

TOSSUPS

1. An 18th-century tale in this language about an evil stepmother who banishes an “incomparable prince” has been billed as its only “pre-exile” novel. A demonic horde inspired a poet in this language to compose an ecstatic dohā about drinking beer, one of his *Hundred Thousand Songs*. A murderous translator from this language’s “Renaissance” of 950 to 1200 CE inspired *The All-Pervading Melodious Drumbeat*, which typifies its *namtar* genre of hagiographies (“hag-ee-ographies”), like *Sky Dancer* and *The Life of Milarepa*. This language’s “dream-taught bards” originated a million-line poem about a godling who wins a horse race to become King of Ling. The Wylie system can transliterate this language’s *Epic of King Gesar* and its Nyingma (“neeng-MAH”) funerary text about three liminal states of rebirth. For 10 points, the *Bardo Thodol* is nicknamed what language’s “Book of the Dead”?
ANSWER: **Tibetan** [or **bod**; accept **Tibetic** languages, **Bodish**, **Dzongkha**, **Bhutanese**, **Dbus-gtsang skad**, **Ü-tsang kä**, **Khams**, **Khamké**, **A-mdo**’i skad, **Amdolese**, **Balti**, **sbal ti**, **Chöke**, **Lha-sa**’i skad, **Lhaséké**, **Lasägä**, or Classical **Tibetan**; accept **Tibetan Book of the Dead** or **Tibetan Book of Living and Dying**] (Tshe ring dbang rgyal wrote *The Tale of the Incomparable Prince*. The other biographies concern Ra Losatwa and Yeshe Tsoygal.)
<World Literature>

2. While making this series, the artist’s father forgot to refocus a telephoto lens, which led to its Pictorialist-like entry showing a figure wading through a stream. Rows of wine glasses are reflected in a mirror in a photo from this series set at a liquor cabinet in a closet. An entry in this series shows a woman in a plaid skirt facing away and waiting with a suitcase by the side of the road. A 1995 MoMA exhibit of this series was sponsored by Madonna after the museum bought its 69 eight-by-ten glossies from Metro Pictures. Robert Longo’s apartment is the setting of the narrative first six entries of this series, which preceded the large-format color *Centerfolds* series. In its twenty-first entry, skyscrapers loom behind a low-angle close-up of a “working girl.” For 10 points, noir movies inspired what self-portraits by Cindy Sherman?
ANSWER: **Untitled Film Stills** [accept **Untitled Film Still** #21 or **Untitled Film Still** #38 or **Untitled Film Still** #49 or **Untitled Film Still** #96; prompt on **Untitled**]
<Other Fine Arts>

3. Multiplying x to the three-halves power by this function, then expanding out and integrating, gives rise to the value [read slowly] “[emphasize] *plus* wavelength cubed divided by [pause] 4 root 2 times a numerical factor” for the coefficient B2 (“B-two”). An integral of the product of this function with another function can be approximated using the Sommerfeld expansion, as exemplified by integrating this function times the density of states to find the carrier concentration. This function becomes a step function in the limit of absolute zero, because its denominator includes the exponential of “epsilon minus mu all over kT ,” all [emphasize] *plus* one. This distribution’s maximum value is 1, corresponding to the Pauli exclusion principle. For 10 points, what distribution describes particles with half-integer spin, in contrast to the Bose–Einstein distribution?
ANSWER: **Fermi–Dirac** distribution [or **Fermi–Dirac** statistics; prompt on **logistic** function or **sigmoid** function]
(The numerical factor in the first line is the spin multiplicity.)
<Physics>

4. This empire's mercantilist "peace party" led parliament after the queen mother deposed a king who planned a Quranic code and skipped Odwira's *adae* rituals. This empire's law against revealing ancestry regulated debt pawns recorded by C. C. Reindorf's Basel Mission. Ivor Wilks credited a meritocratic revolution to this empire's first elected king, who reformed its *kotoko* council after his predecessor was impeached for losing the Battle of Atakpamé. Around 1700, this empire's founder began the "great oath" sworn by confederate *amanhenes* of Juaben and Mampong. A history of this empire's kings written from the Seychelles by Prempeh I does not mention the priest Okomfo Anokye instilling the sacred Sika Dwa with *sunsum* after it fell from the sky during a war with Denkyira ("den-CHEER-uh"). For 10 points, Osei Tutu I unified what Akan empire with Kumasi's Golden Stool? ANSWER: **Asante** Empire [or **Ashanti** Empire, **Asante** Kingdom, **Asante** Confederacy, or **Asanteman**; accept **Asantehene**; accept **Kumasi** Kingdom or **Kumasihene** until "Kumasi" is read] (Clues include the Asantemanhyiamu assembly, the destoolings of Osei Kwame and Kusi Obodom, Asantehemaa Konadu Yaadom, the enslaved awowa class, and Osei Kwadwo's bureaucratic reforms.)

<World History>

5. This phenomenon was the subject of a festival where sages juggled flaming objects all night, the *Simchat Beit Ha-Sho'vevah* ("seem-HOT bait ha-sho-eh-VAH"). The obscure angel "Af-Bri" ("off-BREE") controls this phenomenon per a prayer that is replaced by the *Morid Ha-Tal* ("mo-REED ha-TALL"). Honi the Circle-Maker gained his epithet by drawing circles to cause this phenomenon and then complaining about it. Joel's prediction of a "latter" form of this phenomenon names charismatic movements led by Joseph Mattsson-Boze and Charles Parham. The central prayer of Shemini Atzeret ("sh'MEE-nee aht-SEH-ret") asks God, "for the sake of the Patriarchs," not to withhold this phenomenon, which allows one to [emphasize] *not* sleep in a *sukkah* during Sukkot ("soo-COAT"). A covenant that this phenomenon would not return formed after a dove returned with an olive branch. For 10 points, name this phenomenon that lasted 40 days and 40 nights during the biblical Flood.

