

**2024 IQBT National All-Star Academic Tournament
Round 1 – Tossups**

1. A metaphor by this author compares a river that rises up in a flood and then recedes to a stream to the extent that people should contemplate the nature of leadership. A passage by this author is about a herald who cannot leave an extremely large palace after being entrusted with an emperor's dying message. The narrator of a story by this author relates how the title structure was built piecemeal to protect from northern nomads. The posthumous publication of this author's story "The Great Wall of China" was overseen by Max Brod. A novel by this author, which contains the parable "Before the Law," begins when two unnamed government agents arrest the bank worker Josef K. For 10 points, name this Czech author of *The Trial*.

ANSWER: Franz **Kafka**

Category: Literature - Not British or American- Any European

2. This organization's code of ethics calls for "purity of arms," inspired by one of its predecessors' strategy of "restraint." This organization uses a policy of "disproportionate force" against infrastructure according to the Dahiya doctrine. Until 2016, this organization had a policy of preventing kidnappings "by all means" possible, including death, known as the Hannibal Directive. Supporters of this organization called it the "most moral army in the world." This organization opened fire on people trying to obtain humanitarian aid in the flour massacre. Whistleblowers revealed that this organization tortured prisoners at the Sde Teiman ("sed-ay te-mann") detention camp. This organization rescued four hostages in a raid on Nuseirat. For 10 points, name this national military of Israel.

ANSWER: **Israel Defense Forces** [or **IDF** or **Tzahal**; prompt on descriptions of the Israeli military or Israeli army until "Israel" is read; prompt on Israeli Defense Forces which is a promptable description but not the actual name]

Category: Current Events - World Canada/Aus/NZ/Misc

3. The god Ullr ("ooh-LUR") carved spells into one of these objects to allow him to sail on it like a boat. These objects belonging to a horse are the first thing Grettir the Strong notices in the place where he fights the undead Karr the Old. After his death, these objects of Ymir formed the mountains of the Earth. Loki persuades Thjalfi ("thyahl-VEE") to damage one of these objects during a meal, which results in him and his sister accompanying the trickster on his journey to face Utgard-Loki. The breaking of one of these objects belonging to Thor's goats causes it to end up with a limp after being resurrected. For 10 points, name these objects that were broken for those goats to reach the marrow inside.

ANSWER: **bone** [or specific bones like **skull**; prompt on limbs like legs with "what objects in them?"]

Category: Mythology - Norse/Germanic

4. Random numbers were generated by shuffling playing cards as part of an early computational model of this process conducted by Nils Aall Barricelli. Stuart Kauffman introduced a model that originally described this process in which "K" represents "ruggedness," called the NK model. A tighter condition was added to the definition of Nash equilibria by John Maynard Smith to describe a "stable strategy" named for this process. Many modern models are based on Motoo Kimura's neutral theory of this process's "molecular" form. This process is often modeled as movement toward the local optimum of a "fitness" or "adaptive" landscape. For 10 points, what biological process names a type of computation inspired by natural selection?

ANSWER: evolution [or evolving; or evolves; or evolutionary computation; or evolutionarily stable strategy; or molecular evolution; prompt on natural selection before read]

Category: Science - Biology ecology/evolution

5. A ruler with this name was served by the nobleman Pandulf Ironhead, who lost two sons in battle against Emir Abu'l-Qasim. A ruler with this name gave away a replica of the Holy Lance at the Congress of Gniezno ("guh-nyez-no"). A ruler with this name swam to a Greek merchant ship for safety after losing the Battle of Stilo to a Muslim army from Sicily. After escaping from imprisonment by Berengar II, Adelaide of Italy married a ruler with this name. A ruler with this name arranged for his son to marry the Byzantine princess Theophanu, spurring his namesake "Renaissance." That ruler with this name defeated the Magyars at the Battle of Lechfeld and was crowned by Pope John XII in 962. For 10 points, give this name of a German king widely regarded as the first Holy Roman Emperor.

ANSWER: Otto [or Otto I; or Otto the Great; or Otto II; or Otto the Red; or Otto III; or Ottonian Renaissance]

Category: History - European Germany 477-1750

6. A book titled for this genre features a chimeric demon who hides in a black cloud each night before being shot down by an arrow. That book titled for this genre includes an "Initiates' Book" that discusses the initiation of an Empress into a Buddhist convent after her son drowns. In a book titled for this genre, an infant princess from the moon is found inside a stalk by an old man. This genre titles narratives "of the Heike ("high-kuh")" and "of the Bamboo Cutter." A character marries the daughter of the Minister of the Left in a novel titled for this genre, whose title character is banished to Suma after an affair with a concubine. Lady Aoi's ("ah-OH-ee's") husband courts Lady Utsusemi and Lady Fujitsubo in a novel whose title is named after, for 10 points, what genre "of Genji"?

