABA.

ANSWER: **rhyme** [or word forms such as **rhyming**; accept "The **Rhyming** Poem" or "The **Riming** Poem"; accept end **rhyme** or other forms of **rhyme**; accept **rhyme** scheme]

[M] This poet, who is often grouped with the Alliterative Revival, used a device called a "bob and wheel" consisting of a pair of stressed syllables and a rhyming four-line stanza. In a poem attributed to this unknown author, a grieving father sees a maiden named for the title object.

ANSWER: **Pearl** Poet [or **Gawain** Poet]

<R. Keyal, Poetry>

10. This group formed out of the Artel of Artists, which itself was started when 14 students walked out of a competition to paint “The Entry of Odin into Valhalla.” For 10 points each:

[M] Name this group of Russian artists who sought to paint scenes relevant to ordinary Russian life. This group’s members included Ilya Repin (“RAY-pin”), who depicted tattered men pulling a ship onto a sandbar in *The Volga Barge Haulers*.

ANSWER: The **Wanderers** [or **Peredvizhniki**; or The **Itinerants**]

[H] The works of The Wanderers were frequently exhibited at this Moscow gallery. Founded by brothers Pavel and Sergey, this gallery houses the most complete collection of Russian art, including Kazimir Malevich’s (“ka-zee-MEER mull-YEV-itch’s”) *Black Square*.

ANSWER: **Tretyakov** Gallery

[E] The Wanderers frequently painted members of this denomination, who are depicted carrying a gigantic cross in Kursk in a Repin painting. The Tretyakov Gallery also houses Andrei Rublev’s icons, religious paintings made by this denomination.

ANSWER: Eastern **Orthodox** [or Russian **Orthodox**; prompt on **Christianity**]

<Parameswaran, Painting and Sculpture>

11. Luis Alfaro’s 2013 play *Mojada* (“mo-HAH-dah”) reimagines this character as a seamstress who crosses the US–Mexico border to Los Angeles. For 10 points each:

[M] Name this character who is exiled from Aztlán (“az-TLAHN”) for loving La Luna in Cherrie Moraga’s (“sheh-REE mo-RA-ga’s”) play *The Hungry Woman*. An earlier play ends with this character riding away in a golden chariot pulled by dragons.

ANSWER: **Medea** (The play is *Medea* by Euripides.)

[E] Luis Alfaro’s Greek Trilogy also includes *Electricidad* and *Oedipus El Rey*, two plays inspired by this author of the Theban Trilogy.

ANSWER: **Sophocles**

[H] Sara Uribe’s (“oo-REE-bay’s”) prose poem *Antígona González* quotes from *Antígona Furiosa*, a play from this country. The audience witnesses a version of the Milgram experiment during a house tour in a site-specific play from this country, Griselda Gambaro’s *Information For Foreigners*.

ANSWER: **Argentina** [or **Argentine** Republic; or República **Argentina**]

<R. Keyal, Drama>

12. Ancient Chinese chronicles criticized the Lac people living in this river’s delta for their systems of matrilineal inheritance, which went against Confucian practice. For 10 points each:

[H] Name this river whose delta was home to the Đông Sơn (“dohng sun”) culture. The legendary Hồng Bàng dynasty ruled along this river.

ANSWER: **Red** River [or **Hong** River; or **Hóng** Hé; or **Sông** Hồng]

[E] These sisters became Vietnamese national heroines after rebelling against the invading Han Chinese in the 1st century CE.

ANSWER: **Trung** sisters [or **Trung** sisters; accept **Trung** Trắc or **Trung** Nhi]

[M] Centuries later, the 15th-century law code of this dynasty gave more generous inheritance rights to women than the Tang Code it was based on. This dynasty’s founder expelled the Ming from Vietnam.

ANSWER: **Lê** Dynasty [or Primal **Lê**; or Hậu **Lê** triều Hán tự; or nhà Hậu **Lê**; accept Later **Lê** or Revival **Lê**; accept **Lê** Lợi]

<Raje, World History>

13. Restoration of Notre-Dame Cathedral is well underway after a fire destroyed its roof and spire in 2019. For 10 points each:

[M] Workers have removed more than 300 tons of scaffolding surrounding the spire, which collapsed onto this part of the cathedral. This central area of the church is where worshippers sit.

ANSWER: **nave**

[E] To raise funds for the rebuilding process, donors can “adopt” one of these stone objects. These carved depictions of mythical creatures are designed to direct water away from the cathedral.

ANSWER: **gargoyles** [or **grotesques**; or **chimerae**]

[H] The last major restoration of Notre-Dame before the fire was led by this man, who championed the Gothic Revival style popular in the 19th century.

ANSWER: Eugène **Viollet-le-Duc** (“oo-JEN vee-oh-LAY luh dook”) [or Eugène Emmanuel **Viollet-le-Duc**]  
<Golden, Other Arts>

14. Theravada Buddhists believe the Buddha engaged in this practice, as evidenced by the contents of an offering from the smith Cunda. For 10 points each:

[H] Name this practice that is permissible for Theravada monks because they must regularly beg for alms. This practice is permissible for those monastics when a three-fold rule for purity is met.

ANSWER: **eating meat** [accept **carnivory** or equivalents]

[E] In contrast, many monastic adherents of this other branch of Buddhism do not eat meat. This “Greater Vehicle” emphasizes the Bodhisattva path and “skillful means” described in texts like the *Lotus Sutra*.

ANSWER: **Mahayana** Buddhism

[M] In addition to meat, five vegetables are widely avoided in East Asian Buddhist cuisine because they are believed to increase sexual desire when eaten cooked, and increase anger when eaten raw. Name any *two* of these vegetables.