ANSWER: **rain** [or **geshem**; or **rain**storms or **showers** or **downpours**; accept **snow**; accept latter **rain**; prompt on **water**, **floods**, **deluges**, **inundations**, **dew**, or descriptions of drawing **water** from a well by asking "what phenomenon created the water?"; prompt on **weather** or **precipitation** or **storms**]

<Religion>

6. *Description acceptable.* A man whose name means this action asks, "Is there no thunder left" and remarks that "when thunder claps, heaven likes" his actions. A pirate's son named Hoffman disguises himself as Otho to perform this action in a play by Henry Chettle. In a play subtitled for the "honest man's" instance of this action, Montferrers unusually counsels Charlemont [emphasize] *against* it. A character named for this action forces a man to watch as his bastard son Spurio cuckolds him. That character, whose name means this action in Italian, tricks the Duke into kissing Gloriana's poisoned skull. A play titled for this action was long considered to be by Cyril Tourneur but is now attributed to Thomas Middleton. Seneca's tragedies inspired this action's namesake genre of violent English plays. For 10 points, Hamlet spends his play deliberating whether to take what action?

ANSWER: **revenge** [or synonyms such as **vengeance** accept **Vindice** or *The Revenger's Tragedy*; accept **vendetta** or **feud**; accept descriptions of **kill**ing in response to a crime or **wrong**; prompt on **kill**ing or equivalents by asking "for what purpose?"]

<British Literature>

7. An artist with this surname finished a smooth landscape of the Andalusian hills of Yegen at her home in Tidmarsh Mill. That Bloomsbury associate with this surname painted an Impressionist profile portrait of E. M. Forster and a portrait of Lytton Strachey (“LIT-un STRAY-chee”) reading in bed. The main 2022 Venice Biennale (“bee-en-NAH-lay”) exhibition honored an artist with this surname whose childhood at the Gothic mansion Crookhey Hall led her to call her father “Lord Candlestick” in many paintings. An artist with this surname painted a figure with a “moonlike face,” golden wheat-like hair, and geese flying out of her white cape in *The Giantess (The Guardian of the Egg)*. A triple-breasted hyena appears in a self-portrait by an artist with this surname that features a rocking horse inside and a white horse outside. For 10 points, give this surname of a British Surrealist named Leonora.

ANSWER: **Carrington** [accept Leonora **Carrington** or Mary Leonora Carrington; accept Dora **Carrington** or Dora de Houghton **Carrington**] (The Biennale exhibition was titled *The Milk of Dreams*. The self-portrait by Leonora Carrington is *Self-Portrait (Inn of the Dawn Horse)*.)

<Painting & Sculpture>

8. Riots in this city led William Scholefield to create a permanent police force, replacing ad hoc groups appointed by improvement commissioners like Sampson Lloyd II. In this city, R. W. Dale opposed Forster’s Education Act to defend Nonconformists. Municipal activism in this city followed the Civic Gospel, whose originator George Dawson was a founder of the National Education League. The original “gas-and-water socialist” was a mayor from this city, where Thomas Attwood led an underconsumptionist school of economics and founded its namesake “Political Union” to campaign for the Reform Act of 1832. The father of Austen and Neville Chamberlain was a mayor of this city, whose Lunar Society led the “Midlands Enlightenment.” For 10 points, the iron industry of what second-largest city in England inspired the name of a city in Alabama?

ANSWER: **Birmingham** [accept **Birmingham** Enlightenment, Lunar Society of **Birmingham**, **Birmingham** Political Union, or **Birmingham** School] (Sampson Lloyd II was the founder of Lloyds Banking Group. The mayor was Joseph Chamberlain.)

<European History>

9. Five questions about this condition make up the abridged IIEF survey. Decreased risk of death and of this condition drove adoption of a nerve-sparing surgery developed by Peter Walsh. Second-line treatments for this condition include alprostadil and injections of Bimix or Trimix, while first-line options can tint vision blue. Brantley Scott pioneered treating this condition with an IPP implant with a reservoir. TURP can cause this condition by damaging parasympathetic nerves. This condition can be evaluated with a duplex ultrasound after intracavernosal injection of papaverine. Smoking may cause this condition by reducing nitric oxide availability. This condition is treated by sildenafil citrate, a PDE5 inhibitor. This condition and incontinence are common side effects of prostate removal. For 10 points, name this condition treated by Cialis and Viagra.

ANSWER: **erectile dysfunction** [or **ED**; accept **impotence** or **impotent**; prompt on **sexual dysfunction**] (TURP is transurethral resection of the prostate.)

<Biology>

10. 15 of these entities are called “modal aspects” in the Neo-Calvinist thought of Herman Dooyeweerd (“DOY-uh-vaïrd”), who adopted the notion of their “sovereignty” from Abraham Kuiper (“KYE-per”). Giotto’s *Kiss of Judas* illustrates the “interfacial intimate” type of these “air conditioning” entities in a series that analyzes their micro, macro, and plural types. Before writing about “transnationalizing” these entities in the post-Westphalian world, Nancy Fraser analyzed how they exclude “subaltern counter-” ones in a paper on “Rethinking” this sort of entity. These entities title a trilogy by Peter Sloterdijk (“SLOH-ter-dike”). A book argues that one of these entities stopped merely representing courtly authority thanks to “culture-debating” spaces like salons and coffee-houses. For 10 points, Jürgen Habermas studied the “structural transformation” of the “public” one of what realms of social life? ANSWER: **spheres** [or **Sphären**; or public **spheres**; accept **publics** or **publicity** or “subaltern counter**publics**” until “public” is read; accept **Öffentlichkeit**; accept *The Structural Transformation of the Public **Sphere***, *Strukturwandel der Öffentlichkeit*; **Sphere**s trilogy, “Rethinking the Public **Sphere**,” or **sphere** sovereignty; prompt on social spaces, bubbles, globes, arenas, or discursive spaces] <Philosophy>

