2022 ACF Winter

Packet 5 by Nebraska A, Virginia B, Durham A, Iowa State A

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Tossups

1. Ferrioxalate illustrates how this geometry can display helical chirality. Depending on the ratio between bite size and hard-sphere radius, racemization of compounds with this geometry can proceed through an intermediate with either D3h (“D-three-H”) or C2v (“C-two-V”) symmetry. Complexes of this geometry are racemized in the Bailar and Ray–Dutt twists. Complexes with this geometry may display facial or meridional isomerism. For coordination complexes with this geometry, the chelate effect enables EDTA to have a high formation constant. One axis of a complex with this geometry elongates in the most common example of the Jahn–Teller (“yahn-TELL-er”) effect. A ligand’s dissociation from this geometry yields a square pyramidal or trigonal bipyramidal intermediate. For 10 points, sulfur hexafluoride exhibits what geometry, in which a central atom is surrounded by six groups?

ANSWER: **octahedral** [accept **Oh**]

<Chemistry>

2. A 1999 essay by this writer describes his profession’s scorn for objects they call “coffee filters” and “anal research gloves” and opens by asserting that it’s all about “blood and organs, cruelty and decay.” George Orwell’s *Down and Out in Paris and London* inspired a memoir by this writer that features “Adam Real-Last-Name-Unknown” and a beloved boss he calls “Bigfoot.” The 2021 documentary *Roadrunner* is about this author, whose friend Éric Ripert (“rih-PAIR”) honored him at the Brasserie Les Halles (“lay ahl”). This author’s *New Yorker* essay “Don’t Eat Before Reading This” launched his media career, enabling him to travel around the world trying exotic dishes for the TV show *Parts Unknown* until his 2018 death. For 10 points, *Kitchen Confidential* is a memoir by what American chef who hosted *No Reservations*?

ANSWER: Anthony **Bourdain** (“bor-DAYN”) [or Anthony Michael **Bourdain**]

<Other Academic>

3. A 1996 Act was argued to be “overbroad” with regard to this Constitutional amendment by the NCSF in the case *Nitke v. Gonzales*. Until 1957, some US jurisdictions applied this amendment by considering the “most susceptible persons,” based on the 1868 English case *R v. Hicklin*. “Community standards” form one of the three prongs of a test for exceptions to this amendment established in the case *Miller v. California*. While discussing an exception to this amendment, Potter Stewart declared during the case *Jacobellis v. Ohio* that “I know it when I see it.” The case *FCC v. Pacifica*, which involved George Carlin, identified exceptions to this amendment by their use of “seven dirty words.” For 10 points, many decisions in obscenity cases draw on what amendment to the Constitution, which protects freedom of speech?

ANSWER: **First** Amendment [or Amendment **1**]

<Social Science>

4. A leader in this conflict tells another that “nothing but our own red blood” can make the title object in the poem “The Rose Tree.” Another poem compares a stone that “trouble[s] the living stream” to fighters in this conflict, who have “hearts with one purpose alone.” Three poems about this conflict appear in the collection *Michael Robartes* (“Roberts”) *and the Dancer*. A leader in this conflict who married Maud Gonne is described as a “drunken, vainglorious lout” in a poem whose narrator greets participants in this conflict with “polite, meaningless words.” That poem begins, “I have met them at close of day” and repeats the refrain, “a terrible beauty is born” after listing Connolly, Pearse (“purse”), and other leaders of this rebellion. For 10 points, a W. B. Yeats (“yates”) poem revisits what 1916 Irish Republican uprising?

ANSWER: **Easter Rising** [or **Easter Rebellion** or **Éirí Amach na Cásca**; prompt on the Rising or equivalents; prompt on Irish revolutionary period]

<British Literature>

5. Alice Albinia’s book about this river’s “empires” describes the arrival of Black Siddis (“sid-eez”) after the conquest of the Chacha dynasty. Scylax of Caryanda and Nearchus began expeditions on this river, which contained carnivorous oil-bearing worms according to Ctesias (“TEE-see-us”). Makrān was located just west of this river, which was the heartland of a culture likely known to Sumer as “Meluhha” that shipped carnelian from the port of Lothal. A culture based around this river left stamp seals decorated with “unicorns” and an undeciphered script that may have influenced Brāhmī. Alexander the Great allied with the king of Taxila on this river and crossed a tributary of it to defeat Porus at the Battle of the Hydaspes. For 10 points, the cities of Harappa and Mohenjo-Daro were built by a civilization based on what river in modern-day Pākistān?