ANSWER: tales [or monogatari; or stories; or *The Tale of Genji*; or *The Tale of the Bamboo Cutter*; or *Tale of the Heike*; or *Genji Monogatari*; or *Taketori Monogatari*; or *Heike Monogatari*; prompt on novels or epics or prose narratives or legends]

Category: Literature - Not British or American- Any Non-European

7. Susie Scott argued that locations described by this word allow people to pursue "Reinvented Identities." Locations described by this word alter people's personality through the process of resocialization, inducing conformity through reward and punishment. This word modifies the fertility rate that gives the expected number of children a woman will have. Marcel Mauss likened "entire social systems" to "social facts" described by this word. Orphanages, cloisters, and jails are among the "institutions" Erving Goffman described by this word. Social scientists have studied the effects of unrestricted weapons use in a type of "war" named for this word. For 10 points, what word meaning "complete" or "absolute" names an autocratic "-ism" similar to authoritarianism?

ANSWER: **total** [or **total** institutions; or **total** fertility rate; or **total** social facts; or **total** prestation; or **totalitarianism**; or **total** war]

Category: Social Science - Sociology

8. During this war, Dona Jesus Dosamentes "unsexed" herself to disguise herself as a captain of one side. The Revolt of the Polkos began after church land was nationalized during this war. Luis Gonzaga Cuevas helped negotiate the treaty that ended this war, which was followed up by territorial concessions in the Treaty of Mesilla ("meh-SEE-yah"). A force in this war attempted to use "La Vomito," or yellow fever, to weaken a force that later killed the "Six Heroes." John Riley led the Saint Patrick's battalion during this war. The winning side in this war took Chapultepec Castle after it was reinforced by Antonio Lopez de Santa Anna. For 10 points, name this war that was ended by the Treaty of Guadalupe Hidalgo, which was fought against America's southern neighbor.

ANSWER: **Mexican-American War**

Category: History - World Mexico

9. This piece extensively uses the motif of a descending major ninth where the second note is accented in a bergamask dance, sometimes called the "Dance of Clowns." This piece opens with a series of whole-note woodwind chords in E major that progressively expand in range. A melody beginning "C, B, short F sharp - A" follows a trumpet fanfare in a movement of this piece. Bassoons accompany the horn melody in a nocturne from this piece that follows the song "what hempen homespuns." This piece borrowed music from its composer's earlier concert overture on the same subject that imitates the braying of Bottom and contains a famous wedding march. For 10 points, name this piece composed to accompany a Shakespeare play, by Felix Mendelssohn.

ANSWER: Incidental Music to A ***Midsummer Night's Dream*** [or Felix **Mendelssohn**'s **opus 61**; or Concert Overture to A ***Midsummer Night's Dream***; Felix **Mendelssohn**'s **opus 21** before "concert"]

Category: Arts - Audio - Academic music non-opera 1750-1880

10. The axial current, which is more commonly named for this property, is conserved if there is this sort of symmetry but is not conserved in the Adler-Bell-Jackiw ("JACK-iv") anomaly. A Lorentz-invariant quantity with this name equals helicity for massless particles. The discovery that an interaction had this property resolved the tau-theta puzzle. The beta decay of cobalt-60 has this property, as proven by Chien-Shiung Wu. Because it has this property and violates charge conjugation symmetry, the decay of neutral kaons ("KAY-ons") violates CP symmetry. Molecules with this property have nonzero optical activity and rotate the polarization of light. For 10 points, what property of objects that cannot be superimposed on their mirror images can be used to define handedness?

ANSWER: **chirality** [or word forms like **chiral**; or **parity violation** or word forms; or **CP symmetry violation** or word forms until "CP" is read; or **chiral** symmetry; or **chiral** current; or **chiral** anomaly; prompt on symmetry violation or asymmetry]

Category: Science - Physics particles/HE

11. John Francis Appleby made his fortune by developing a device for harvesting this crop. Oliver Dalrymple and the Grandin Brothers owned "bonanza farms" that produced this crop. Facilities that primarily stored this crop were modernized by an invention by Joseph Dart. Mennonite immigrants from Russia introduced the Turkey Red variant of this crop to the US. The Confederacy's primary center of production for this crop was Shenandoah Valley. Regulations on facilities that primarily stored this crop were the subject of the cases *Wabash v. Illinois* and *Munn v. Illinois*. Innovations like the McCormick reaper significantly increased this crop's production, primarily cultivated in the Great Plains. For 10 points, name this crop processed into flour.