11. *Note to moderator: Read the answerline carefully. Note to players: Description acceptable.* The painter Hedda Sterne encouraged the use of these artworks, which include depictions of animals inspired by the creator’s lover Silvia Reinhardt and her black poodle. A character makes one of these artworks depicting a yellow-shaded figure falling “softly as a tree falls” in front of two hills, then reproduces it in the next chapter without that figure and calls it “the loveliest and the saddest landscape in the world.” After three failed attempts, the frustrated narrator creates one of these artworks depicting a box with three air holes that he claims contains a sheep. Adults mistake one of these artworks for a depiction of a hat, but the title character recognizes it as a boa constrictor swallowing an elephant. For 10 points, identify these artworks made by a pilot in a novella by Antoine de Saint-Exupéry (“SAN-teg-zew-pay-REE”). ANSWER: **illustrations** in *The Little Prince* [accept **watercolors**, **paintings**, **drawings**, or **art** in place of “illustrations”; accept *Le Petit Prince* in place of “*The Little Prince*”; accept **illustration** by the narrator of *The Little Prince*, the pilot in *The Little Prince*, the protagonist of *The Little Prince*, or equivalents; prompt on **illustrations**, **paintings**, **drawings**, or **art** by Antoine de Saint-Exupéry by asking “from what literary work?”; reject “drawings by the Little Prince” or equivalents] <European Literature>

12. This movement is the last track on a 1968 Deutsche Grammophon recording by Henryk Szeryng (“SHAIR-ing”), who also performed it at the end of a 1975 live recording in Ascona. A piano arrangement of this movement has a chorale-like major-key section marked “*quasi Tromboni*.” A version of this movement ends Brahms’s five studies for piano left-hand. This movement begins with a long minor triad, then the note A, and then the chord “D, G, B-flat, E.” Busoni’s BV B 24 is a piano arrangement of this piece, which consists of 64 iterations of a four-bar progression that moves from D minor to A7. This solo piece takes about 15 minutes to play, making it by far the longest track on the debut album of a 17-year-old Hilary Hahn, for whom it is an unofficial signature piece. For 10 points, name this last movement of the Second Partita for solo violin by J. S. Bach. ANSWER: J. S. **Bach**’s **chaconne** (“sha-KUN”) [or the **chaconne** from Johann Sebastian **Bach**’s Partita No. 2 for solo violin; accept **Bach**–Busoni **chaconne**; accept **chaconne** after “Bach” is read; accept **BV B 24** until read; prompt on **Partita No. 2** for solo violin; prompt on **BWV 1004**; prompt on **chaconne** by asking “by which composer?”; prompt on **Busoni**’s **chaconne** until “Busoni’s” is read by asking “based on which composer?"] <Classical Music>

13. *Description acceptable.* The optimal choice for this quantity maximizes the Caliński–Harabasz (“kah-leen-skee hahr-ah-bash”) index. Chinese restaurant processes increment this quantity at each step with a probability that depends on the alpha parameter of the Dirichlet (“deer-ih-CLAY”) distribution. A good value for this quantity gives a high average silhouette score and evenly proportioned silhouette plots. Agglomerative approaches to building a hierarchy decrease this quantity at each step, as shown on dendrograms. This quantity can be selected by finding an “elbow” on plots of WCSS versus it. This quantity is selected as an input to, and lends its name to, an algorithm whose name ends in “plus plus,” which outperforms Lloyd’s algorithm and iteratively updates Voronoi cell centroids. For 10 points, name this quantity symbolized “*k*” in an unsupervised learning algorithm named for choosing “*k* means.”

ANSWER: **number of clusters** [accept **number of partitions**; accept **number of tables** after “Chinese” is read; accept **number of centroids** until “centroids” is read; accept **number of means** until “means” is read; accept descriptions of **how many clusters** or **how many partitions**; prompt on *k* until read] (WCSS is the within-cluster sum of squares. Lloyd’s algorithm is improved upon by *k*-means++.)

<Other Science>

14. William Leonard Pickard used a former facility for these devices near Wamego (“wah-MEE-goh”) to make most of America’s LSD in the 1990s. These devices were rated at “Mount Olympus” near Roi-Namur, which fishermen occupied in 1982 to demand compensation from Project Nike. The Safeguard program protected a line of these devices that debuted at facilities named for Malmstrom and Warren and inspired historic sites near Grand Forks and Wall. A museum near Tucson showcases a line of these devices that was canceled due to a Damascus, Arkansas “broken arrow” incident. Redstone’s ABMA (“A-B-M-A”) developed these devices even before the Gaither Report and the Kennedy campaign stoked fears of their namesake “gap” compared to the Soviet Union. For 10 points, what devices, often with “intercontinental” range, were stored in Minuteman silos or launched from “cruise” systems?

ANSWER: **missiles** [accept cruise **missiles**, intercontinental ballistic **missiles**, **ICBMs**, anti-ballistic **missile**, **ABMs**, **guided** weapons, **missile** silos, **V-2**, **Titan II**, **Atlas**, or Nike **Zeus**; accept **Minuteman** until read; prompt on **rockets** by asking “used in what devices?”; prompt on thermonuclear weapons, **nukes**, **warheads**, **explosives**, payload, **ballistic** systems, **weapons** of mass destruction, **WMDs**, or **payload**; reject “bombs” or “bombers”]

<American History>

15. This property is “extravagantly prized” by Amhara people per Donald N. Levine, who called modern thinking a “flight from” it and studied its use in *gene* (“KEN-eh”) poetry in *Wax and Gold*. Else Frenkel-Brunswik argued that authoritarian personalities exhibit an intolerance of this property that is a common cognitive distortion in anxiety disorders. Pauline Boss coined a term for this type of “loss,” which causes “frozen grief” by preventing emotional closure. German-speaking countries rank high on a measure of “avoidance” of this property that serves as one of Hofstede’s cultural dimensions. Social situations with this property may elicit negative interpretation bias. Illusory images with a visual form of this property cause multistable perception of reversible figures like the duck–rabbit. For 10 points, what property is denied by black-and-white thinking?