ANSWER: **garlic** OR **onions** OR **leeks** OR **scallions** OR **shallots** [accept any two answers]

<Yang, Religion>

15. The types of this phenomenon are distinguished by the angular divergences between primordia, the spacing of primordia along the apical–basal axis, and the number of organs simultaneously initiated. For 10 points each:

[H] Name this regular arrangement of a plant’s leaves and flowers that most often takes the form of a Fibonacci spiral.

ANSWER: **phyllotaxis** (“fill-oh-tax-is”)

[M] Regulation of organ initiation from this type of plant tissue gives rise to phyllotaxis. This type of tissue contains undifferentiated, totipotent cells.

ANSWER: **meristem** [or **meristematic** tissue; accept apical **meristem** or intercalary **meristem** or basal **meristem** or lateral **meristem** or primary **meristem** or secondary **meristem** or ground **meristem**; accept **protoderm** or **procambium** or **vascular cambium** or **cork cambium**]

[E] The apical meristem differentiates into the procambium, which in turn forms this vascular tissue in plants. This tissue’s tracheids (“TRAY-kee-ids”) and vessel elements transport water.

ANSWER: **xylem**

<Settle, Biology>

16. This position resolves the problem of temporary intrinsics, which asks how the same object can have different properties at different times. For 10 points each:

[H] Name this philosophical position that includes both worm theory and stage theory. According to this position, objects that persist through time have distinct temporal parts.

ANSWER: **perdurantism** (“per-DUR-un-tism”) [or **four-dimensionalism** or **perdurance** theory; prompt on **exdurantism**; reject “endurantism”]

[M] The problem of temporary intrinsics is sometimes framed in terms of a law named for this thinker, which states that objects with different properties cannot be the same thing. This thinker attacked Newton’s absolute view of space and time in a correspondence with Samuel Clarke.

ANSWER: Gottfried Wilhelm von **Leibniz** (“LYBE-nitz”)

[E] David Lewis introduced the problem of temporary intrinsics to support perdurantism in a book titled for the “plurality” of these things. Leibniz argued that the best possible one of these things is the one we live in.

ANSWER: **worlds** [or **mondes** or **Welten**; accept possible **worlds** or *On the Plurality of **Worlds*** or the best of all possible **worlds** or *le meilleur des **mondes** possibles* or *Die beste aller möglichen **Welten***]

<Kulkarni, Philosophy>

17. The oil platform Piper Alpha exploded over this body of water in 1988. For 10 points each:

[E] Name this body of water where oil drilling has been extremely lucrative for the United Kingdom and Norway. Rotterdam, Europe’s largest seaport, is located on this body of water.

ANSWER: **North** Sea

[M] Much of Norway’s oil revenues is put into one of these entities, referred to as the Government Pension Fund. Kuwait was the first to establish one of these entities with a three-word name.

ANSWER: **sovereign wealth funds** [or **SWFs**]

[H] Many oil workers on the North Sea travel to it via this British port, sometimes known as the “oil capital of Europe.”

ANSWER: **Aberdeen**

<Parameswaran, Geography>

18. In this author’s only mystery novel, a young man obsesses about killing and scalping white people, though no actual crimes are depicted. For 10 points each:

[E] Name this Native American author of *Indian Killer*. He is better known for the collection *The Lone Ranger and Tonto Fistfight in Heaven* and the novel *The Absolutely True Diary of a Part-Time Indian*.

ANSWER: Sherman **Alexie**

[M] Joe Coutts investigates his mother’s rape near a reservation in this author’s mystery novel *The Round House*. This author depicted the lives of five Ojibwe (“oh-JIB-way”) families in her novel *Love Medicine*.

ANSWER: Louise **Erdrich** [or Karen Louise **Erdrich**]

[H] Chickasaw writer Linda Hogan wrote the mystery novel *Mean Spirit* about murders of Osage (“OH-sayj”) people in 1920s Oklahoma after an oil boom, which was also the subject of this nonfiction book by David Grann.

ANSWER: ***Killers of the Flower Moon***

<Raje, Misc. Literature>

19. Answer the following about the “history of mentalities,” a genre that examines trends in attitudes of ordinary people, for 10 points each.

[M] The genre of “history of mentalities” was popularized by Marc Bloch, the founder of this French school of historiography. Its “second generation” included Fernand Braudel.

ANSWER: ***Annales*** (“ah-NAHL”) school

[E] In a “history of mentalities” by Robert Darnton, he examines how 1730s Parisians killed these animals as practical jokes. Their “black” variety were believed to be familiars of witches and thus associated with bad luck.

ANSWER: **cats** [accept *The Great Cat Massacre*]

[H] This author wrote a “history of mentalities” titled *The Autumn of the Middle Ages*, which examines the escapism of courts in the Low Countries through the literary and artistic works produced there.

ANSWER: Johan **Huizinga** (“housing-uh”)

<Parameswaran, Other History>

20. This scientist founded the informal Olympia Academy with Conrad Habicht and Maurice Solovine three years before authoring the *annus mirabilis* papers. For 10 points each:

[E] Name this scientist who won the 1921 Nobel Prize in Physics for his explanation of the photoelectric effect.

ANSWER: Albert **Einstein**

[H] Some historians of science argue that this woman provided significant assistance to Albert Einstein’s *annus mirabilis* papers. Einstein gave this woman his Nobel Prize money per their 1919 divorce agreement.

ANSWER: Mileva **Marić** (“MAH-rich”) [or Mileva **Marić**-Einstein or Mileva **Marity**]

[M] Einstein published the *annus mirabilis* papers while living in this country. Einstein worked at a patent office with his friend Michele Besso in this country.

ANSWER: **Switzerland** [or **Swiss Confederation**]

<Settle, Physics>