ANSWER: **wheat** [prompt on grain]

Category: History - US economic/labor

12. Unlike other exceptions to the Madelung rule, this element has exactly zero electrons in its valence s-orbital. This element is poisoned by barium sulfate in the Rosenmund reduction. The Fleischmann-Pons experiment attempted to catalyze cold fusion with an electrode of this element since it adsorbs nearly 1,000 times its volume in hydrogen at room temperature. Rhodium, platinum, and this element are used in catalytic converters. Negishi, Suzuki, and Heck won the 2010 Nobel Prize for their work on cross-coupling reactions catalyzed by this element. This element is poisoned in a catalyst that hydrogenates alkynes ("al-KINES") to alkenes ("al-KEENS") named for Herbert Lindlar. For 10 points, name this transition metal with an atomic number of 46 and chemical symbol Pd.

ANSWER: **palladium** [or **Pd** until mention]

Category: Science - Chemistry mixed or misc or any non-organic

13. A memoir titled *Life with [this artist]* written with Carlton Lake recounts how he blacklisted a former partner among art dealers to ruin her art career. A hiatus from painting in this artist's fifties led to his poetry collection named *The Burial of the Count of Orgaz*. This artist was inspired by an Afghan hound to create a 50-foot-tall sculpture located in the Chicago Loop. He depicted a firing squad firing at nude children and women in his *Massacre in Korea*. A woman wearing a red tutu sits apart from other circus performers in this artist's *Family of Saltimbanques*. A work by this artist depicts a flower growing by the hand of a dead man who still holds a sword, as well as a screaming woman holding a dead baby below a bull. For 10 points, name this painter of *Guernica*.

ANSWER: Pablo Picasso [or Pablo Ruiz Picasso] [The first line refers to Françoise Gilot.]

Category: Arts - Visual - Painting 1851-1945

14. A fisherman with this condition tells a proud maiden who paced "by the nets on the pebbly shore" that "you are not so fair." In a poem titled for this condition, the speaker says that only "one man loved the pilgrim soul in you, and loved the sorrows of your changing face." Love fled "and hid his face amid a crowd of stars" in a poem titled for this condition based on a Ronsard sonnet. The speaker claims that "my circus animals were all on show" until this condition set in. A poem titled for this condition imagines Maud Gonne "grey and full of sleep." A man with this quality "is but a paltry thing, a tattered coat upon a stick" in "Sailing Towards Byzantium." For 10 points, W. B. Yeats wrote about how "that is no country" for men with what quality?

ANSWER: being old [or being aged; or being elderly; or "The Meditation Of The Old Fisherman"; or "When You Are Old"; or "an aged man"; or "no country for old men"]

Category: Literature - British poetry non-Shakespeare

15. Practitioners of this religion symbolically cut open a doorway with a white-handled knife also used for cooking. In this religion, the athame ("uh-THAW-may") is purified after being touched by others. A text from this religion is copied and modified by each successive owner; that text, which includes the chant Eko Eko Azarak, is the Book of Shadows. Initiates in this religion raise a cone of power during an esbat ("ESS-bat"). Like Thelema ("thuh-LEMMA"), this religion instructs "do what ye will," a principle known as its Rede ("reed"). The Wheel of the Year structures this religion's seasonal festivals, which were popularized by Gerald Gardner. This religion's two major deities are the Triple Goddess and the Horned God. For 10 points, covens practice witchcraft in what neopagan religion?

ANSWER: Wicca [or Wiccan; prompt on The Craft; prompt on witchcraft before mention; prompt on neopaganism before mention]

Category: Religion - Misc/Other/Cross Belief/Theology/Practice Non-literature

16. A form of this quantity is defined as the number of small balls needed to cover the information contained in a larger ball and is named after Patrice Assouad. A form of this quantity is defined as the limit of the ratio of the logarithm of the number of boxes to the logarithm of one over the size of the boxes. The rank-nullity theorem compares different values of this quantity for vector spaces. This quantity is the log of 3 divided by the log of 2 for the Sierpinski triangle. Felix Hausdorff is the namesake of a form of this quantity, which is often non-integer for fractals. This quantity is the minimum number of coordinates needed to uniquely define a point. For 10 points, name this quantity that is one for a line and two for the plane.

ANSWER: dimension [or fractal dimension; or Assouad dimension; or Minkowski dimension; or upper box-counting dimension; or Hausdorff dimension]

Category: Science - Math beyond calculus curriculum

17. The protagonist of a story by this author helps his friend Elvis realize that he isn't the father of his mistress' son. Another story by this author ends with the instructions to "put the government cheese back in its place before your mom kills you." Beli sees a faceless man waving at her before discovering she is pregnant with the Gangster's child in a novel by this author, who is known for his characteristic second-person point-of-view. This author's story "How to Date a Brown Girl" and collection *This is How You Lose Her* are narrated by a recurring character who describes a fukú curse inflicted by Rafael Trujillo. Yunion de las Casas was created by, for 10 points, what author of *The Brief and Wondrous Life of Oscar Wao*?