ANSWER: **ambiguity** [accept **uncertainty**, **nuanced**, **unclear**, **lack of clarity**, or synonyms; accept **ambiguous** images, situational **ambiguity**, **ambiguous** loss, **ambiguity** tolerance, intolerance of **ambiguity**, **uncertainty** avoidance, or *The Flight from Ambiguity*; prompt on **ambivalence** or **ambivalent**; prompt on **TA** or **UAI** by asking “what does that stand for?”; reject “risk”]

<Social Science>

16. This element and helium were used as NMR aromaticity probes for rings without internal hydrogens before the development of NICS (“N-I-C-S”). The structure of tetrahedral sites containing this element can be determined from its huge Fermi contact shift when intercalated in magnesium oxide spinels. At high pressures, up to 28 atoms of this element can enter each cell of solid buckminsterfullerene. This element is the smallest counterion for *sec*-butyl borohydride in the selectride family of reducing agents, and has the second-highest absolute hardness of a plus-one cation after the proton. This metal is the template for the smallest crown ether capable of phase transfer. This element is the least dense metal, and its aluminum hydride is a strong reducing agent. For 10 points, name this metal that re-enters electrodes in a namesake class of batteries.

ANSWER: **lithium** [or **Li**; accept **lithium**-ion batteries; accept 7-**Li**-NMR or 6-**Li**-NMR; accept **lithium** aluminum hydride after “aluminum” is read; prompt on **LAH** after “aluminum” is read by asking “what does that stand for?”]
<Chemistry>

17. In 2023, life-size reliefs of these animals were dated by luminescence as older than Stonehenge. The arrival of these animals was dated to the 900s BCE at Timna Valley copper mines. Michael Rostovtzeff argued that taxation from these animals enriched cities like Dura-Europos, where one was depicted below the god Arsu. An early record of these animals comes from Gindibu’s Qedarites at the Battle of Qarqar. A word for these animals is the second part of Zarathustra’s name. Richard Bulliet argued that cloth saddles led to the wheel’s replacement by these animals, which supposedly scared Lydia’s cavalry at Thymbra and resupplied Surenas’s horse archers at Carrhae (“CAR-rye”). These animals, which likely spread from the Hadhramaut to Somalia, enriched Palmyra and Petra by enabling caravans. For 10 points, a species of what animals is named for ancient Bactria?

ANSWER: **camels** [accept **dromedaries**, **dromedary**, **Camelus**, or **gāmālim**; accept **Bactrian** camels until “Bactria” is read; accept **Camel** Site; prompt on even-toed **ungulates** or **artiodactyls**] (Rostovtzeff defined “caravan cities.” The root word is *uṣṭra*. Both Xenophon and Herodotus report Cyrus the Great’s use of camels at the Battle of Thymbra.)

<Other History>

18. In the *Rigveda*, Indra murders the boar Emusha so that this god can steal *odaná*, a rice porridge. The Purusha myth resembles a passage from the *Shatapatha* (“shuh-TUH-puh-tuh”) *Brāhmaṇa* in which the defeated *devas* sacrifice this god’s body to get a portion of the world from the victorious *asuras*. This god’s Rigvedic epithet *urugāyá*, meaning “wide-ranging,” refers to how he reached the heavens with a sequence of three deeds called the *trivikrama* (“tree-VICK-ruh-muh”). In a much later myth, this god avenges a defeat of Indra’s by approaching a *yajña*, receiving holy water despite the protests of Shukrācārya (“shoo-krah-CHAR-yuh”), and receiving a boon. Thereafter, this god metes out the world with his three strides and banishes the *daitya* (“DAIT-yuh”) king Mahābālī to the shadow realm *pātāla*. For 10 points, name this Hindu god who manifests as the dwarf Vāmana, the fifth of his ten avatars.

ANSWER: **Vishnu** [or **Visnu**; accept **Vāmana** until read]

<Mythology>

19. *Two answers required.* In these two cities, Gerard Krefft curated Darwinist exhibits to advance the “new museum idea.” Masons’ strikes in these cities won the first eight-hour workday. 10 percent of flights between these two cities are canceled by “slot hoarding.” Teetotalers (“tee-totalers”) stayed at “coffee palaces” in these two cities for rival expos at the Garden Palace and Royal Exhibition Building. The potato farmer Cliff Young won Westfield’s ultramarathon between these two cities, which host the two oldest “verdant universities” and “sandstone universities.” The crime show *Underbelly* featured both of these cities’ “gangland wars.” “Magic” coffee in one of these cities led Auckland or the other to create the flat white. These two cities respectively founded the AFL and National Rugby League and hosted the 1956 and 2000 Olympics. For 10 points, name these largest cities in Australia.

ANSWER: **Melbourne** AND **Sydney** [accept answers in either order; accept **Narrm**, **Port Phillip**, **Melburnians**, or University of **Melbourne** in place of “Melbourne”; accept **Port Jackson**, **Sydneysiders**, University of **Sydney**, or **Sydney** Uni in place of “Sydney”] (La Trobe and Macquarie are the oldest verdant universities.)

<Geography>

20. This woman suggests that her lover grow out his hair while she cuts hers so they can match. Earlier in the novel, this woman’s lover undoes her hair when they kiss so that it envelops them, likening it to being “inside a tent or behind a falls.” In a hotel room furnished with red plush and mirrors, this woman says, “I never felt like a whore before,” and discusses the poem “To His Coy Mistress.” While thinking of this woman, the narrator notes that “if people bring so much courage to this world the world has to kill them to break them.” In an ending that was rewritten over 47 times, this woman’s lover walks back to his hotel in the rain after she dies from a C-section. This woman helps her lover row a boat to Switzerland after deserting the Italian army. For 10 points, name this nurse and lover of Frederic Henry in Ernest Hemingway’s *A Farewell to Arms*.

ANSWER: **Catherine** Barkley [or Catherine **Barkley**]

<American Literature>

BONUSES

1. Kristen Hawkes bolstered this hypothesis with evidence that its focal people boost group fitness among the Hadza by focusing on provisioning. For 10 points each:

[10m] Name this controversial hypothesis to explain a human life history stage. It argues that menopause had evolutionary benefits by raising investment in “alloparenting,” or supporting others’ children.