ANSWER: Junot Díaz

Category: Literature - American any genre by a nonwhite author

18. During a blizzard in 1922, a theater of this name in Washington, DC, collapsed, killing 98 people in the deadliest disaster in the city's history. It's not "banker," but the Panic of 1907 is sometimes called the panic of these people. A baseball team of this name founded by Alexander Cartwright in 1845 formalized 20 eponymous rules that helped codify the modern game of baseball. A character of this surname was held to have gone missing before the publication of an 1809 "history" that popularized his baggy-kneed pants. That character of this surname is the purported author of Washington Irving's *A History of New York*. For 10 points, give this term for the semi-legendary aristocracy of New Netherland, which also lends its name to a New York basketball team.

ANSWER: knickerbocker [or knicks; or Diedrich Knickerbocker]

Category: Misc/Cross - Misc/Other/Cross Academic

19. An eight-count dance from this country that translates as "old style" employs "low to the ground" footwork and emphasizes the accented "batter." A "long dance" from this country starts with a row of men facing a row of women. This is the westernmost of two countries where women dancers wear rawhide shoes called pampooties. With an eastern neighbor, this country's dancers employ pairs of lines called heys in a dance called ceili ("KAY-lee"). Lord of the Dance was created in this country after Michael Flatley left one that put on jigs and reels. The bodhrán ("bow-RAN") and uilleann ("IL-yen") pipes accompany dances from this country put on by Riverdance. For 10 points, name this country whose dances may date back to a celebration in County Cork.

ANSWER: **Ireland** [Republic of **Ireland**; or **Éire**; or Poblacht na h**Éireann**]

Category: Arts - Misc - Ballet/Dance

20. According to Aristotle, this leader came to power a decade after the Alcmeonidae family helped put down the revolt of Olympian Cylon. This man was the earlier of two leaders to have proclamations etched onto tablets that pivoted around a four-sided pyramid. According to the *Suda*, this leader died at the theater after suffocating under clothing that the crowd threw on him out of praise. A debtor whose social status was below that of his creditor was forced into slavery under laws enacted by this leader. The right for a victim's relatives to punish a murderer was the only legislation introduced by this leader not to be repealed by Solon. For 10 points, name this Athenian leader whose name became an adjective for very strict rules.

ANSWER: **Draco** [or **Dracoian**]

Category: History - Classical Greek/Hellenistic

21. A small cloud in this shape can form when a fast-moving object lowers the temperature of the surrounding air. Heinrich Hertz studied how small objects moving through a solid produce these shapes. Kruskal-Szekeres ("KRUSS-kull SEH-keh-resh") coordinates undo the general relativistic distortion of these shapes. One over beta equals the half-angle of one of these shapes created by Cherenkov radiation. The edges of these shapes on Minkowski diagrams show events that can be reached by a light ray. The shock wave created by a sonic boom makes one of these shapes named for Ernst Mach. Intersecting one of these shapes with a plane can generate any Keplerian orbit. For 10 points, ellipses and hyperbolas are examples of what shape's namesake "sections?"

ANSWER: **cones** [or vapor **cones**; or Hertzian **cones**; or light **cones**; or Mach **cones**; or **conic** sections]

Category: Science - Physics any

22. In a story by this author, Ernest searches for someone who resembles a rock formation to fulfill a prophecy, only for a poet to realize Ernest resembles it. The title character of a story by this author declares, "I shall have built my monument!" before he and the family he visits are killed by a rock slide. This author of "The Great Stone Face" and "The Ambitious Guest" wrote a story in which Aminadab helps Aylmer ("ALE-mur") create an elixir to remove the title hand-shaped feature from Georgiana. The protagonist of a story by this author meets a man with a serpent-shaped staff while walking through the woods before seeing Goody Cloyse and his wife Faith at a witches' sabbath. For 10 points, name this author of "The Birthmark" and "Young Goodman Brown."

ANSWER: Nathaniel Hawthorne

Category: Literature - American short fiction

23. A portrait by this artist has a lily pond border containing the words "crane" and "frog," which serve as double entendres alluding to the woman's job as a courtesan. This artist used a sky of deep ultramarine as the background of his portrait of Eugène Boch as *The Poet*. This artist sent a portrait of himself with a pale green background as part of an exchange with Émile Bernard. This artist displayed his collection of prints by depicting Mount Fuji in the background of his portrait of the straw hat-wearing Julien Tanguy. Hokusai's *Great Wave* may have inspired swirls in a painting showing this artist's view of cypress trees from an asylum near Saint-Rémy. For 10 points, name this Dutch artist of *The Starry Night*.

ANSWER: Vincent van Gogh [Vincent Willem van Gogh]

Category: Arts - Visual - Painting 1701-1850

2024 IQBT National All-Star Academic Tournament
Round 1 – Bonuses

1. The Stone of the Pregnant Woman is a massive monolith found in a city named after this deity. For 10 points each:

[10] Name this deity who holds a spear-shaped thunderbolt with a plant-like shaft in a stele discovered by Claude Schaeffer. The North African Sanctuary of Tophet was dedicated to this deity and his consort.

ANSWER: **Baal** [or **Ba'al**; or **Baal** Hadad; or **Baalbek**; or **Baal** Hammon]

[10] *Baal with Thunderbolt* was excavated from this Syrian city whose final ruler was Ammurapi. The *Baal Cycle* was found in this city.

ANSWER: **Ugarit**

[10] Ugarit was one of the cities destroyed in a 12th century BC "collapse" during the late part of this age that followed the Stone Age.

ANSWER: **Bronze** Age [or Late **Bronze** Age; or **Bronze** Age Collapse]

Category: History - Archaeology

2. Federico Garcia Lorca's concept of *duende* inspired this poet's collection of the same name. For 10 points each:

[10] Name this Harvard professor who was the US poet laureate from 2017 to 2019. This poet wrote the collection *Life on Mars*.

ANSWER: Tracy K. **Smith**

[10] The memory of Smith's late father inspired a poem from *Life on Mars* titled for these things. W. H. Auden's "Funeral Blues" says these things "are not wanted now" and tells the reader to "put out every one."

ANSWER: **stars** [or "My God, It's Full of **Stars**"] [Smith's father worked on the Hubble Space Telescope.]

[10] Smith translated the collection *My Name Will Grow Wide Like a Tree* into English despite not speaking this language. Ezra Pound created a version of *The River Merchant's Wife* even though he did not speak this language.

ANSWER: **Chinese** [or **Hànyǔ**; or **Zhōngwén**; or **Mandarin** Chinese; or Classical **Chinese**]

[*My Name Will Grow Wide Like a Tree* is by Yi Lei.]

Category: Literature - English-language by women

3. In a black-and-white photograph, a woman standing in one of these locations stares towards the right while her left hand gestures at a dropped bag. For 10 points each:

[10] Name this location, the setting of a pioneering piece of video art by Martha Rosler. That artwork is titled *Semiotics of [this location]*.

ANSWER: kitchens [or *Semiotics of the Kitchen*]

[10] This photographer used kitchens as the setting of the untitled 3rd and 84th photographs in her best-known series, which depicts unnamed women in costume. This photographer also created the *Bus Riders* and *Centerfolds* series.

ANSWER: Cindy Sherman

[10] Sherman's best-known series subverts depictions of women in this art form. Laura Mulvey critiqued how the "male gaze" depicts subjects such as Greta Garbo in this popular art form.

ANSWER: films [or cinema; or movies; or *Untitled Film Stills*; or *Visual Pleasure and Narrative Cinema*]

Category: Arts - Visual - Photography or fashion/design or misc visual

4. This company announced an early attempt at a curated Internet service environment in 1983, which largely did not come to fruition. For 10 points each:

[10] Name this manufacturer of the Aquarius home computer. Its electronics division achieved more success providing accessories to its Barbie and Hot Wheels toy lines.

ANSWER: Mattel

[10] The Aquarius used this 8-bit processor introduced in 1976, which powers most third-generation gaming consoles and is still used in TI graphing calculators. Zilog announced that the manufacture of this processor will end in June 2024.

ANSWER: Zilog Z80

[10] Mattel chose the CP1600 for this game console, controlled with a numeric keypad and a circular "control disc." Its lauded games included *Baseball* and *Demon Attack*.

ANSWER: Intellivision

Category: Misc/Cross - History of science & technology

5. A pioneering outdoor depiction of this scene was located at the top of a stairway in the Convent of San Marco. For 10 points each:

[10] Name this scene. An angel with colorful wings is framed by an archway in Fra Angelico's depiction of this scene.

ANSWER: the Annunciation

[10] This artist included a pickle and an apple in his painting of the Annunciation, which shows a beam of light entering Mary's forehead from a UFO-like object.

ANSWER: Carlo Crivelli

[10] Crivelli's *Annunciation* is with Emidius, one of these figures. Crivelli's other depictions of these figures for the Ascoli Piceno include Lucy holding her eyes on a plate and Jerome with a tiny lion by his feet.

ANSWER: saints [or Saint Emidius; or Saint Lucy; or Saint Jerome]

Category: Arts - Visual - Painting pre-1500

6. In a system undergoing this kind of rotation, a radially displaced parcel oscillates at the epicyclic frequency. For 10 points each:

[10] Name this kind of rotation that leads to a "winding problem" that motivated Lin and Shu's density-wave theory. This form of rotation creates shear forces because the rotation rate varies throughout a fluid.