ANSWER: **grandmother** hypothesis

[10h] This feminist primatologist argued that humans are allomothering (“allo-mothering”) “cooperative breeders.” This author of *Mothers and Others* critiqued evolutionary theory’s neglect of female agency in *The Woman That Never Evolved*.

ANSWER: Sarah Blaffer **Hrdy** (“HUR-dee”)

[10e] Hrdy (“HUR-dee”) rejects the idea that this field “worked against women.” Hrdy’s teacher, E. O. Wilson, pre-fixed “socio-” to this field to name a “new synthesis” of evolutionary and social sciences.

ANSWER: **biology** [or **biological** sciences; accept sociobi**ology**; prompt on **bio**] (Wilson also coined the term “alloparenting”)

<Social Science>

2. A being composed of these objects recruits the Magician, the Sophist, and three madmen as he plots to kill a Venezuelan arms dealer. For 10 points each:

[10h] Name these objects that a junk dealer uses to make a “Whatitsname” that reminds the Assyrian widow Elishva of her son Daniel in a 2013 novel. An art student works with these objects in a *mghaysil* (“muh-GAY-sill”) in a Sinan Antoon novel.

ANSWER: **corpses** [or **carcasses**, **cadavers**, human **bodies**, dead **body**, or equivalents; accept **body** parts or **limbs**; accept *The Corpse Washer*; prompt on **parts** by asking “of what?”]

[10e] *The Corpse Washer*, Hassan Blassim’s *The Corpse Exhibition*, and a 2013 novel inspired by *Frankenstein* are all set during this war featured in Phil Klay’s *Redeployment*.

ANSWER: **Iraq** War [or descriptions of the 2003 invasion of **Iraq**; or Operation **Iraqi** Freedom; or ḥarb al-‘**irāq**; prompt on War on **Terror**] (The 2013 novel is *Frankenstein in Baghdad*.)

[10m] The author of *Frankenstein in Baghdad* has this surname. An Egyptian author with this surname fictionalized herself as the interviewer of the death-row inmate Firdaus in *Woman at Point Zero*.

ANSWER: **Saadawi** [accept **Elsa‘dāwī** or Al-**Saadawi**; accept Nawal El **Saadawi**; accept Ahmed **Saadawi**]

<World Literature>

3. This country’s first Muslim president, Irfaan Ali, encouraged its large diaspora in Trinidad and Tobago to “come home” and work in the world’s fastest-growing economy. For 10 points each:

[10e] Name this anglophone country whose oil-rich Essequibo region is claimed by its western neighbor, Venezuela.

ANSWER: **Guyana** [or Co-operative Republic of **Guyana**; accept **Guayana** Esequiba]

[10h] Venezuela arrested this opposition leader’s aides for alleged sabotage of the 2023 Guayana Esequiba referendum. Both she and philosopher Corina Yonis were banned from elections despite the Barbados Agreement.

ANSWER: María Corina **Machado** [or María Corina **Machado** Parisca] (They were dubbed “the two Corinas.”)

[10m] A US–Venezuela prisoner swap exchanged businessman Alex Saab for members of Machado’s campaign and extradited this Malaysian defense contractor who bribed the US Navy. He is nicknamed for his large frame.

ANSWER: **Fat Leonard** [or Leonard **Francis** or Leonard Glenn **Francis**; prompt on **Leonard**]

<Current Events>

4. This technique's efficacy is sometimes attributed to unknown "non-thermal" effects, but it's probably just efficient. For 10 points each:

[10m] Name this method that achieves rapid and uniform heating of a small volume of material. Pioneering work with this method was done with consumer units now banned by the ACS *Journal of Chemical Education*.

ANSWER: **microwave**-assisted synthesis [or **microwave** heating; or word forms of **microwaving**]

[10e] Microwaves have been called the modern version of this ubiquitous heating device, which produces a narrow cone of flame.

ANSWER: **Bunsen burners** [prompt on **burners**]

[10h] The Ley lab used one of these materials incorporating emim ("E-mim") to accelerate microwave syntheses in toluene. These materials have a huge loss tangent due to their conductivity and can be used in closed containers due to their negligible vapor pressure.

ANSWER: **ionic liquids** [or **ILs**]

<Chemistry>

5. Although they may have subtle culinary differences, Columella's *De re rustica* and Constantine VII's *Geōponika* use the term "liquamen" for this product. For 10 points each:

[10e] Name this fish sauce produced at Roman salteries in Lixus, Lusitania, and Baetica ("BYE-tee-kah").

ANSWER: **garum** [accept **salsamenta**, **oenogarum**, **oxygarum**, or **haimation**]

[10m] The Mauretanian agriculturalist Gargilius appended a garum recipe to fragments based on an author of this name who wrote 28 books on agronomy. Carthage's dynasty of this name apocryphally sent Hanno the Navigator to modern Gabon.

ANSWER: **Mago** [accept **Magonid** dynasty]

[10h] This author of *The Wanderings of Hanno* built Mogador's garum and Tyrian purple factories and sent a fleet to the Canary Islands. This Numidian and Mauretanian scholar-king wrote treatises on Roman archaeology and euphorbia.

ANSWER: **Juba II** [or **Ióva II** or **Ioúvas II**; **Gaius Iulius Iuba**; accept "Rex **Literatissimus**"; prompt on **Juba**, **ywb'y**, **Ióva**, or **Ioúvas**] (Hanno probably only sailed as far as Mogador.)

<Other History>

6. A class of materials named in analogy to this substance, which include Pr₂Zr₂O₇ ("P-R-two-Z-R-two-O-seven"), have spins that obey the two-in, two-out rule. For 10 points each:

[10e] Name this material that is the most common example of a solid that is [emphasize] *less* dense than its liquid counterpart.

ANSWER: **ice** [or water **ice**; accept spin **ices**; prompt on frozen **water** or **H₂O**]

[10h] Pr₂Zr₂O₇'s spin-ice structure partly arises from "doublets" named for not satisfying an assumption of this theorem. The surface states of topological insulators can form "pairs" named for this theorem.