ANSWER: differential rotation

[10] Differentially rotating systems should be unable to maintain this shape, leading to the "winding problem." The Orion Arm is a component of one of these shapes.

ANSWER: spirals

[10] The differential rotation rate of the Sun's convective envelope can be measured by observing these cold regions on its surface.

ANSWER: sunspots

Category: Science - Astronomy non space geo

7. One of these groups took its name from the psychiatric diagnosis exempting young men from compulsory military service, DG 307. For 10 points each:

[10] Name these groups. The dissident Mejla ("MAIL-uh") Hlavsa founded one of these groups in Czechoslovakia, popular among so-called máničky ("maan-ITCH-key").

ANSWER: rock bands [or underground rock bands; or alternative rock bands; or psychedelic rock bands; prompt on bands or music groups by asking, "In what genre did they perform?"]

[10] This fan of Hlavsa's band, The Plastic People of the Universe, helped draft Charter 77 after the band's arrest. This politician later succeeded Gustáv Husák as president.

ANSWER: Václav Havel

[10] Havel claimed he was inspired to run for president by the music of a band named for this material, fronted by Lou Reed. Czechoslovakia's peaceful 1989 revolution and 1992 "divorce" were also named for this fabric.

ANSWER: velvet [or The Velvet Underground; or Velvet Revolution; or Velvet Divorce]

Category: History - European Not France/Germany/Russia 1901-present

8. While in this situation, a character starts thinking about dinosaurs, and realizes his death "would be a deliberate loss to earth of good material." For 10 points each:

[10] Describe the situation which, in a climatic scene of *A Pair of Blue Eyes*, Henry Knight finds himself in before he is rescued with the help of Elfride's underwear.

ANSWER: hanging on a cliff [or cliffhanger; or similar descriptions; prompt on being in danger or dying]

[10] This author's novel *A Pair of Blue Eyes* is the origin of the term "cliffhanger." He set novels like *Far from the Madding Crowd* in a fictionalized Wessex.

ANSWER: Thomas Hardy

[10] In this novel, Sarah Woodruff takes solitary walks along the cliffside after she is shunned by the residents of Lyme Regis. This John Fowles novel ends in its own unique way by giving the reader multiple endings to pick from.

ANSWER: The French Lieutenant's Woman

Category: Literature - British fiction

9. This particle's "sombrero potential" allows its field to take on nonzero values everywhere. For 10 points each:

[10] Name this "god particle" which confers mass on other particles through its namesake mechanism.

ANSWER: Higgs boson [or Higgs mechanism]

[10] The 1964 PRL papers that first theorized the Higgs boson used the fact that this physicist's theorem requires spin-zero particles to be produced by spontaneous symmetry breaking.

ANSWER: Jeffrey Goldstone [or Nambu-Goldstone bosons]

[10] The Higgs boson's mass, which cannot be calculated from the Standard Model, was discovered to be around 125 billion of these units. The mass of fundamental particles is typically reported in this unit prefixed by "kilo-," "mega-," or "giga-."

ANSWER: electronvolts [or eV; or kiloelectronvolts or KeV; or megaelectronvolts or MeV; or gigaelectronvolts or GeV; or any of the previous answers divided by c squared]

Category: Science - Physics particles/HE

10. This philosopher analyzed three spheres of right in *Elements of the Philosophy of Right*. For 10 points each:

[10] Johann Fichte's terminology of thesis, antithesis, and synthesis is often wrongly used to explain what German idealist philosopher's dialectic?

ANSWER: Georg Wilhelm Friedrich Hegel

[10] Hegel's three spheres of right are abstract right, morality, and this right to family life and participation in civil society under the State. You may give the original German name or a two-word English translation.

ANSWER: sittlichkeit ("ZITT-lish-kite") [or ethical life; or ethical order]

[10] The *Philosophy of Right* argues that even the State is subordinate to the "world" form of this concept. Hegel's lectures on this concept introduced the term "Volksgeist."

ANSWER: history [or world-history; or *Lectures on the Philosophy of* History]

Category: Philosophy - 1601-1900

11. Two of these characters, who are given the names Flapper and Raspberry, are studied by the protagonist of a novella who determines they write using chains of semagrams with no linear sequence. For 10 points each:

[10] Name these characters in a novella whose language is studied by Dr. Gary Donnelly.

ANSWER: heptapods [prompt on aliens]

[10] Louise Banks deciphers Heptapod A and Heptapod B in this novella by Ted Chiang. In this novella, which inspired the movie *Arrival*, Louise feels little regret for giving birth to her daughter despite knowing she will tragically die.

ANSWER: Story of Your Life

[10] The theme of *Story of Your Life* derives in part from the introduction of this novel, in which Billy Pilgrim travels through time and witnesses the firebombing of Dresden.

ANSWER: Slaughterhouse-Five

Category: Literature - American short fiction

12. In a retelling from *A Wonder-Book For Girls and Boys*, Nathaniel Hawthorne added a now-oft-repeated tragedy regarding this figure's daughter. For 10 points each:

[10] Name this figure from Greek myth who, in Hawthorne's version, accidentally turns his daughter to gold.

ANSWER: Midas

[10] Sheila Murnaghan highlighted how Hawthorne's retelling of this Greek myth downplays its severity as a child-like mistake. The original version of this myth centered on a *pithos*, which Erasmus mistranslated in his retelling.

ANSWER: Pandora's Box [or answers describing the myth of Pandora opening the jar or box]

[10] Hawthorne's retelling of Circe's story has Odysseus request that this figure be changed back to a human along with his men. This first king of Latium was turned into a woodpecker by Circe.

ANSWER: Picus

Category: Mythology - Greek/Roman

13. A "language of symbols and formulas" used in this activity was developed by Joculator Basiliensis, who reduced math and music to a common denominator. For 10 points each:

[10] Name this activity that is studied by Plinio Designori in the country of Castalia. This activity is almost banned by Pope Pius XV in a novel mostly written during the 1930s.

ANSWER: the glass bead game [or glasperlenspiel]

[10] Joseph Knecht becomes "Magister Ludi," or master of the game, in this author's novel *The Glass Bead Game*.

ANSWER: Hermann Hesse

[10] Mirroring Hesse's views, Fritz Tegularius in *The Glass Bead Game* is a representation of this person, as opposed to Father Jacobus, or Jakob Burckhardt. Hesse's novel *Peter Camenzind* contrasts the ethics of this person with those of Saint Francis of Assisi.

ANSWER: Friedrich Nietzsche

Category: Literature - Not British or American- German

14. This organism is thought to have lived in hydrothermal vents between 3.5 to 3.8 billion years ago. For 10 points each:

[10] Name this organism. This single-celled organism is known to have enzymes like DNA polymerase due to its presence in all modern organisms.

ANSWER: **Last Universal Common Ancestor** [or **LUCA**; or **cenancestor**; prompt on descriptions]

[10] LUCA is thought to have produced acetyl-CoA using this pathway, in which two carbon dioxide molecules are fixed in parallel using CO dehydrogenase and acetyl-CoA synthase.

ANSWER: **Wood-Ljungdahl** pathway [or **reductive acetyl-CoA** pathway; or **WL** pathway]

[10] These graphs represent evolutionary relationships between ancestors and descendants. Branch points on these diagrams represent where lineages split from each other.

ANSWER: **phylogenetic tree** [or **evolutionary tree**; or **phylogeny**; prompt on tree of life; prompt on chronogram; prompt on dendrogram; prompt on phylogram; reject "cladogram"]

Category: Science - Biology ecology/evolution

15. This ruler's sons take turns to tell him wondrous stories in a papyrus discovered by Henry Westcar. For 10 points each:

[10] Name this ruler who shipped stone from Tuva for a building project. Herodotus claimed this ruler forced his daughter into prostitution and demanded that she be paid in blocks of limestone.

ANSWER: **Khufu** [or **Cheops**]

[10] This official described the transport of limestone blocks to Giza, where they might have been used to clad Khufu's pyramid. Papyri containing this man's diary were excavated in 2013 by Pierre Tallet.

ANSWER: **Merer** [or Diary of **Merer**]

[10] This statue at Giza depicts a half-animal, half-lion figure. Napoleon was falsely accused of breaking this statue's nose with a cannonball.

ANSWER: **Sphinx** [or Great **Sphinx** of Giza]

Category: History - World Ancient Egypt

16. Answer the following about things Japan has tried to counter deflation, for 10 points each.

[10] By reducing this quantity, Japan decreased the cost of borrowing money. The Bank of Japan finally raised this quantity above zero in 2024.

ANSWER: **interest** rates [or **federal funds** rate]

[10] When reducing interest rates didn't work, Japan pioneered the use of this policy, in which a central bank buys financial assets to increase liquidity.

ANSWER: **quantitative easing** [or **QE**; prompt on monetary policy]

[10] The Bank of Japan's interest rate targets are done in reference to this part of the money market. The rate in this market tends to be the lowest rate at which banks lend.

ANSWER: **overnight** market

Category: Social Science - Economics

17. This composer's *Grand, Grand Festival Overture* includes parts for four rifles, three vacuum cleaners, and a floor polisher. For 10 points each:

[10] Name this English composer of sets of four Cornish, Irish, Scottish, and Welsh dances. This composer wrote a concert suite based on his score for *The Bridge on the River Kwai*.