ANSWER: **Kramers**'s degeneracy theorem [accept **Kramers** pairs; accept non-**Kramers** doublets]

[10m] At low temperatures, Pr₂Zr₂O₇'s value for this quantity suddenly peaks in an example of the Schottky anomaly. As temperature approaches zero, this quantity also approaches zero, as shown by a model based on independent quantum harmonic oscillators.

ANSWER: **heat capacity** [or **thermal capacity**; or **specific heat** capacity; or molar **heat capacity**] (The model is the Einstein model.)

<Physics>

7. Near the very end of this piece, the right hand plays a *senza tempo* passage that begins with a very high “C-flat, B-flat, C, A” figure played 12 times. For 10 points each:

[10m] Name this solo piano piece that begins with an ascending sixth, from the dominant B-flat up to G. This piece has a waltz-like rhythm due to its combination of 12/8 (“twelve-eight”) meter and left-hand accompaniment.

ANSWER: Frédéric **Chopin**’s **Nocturne in E-flat** major [or Frédéric **Chopin**’s **Nocturne, Op. 9, No. 2**; prompt on **nocturne**; prompt on **Chopin**’s **Nocturne** or **Chopin**’s Nocturnes **Op. 9** by asking “which one?”; prompt on **Nocturne in E-flat** major by asking “by which composer?”]

[10h] This late Chopin piece is in F-sharp major and 12/8 (“twelve-eight”) time, and is laden with the parallel thirds and sixths characteristic of its genre. It is often contrasted with his Opus 57 Berceuse (“bair-SUZ”).

ANSWER: **Barcarolle** in F-sharp major [or Barcarolle, **Op. 60**]

[10e] Chopin wrote three pieces with this title that suggests an unprepared, free-flowing style. This title is paired with “Fantaisie” in a different Chopin piece based on a four-against-three rhythm.

ANSWER: **impromptu** [accept *Fantaisie-**Impromptu***]

<Classical Music>

8. The descendants of ibn ‘Abd al-Wahhāb are known as the “family of” this title, which honors the Somali clan founders Darod and Ishaak (“iss-HOCK”). For 10 points each:

[10e] What informal title of Arab tribal elders is claimed by the Al Nahyan family? It is still the common English word for emirs of Gulf states like Dubai.

ANSWER: **sheikh** (“shake”) [or variants of **sheik**, **sheikha**, **shaykh**, **cheikh**, **sekh**, or **šejh**; accept **sheikhdom** or **mashīkhāt**; accept Al ash-**Sheikh** or Āl aš-**Šaykh**]

[10m] Raids by Sheikh Rahmah bin Jābir motivated this protectorate over Arabia’s so-called “Pirate Coast.” These sheikhdoms signed a maritime peace after Oman and British Bombay attacked Ras Al Khaimah’s (“rass al KYE-mah’s”) Wahhābi Al Qasimis (“al KAH-see-meez”).

ANSWER: **Trucial** States [or **Trucial** Coast, **Trucial** Oman, **Trucial** Arabia, **Trucial** Sheikhdoms, Al-Imārāt al-**Mutaṣālih**, Al-Sāhil al-**Mutaṣālih**, or Al-Mashīkhāt al-**Mutaṣāliha**; accept Perpetual Maritime **Truce**]

[10h] Abu Dhabi violated the truce when this tribe’s Āl Khalīfah family led an 1867 war against Qaṭar’s Al Thanis (“al THAH-neeZ”). Sheikh Nasr Al-Madhkur lost Bahrain after a 1783 invasion by this tribe, whose Al Sabah branch founded Kuwait in 1752.

ANSWER: Bani ‘**Utbah** (“bah-NEE OOT-bah”) [or Bani ‘**Utûb**, ‘**Utbî**, Benî ‘**Utbe**, **Uttoobees**, or **Attoobees**]

<World History>

9. In this book’s title story, Mrs. Field and Cassandra Parbinger cough up mouse bones, implying that they turned into owls to devour the villainous Captain Winbright. For 10 points each:

[10h] Name this collection introduced by James Sutherland, a fictional professor of Sidhe (“shee”) Studies. Its stories are set in the same fairy-inhabited alternate history as its author’s earlier 2004 novel.

ANSWER: *The **Ladies of Grace Adieu*** [or *The **Ladies of Grace Adieu and Other Stories***]

[10e] This magician visits his brother-in-law at Grace Adieu in the collection’s title story. This man and his teacher, Mr. Norrell, title a 2004 novel by Susanna Clarke.

ANSWER: Jonathan **Strange** [or **Jonathan** Strange; accept *Jonathan **Strange** & Mr Norrell*]

[10m] After being called a “London magician,” Strange tells the ladies of Grace Adieu he is from this place. A poem from a collection titled for this place states that “To-day the Roman and his trouble / are ashes under Uricon.”

ANSWER: **Shropshire** [accept *A **Shropshire Lad***] (The poem is “On Wenlock Edge the wood’s in trouble” by A. E. Housman.)

<British Literature>

10. William Dalrymple's book *Forgotten Masters* examines paintings in this style, some of which were collected in the Impey Album. For 10 points each:

[10h] Name this style of Indian painting often used for souvenirs. Paintings in this style used European shading and perspective to depict birds and plants or court scenes on a stark white background.

ANSWER: **Company** school [or **Company** painting; or **Company** style; or **kampani** kalam]

[10e] European influence on Mughal painting is also shown by the inclusion of these flying figures in Mughal miniatures. Raphael's *Sistine Madonna* features two of these winged children looking upwards.

ANSWER: **putti** [or **putto**; accept **cupids** or **cherubs** or **cherubim**; prompt on **angels**]

[10m] Rajput and Mughal painters primarily worked in this medium, which colored the paper for Henri Matisse's cut-outs. This opaque watercolor technique uses pigments like Chinese white.

ANSWER: **gouache** ("gwash") [accept **papiers gouachés**]

<Painting & Sculpture>

11. In a play by this author, the 16-year-old Lauren and the divorced carpenter Schultz attend a summer acting class set at a "windowless dance studio" at the community center. For 10 points each:

[10h] Name this author whose plays *Circle Mirror Transformation*, *Body Awareness*, and *Nocturama* are all set in the fictional small town of Shirley, Vermont. Her play *The Flick* won the Pulitzer Prize in 2014.

ANSWER: Annie **Baker**

[10m] At the end of Baker's Shirley, Vermont, play *The Aliens*, Evan sings "If I Had a Hammer" after KJ gives him one of these objects. Hedley uses a machete to kill Floyd Barton in a play titled for these objects.

ANSWER: **guitars** [accept *Seven Guitars*; prompt on musical **instruments**]

[10e] Like Baker, August Wilson set many of his plays in the same place; this city titles his cycle of ten plays, including *Seven Guitars* and *Fences*.

ANSWER: **Pittsburgh** [accept **Pittsburgh** Cycle]

<American Literature>

12. Tamás Pálffy ("toh-MOSH PAHL-fee") confiscated the estates of these nobles during the "ten dark years" after the Magyarized Frankopan and Zrinski families led their namesake "conspiracy" over the Fourth Austro-Turkish War. For 10 points each:

[10h] Name these landed aristocrats who sat in the upper house of the Hungarian Diet. The *Tripartium* upheld their nominal equality with lesser "seven plum tree" nobility.

ANSWER: **magnates** [or **főúri** or **főurak**; accept House of **Magnates**, **Főrendiház**, Camera **Magnatilor**, or **Magnatenhaus**; accept "**Magnate** Conspiracy"]

[10m] *Szlachta* ("SHLOCK-tah") magnates often intervened on behalf of this principality's Movilă ("mo-VEE-luh") *hospodars* and *voivodes*. Stephen the Great ruled this [emphasize] *northeastern* Danubian principality 200 years before the Ottoman Phanariote era.

ANSWER: **Moldavia** [or **Moldova**; or Principality of **Moldavia**; or Țara **Moldovei**; or Igemonia tis **Moldavias**]

[10e] Moldavians of this class embraced the "Latinist" francophilia of the Enlightenment-era "Transylvanian School." Peter the Great abolished the *duma* of these Russian nobles.

ANSWER: **boyars** [or **boierii**; accept **bovar** *duma* or **boyarskaya** *duma*]

<European History>

13. Officiants of the “Four Palaces” governed by these deities invoke their *linh* by dressing up as them in the *hầu bóng* ritual. For 10 points each:

[10m] Identify this sort of deity worshiped as an “unborn ancient” in salvationist faiths like Xiāntiāndào (“shee-en-tee-en-DOW”). One of them supposedly taught the *Đào Đé Jīng* to Lǎozǐ and helped the Jade Emperor create a barrier central to the Qìxì (“chee-shee”) Festival.

ANSWER: **mother** goddesses [accept Queen **Mother** of the West, Xī Wáng**mǔ**, Unborn Ancient **Mother**, Infinite **Mother**, **Seiōbo**, Dǒumǔ Yuánjūn, Seowang**mo**, Wúshēng Lǎo**mǔ**, or Thánh **Mẫu**; accept Đạo **Mẫu** or **Tứ Phủ**; accept **Holy Courtiers** or **Thánh Châu**; accept **Holy Mistresses** or **Thánh Cô**; prompt on goddesses or queens; reject “immortals”]

[10e] Đạo Mẫu is a strain of mother goddess worship in the folk religion of this country, whose other faiths include Coconut Religion and Cao Đài.

ANSWER: **Vietnam** [or Socialist Republic of **Vietnam** or Cộng hòa xã hội chủ nghĩa **Viet** Nam]

[10h] Vietnam’s focal concept of *linh* is often translated as this Latin-derived term for the direct, non-rational experience of the divine or ineffable. Rudolf Otto coined this term as a morally neutral complement to “the holy.”

ANSWER: **numinous** [accept **numen**]

<Religion>

14. Answer the following about geochemical box models, for 10 points each.

[10e] A box’s source and sink flux are equal in this approximation, which, in chemical kinetics, sets the rate of change of an intermediate’s concentration to zero.

ANSWER: **steady-state** approximation [or **SSA**; accept quasi-**steady-state** approximation or **OSSA**; accept pseudo-**steady-state** approximation or **PSSA**]

[10h] Similar to first-order kinetics, if sink flux equals k times the amount of substance in the box, this quantity is “one over k .” Residence time can be set equal to this quantity, which equals water volume over volumetric flow rate.

ANSWER: **turnover** time [accept **renewal** time or **flushing** time]

[10m] Carbon flux between the ocean surface box and the atmosphere box is modified by the Revelle factor, which accounts for the fractional change in this form of carbon known by a three-letter initialism. This form of carbon represents the amount of aqueous CO₂, H₂CO₃, HCO₃⁻ (“H-C-O-3-minus”), and CO₃²⁻ (“C-O-3 two-minus”).

ANSWER: **dissolved inorganic** carbon [or **DIC**; or **total inorganic** carbon or **TIC**; accept **TCO2** or **CT**; prompt on **inorganic** carbon]

<Other Science>

15. An author from the New Culture Movement with this surname satirized the corner-cutting he observed in Chinese society in “The Life of Mr. Close Enough.” For 10 points each:

[10e] Give this surname of the paramount leader who succeeded Jiāng Zémín (“jee-ahng dzuh-min”) in 2002.

ANSWER: **Hú** (“hoo”) [or **Wu**; accept **Hú** Jǐntāo or **Hu** Chin-t’ao or **Wu** Gam-tou; accept **Hu** Shih or **Hú** Shì or **Wu** Sik]

[10m] During the Hú Jǐntāo (“hoo jeen-tao”) era, the Chinese public condemned shoddy building projects nicknamed for this foodstuff or its “dregs” after many collapsed in the 2008 Sichuān earthquake. Yuba is also called this food’s “skin.”