ANSWER: Malcolm Arnold [Sir Malcolm Henry Arnold]

[10] This composer's experimental piece *Water Walk* calls for household appliances like a pressure cooker and bathtub. The pianist sits silently in front of the piano in this composer's 4'33".

ANSWER: John Cage [John Milton Cage Jr.]

[10] "Noise-making" instruments commonly found in the home, such as milk bottles and typewriters, appear in a surrealist Leonide Massine ballet set to music by this composer based on a Jean Cocteau setting.

ANSWER: Erik Satie [the ballet is *Parade*]

Category: Arts - Audio - Academic music non-opera 1881-present

18. In 2016, archaeologists unearthed the remains of women at a location numbered 72 near this site, disproving it was only accessible to men. For 10 points each:

[10] Name this settlement where women overwhelmingly domesticated crops near timber circles called Woodhenge.

ANSWER: Cahokia

[10] These burial locations, one of which included 72, include effigy examples exemplified by the Great Serpent in Ohio.

ANSWER: burial mounds [or tumulus; or tumuli]

[10] Archaeological evidence suggests women played a large role in the construction of mounds by this American Southwest culture around its settlement of Snaketown. This culture built the most complex canal system in the pre-Columbian era.

ANSWER: Hohokam

Category: History - US women's

19. Ambrose Crowley discovered a place with this characteristic whose characteristic landmarks are Mount Charles and Prince George Point. For 10 points each:

[10] Name this characteristic of locations such as Pepys Island. One place with this characteristic supposedly discovered by James Cook was covered by black pixels on Google Maps until 2012.

ANSWER: **phantom** islands [or descriptive answers indicating they are islands that **don't exist**]

[10] The phantom island Isle Phelipeaux was most likely a duplication of Isle Royale ("royal") located in this body of water, the largest freshwater lake by surface area in the world.

ANSWER: Lake **Superior**

[10] A fata morgana most likely led Benjamin Morrell to spot a land he dubbed "New South Greenland" in this sea. The Ellsworth Mountains are near this dangerous sea where Ernest Shackleton's *Endurance* froze.

ANSWER: **Weddell** Sea

Category: Geography - Australia/NZ/Oceania

20. The Unsold approximation explains this interaction in terms of ionization energies. For 10 points each:

[10] Name this interaction. The attractive term of the Lennard-Jones potential describes this interaction.

ANSWER: London **dispersion** forces [or **dispersion** forces; or **London** forces; or **LDF**; prompt on van der Waals forces; prompt on intermolecular forces or IMF]

[10] While London dispersion forces dominate in nonpolar molecules, this interaction is dominant in molecules that contain its namesake element and an electronegative donor. This intermolecular force is responsible for cohesion and adhesion in water.

ANSWER: **hydrogen bonding** [or **H bonding**]

[10] The dispersion force between two molecules is proportional to this quantity, explaining why larger molecules have stronger dispersion forces. This quantity measures how easily electrons can be redistributed in the presence of an external electric field.

ANSWER: electric **polarizability** [prompt on alpha; reject "polarization"; reject "magnetic polarizability"]

Category: Science - Chemistry physical

21. Horse manure and the microclimate created by this place caused the "pink of the fields" mushroom to be cultivated in the 1800s. For 10 points each:

[10] Name this place to which bones from the Holy Innocents cemetery were transferred, stabilizing a sinking city.

ANSWER: **Paris catacombs** [or **Catacombs of Paris**; or **Catacombes de Paris**]

[10] People with this hobby installed an underground movie theater and bar in the Paris catacombs. Catacombs are a major target for people with this hobby, whose name is concatenated to urbex.

ANSWER: **urban exploration**

[10] In this city's Capuchin Catacombs, cadavers would be moved to a storage shelf if the corpse's family stopped paying a subscription. This city is home to a hunting lodge called the Zisa.

ANSWER: **Palermo**

Category: Geography - Europe

22. John A. Burns was the first member of this party to be elected Governor of Hawai'i. For 10 points each:

[10] Name this party, which experienced a namesake revolution in 1954, where it won a majority in Hawai'i's Territorial Legislature over the Republicans.

ANSWER: **Democratic** Party [or **Democrats**]

[10] This Democrat, elected to the legislature in 1954, later became Hawai'i's first representative in Congress after it gained statehood. Before Kamala Harris, he was the highest-ranking Asian American politician in US history.

ANSWER: Daniel **Inouye** [Daniel Ken **Inouye**]

[10] Many of the Democrats elected in 1954, including Inouye, were veterans of this regiment in World War II. This unit was mostly composed of Nisei and used the motto "Go For Broke."

ANSWER: **442nd** Infantry Regiment

Category: History - US political/government 1865-present