ANSWER: **tofu** [or **bean curd**, **dòufu**, **dubu**, or **tubu**; accept **tofu** skin, **dòufu** pí, **tou-fu**-p’i, or **dubu**-kkeopjil; accept **tofu**-dregs, **dòuzhā**, **dòufuzhā**, **tou-zha**, **tou-fu**-cha; **okara**, or kong**biji**; accept **tofu**-dreg projects, **dòufuzhā** gōngchéng, **tofu** projects, or **tofu** buildings; prompt on soy or soybeans]

[10h] In the years after Hú pledged to make China “innovation-oriented,” entrepreneurs created counterfeit imitation smartphones known by this Chinese term. This term refers to copycat goods, sometimes with creative new features.

ANSWER: **shānzhài** (“shahn-jye”) [or **shan-tsai** or **saan zaai**]

<Other Academic>

16. Most stories of this person are based on reports from the French explorer Antoine-Simon Le Page du Pratz. For 10 points each:

[10h] Name this Yazoo explorer who reportedly journeyed from his home in present-day Mississippi to the Pacific Northwest during the 17th century to trace the origins of his people.

ANSWER: **Moncacht-Apé** (“mon-kash-tah-PAY”)

[10m] Le Page du Pratz learned about Moncacht-Apé (“mon-kash-tah-PAY”) from contact with these Mississippian people. This group, whose Sun class of chiefs married the lowest class, revolted against the French in the 1720s and destroyed Fort Rosalie.

ANSWER: **Natchez** people [or **Natchee** or W-**nahk’chee**; accept **Theoloel** or **Thecoel**; accept **Natchez** revolt]

[10e] Le Page du Pratz’s account of Moncacht-Apé notably omits any mention of this mountain range. Sacagawea bartered with her Shoshone tribe to help Lewis and Clark traverse its Bitterroot subrange.

ANSWER: **Rocky** Mountains [or **Rockies**]

<American History>

17. A paper analyzes adverbial modifications to these things with the sentence “Jones did it slowly, deliberately, in the bathroom, with a knife, at midnight.” For 10 points each:

[10m] Donald Davidson explored the semantics of what things in “The Logical Form of Action Sentences”? He proposed anomalous monism in a paper titled for their “mental” type.

ANSWER: **events** [accept “Mental **Events**”; accept Davidsonian **event** semantics] (In the example sentence, Jones is buttering a piece of toast.)

[10e] Davidson’s analysis binds events with this quantifier. This quantifier denotes “there is at least one,” in contrast to the universal quantifier.

ANSWER: **existential** quantifier [or **existence** quantifier; or **backwards E**; accept “there **exists**” or word forms of **existence**]

[10h] Neo-Davidsonian event semantics uses thematic roles like these receivers of an action, such as Caesar in “Brutus stabbed Caesar.” The distinction between agents and these figures is also popular in ethics thanks to its usage by Tom Regan in *The Case for Animal Rights*.

ANSWER: **patients** [accept agent-**patient** distinction or grammatical **patients**; accept moral **patients** or moral **patience** or moral **patienthood**; prompt on **themes**]

<Philosophy>

18. A Malawian-South African jazz guitarist with this first name played with his *mbaqanga* (“im-bah-kahn-gah”) band on Paul Simon’s album *Graceland*. For 10 points each:

[10m] Give this first name of the British composer whose “Indian Suite” introduced the bebop standard “Cherokee.” A pianist with this first name wrote “Confession Blues” with the McSon Trio.

ANSWER: **Ray** [accept Ray **Charles** or Ray **Charles** Robinson; accept **Ray** Noble or **Raymond** Stanley Noble; accept Ray **Phiri** or Raymond Chikapa Enock **Phiri**]

[10h] This Mozambican-South African vocalist sang “The Touch of Your Lips” and “The Very Thought of You” for the Ray Noble orchestra. He recorded “Blue Moon” and hundreds of other songs after leaving the Dutch East Indies.

ANSWER: Al **Bowly** [or Albert Allick **Bowly**]

[10e] Bowly’s itinerant career included a stint with the Surinamese-Guyanese swing dancer Ken “Snakehips” Johnson, who modeled himself on this Harlem bandleader behind the scat song “Minnie the Moocher.”

ANSWER: Cab **Calloway** [or Cabell **Calloway** III]

<Other Fine Arts>

19. Answer the following about American poetry collections that interpolate European authors, for 10 points each.
[10m] In *The Sonnets*, Ted Berrigan often quotes his own loose translations of this poem, such as the line “stronger than alcohol, more great than song.” The speaker of this poem longs for Europe’s parapets after arriving in “unbelievable Floridas.”

ANSWER: “The **Drunken Boat**” [or “Le **bateau ivre**”] (by Arthur Rimbaud)

[10e] Christian Hawkey’s *Ventrakl* includes a series of poems pieced together from Georg Trakl’s mentions of these things. A sonnet by Arthur Rimbaud assigns these things to the vowels.

ANSWER: **colors** [or **Farben**; or **couleurs**]

[10h] *Ventrakl* was inspired by this collection, which includes the credo “I would like to make poems out of real objects.” This Jack Spicer book consists of letters to the title poet and reworkings of poems like “Narcissus.”

ANSWER: **After Lorca**

<European Literature>

20. Regions with this property can be profiled with micrococcal nuclease or ATAC-seq (“attack-seek”). For 10 points each:

[10h] Name this structural property necessarily held by sites hypersensitive to DNase I. Regions with and without this property alternate within territories along the nuclear lamina.

ANSWER: chromatin **accessibility** [or word forms of **accessible**; accept **open**, **free**, **loosely** coiled, **loosely** packed, or **exposed**; accept, but DO NOT REVEAL, assay for transposase-**accessible** chromatin with sequencing; reject “euchromatin”]

[10m] ATAC-seq uses these enzymes to simultaneously cleave and tag accessible DNA sequences. These enzymes, which are related to integrases, naturally have very low activity that is increased by mutating their DDE motif.

ANSWER: **transposases**

[10e] To capture information about chromosomal conformation, Hi-C and other 3C methods must first cleave them with one of these highly specific endonucleases. EcoRI (“eco-R-one”) is an example of these enzymes that leaves sticky ends.

ANSWER: **restriction** enzymes [or **restriction** endonucleases]

<Biology>