ANSWER: **Indus** River [or **Sindhu** River; or **Mehran**; accept **Indus** River Valley civilization; accept **Hydaspes** until read; accept **Jhelum** or **Vitástā**; accept **​​Beas** River or **Hyphasis** or **Vipāshā**; accept **Chenab** River or **Acesines** or **Ashkini**; accept **Sutlej** River or **Hesudrus**; accept **Kabul** River or **Cophen**; accept **Sabarmati** River; accept **Ravi** River; accept **Indus** script; accept **Indus** worm; accept *Empires of the* ***Indus***]

<Other History>

6. A woman with this profession was turned into a spring after going insane and eating one of her children who was the brother of Iacchus (“ee-YAH-kiss”). A man with this profession was born after three gods urinated on a cowhide belonging to Hyrieus (“HAI-ree-us”) and buried it. Hylaeus (“HAI-LAY-us”) and Rhoecus (“ROH-kuss”) were killed by a woman with this profession who was suckled by a she-bear as a child. After following the sounds of Hephaestus’s forges to Lemnos, a man with this profession had his eyesight restored by the Sun shortly before dying from a scorpion. Upon stumbling on a bathing goddess, a man with this profession named Actaeon was turned into a deer and killed by his dogs. For 10 points, Atalanta (“at-uh-LAN-tuh”) and Orion (“oh-RAI-un”) held what profession, which was patronized by the goddess Artemis?

ANSWER: **hunt**ers [or **hunt**resses; or **kynigos**; or word forms like **hunt**ing; accept **archer**s or **toxotai** or **toxótes**; reject “soldiers” or “military”] (The woman in the first line is Aura.)

<Mythology>

7. Glass workers of this nationality protested for the right to vote during what is often considered the first strike in North America in Jamestown. Funds for the Yorktown campaign were secured by a Jewish businessman of this nationality named Haym Solomon. Agrippa Hull served as aide-de-camp to a general of this nationality who asked Thomas Jefferson to free his slaves in his will. An Illinois holiday celebrates a general of this nationality who was likely intersex and died while leading a cavalry charge during the Siege of Savannah. Before fighting in the American Revolution, a general of this nationality helped found the Bar Confederation to resist Russian encroachment. For 10 points, name this nationality of Casimir Pułaski (“poo-WAH-skee”) and Tadeusz Kościuszko (“tah-DEH-oosh kosh-CHOOSH-koh”).

ANSWER: **Polish** [or **Pole**s; or **polacy** or **polak** or **polka**; or people from **Poland** or Rzeczpospolita **Polska**; accept **Belarusian**s or **Byelorussian**s or people from **Belarus** or Riespublika **Bielaruś** or Respublika **Bielaruś**; accept **Polish**–Lithuanian Commonwealth]

<American History>

8. In a novel from this modern-day country, the protagonist is taken from the pouch of a giant slain animal by childlike soldiers who serve a “Flash-Eyed Mother.” In that novel from this country, a woman follows a beautiful man who keeps losing body parts until he is simply a skull that captures her. A woman gives birth to a full-grown child out of her thumb in that novel from this country, whose protagonist searches for his tapster in Dead’s Town. The protagonist beats his wife during the “Week of Peace” in a novel from this home country of the author of *The Palm-Wine Drinkard*. In a novel from this country, the adopted son Ikemefuna is killed by a resident of Umuofia named Okonkwo. For 10 points, name this home country of Amos Tutuola and Chinua Achebe.

ANSWER: **Nigeria** [or Federal Republic of **Nigeria** or Orílẹ̀-èdè Olómìniira Àpapọ̀ **Nàìjíríà** or Ọ̀hàńjíkọ̀ Ọ̀hànézè **Naìjíríyà** or Jamhuriyar Tarayyar **Najeriya**]

<World Literature>

9. In 2019, Soares-Santos et al. estimated a term in this statement using data from a “dark siren.” This statement was experimentally based on 41 measurements made by Milton Humason and Vesto Slipher (“SLY-fer”). Deviations from this statement lead to distortions called “fingers of God.” This statement’s usual form is equivalent to the time derivative of the scale factor divided by the scale factor being constant. The age of the universe can be estimated as the reciprocal of a constant in this law, which has been estimated as about 70 kilometers per second per megaparsec based on observations of Cepheid variables’ redshifts. For 10 points, distance is proportional to the recessional velocity of galaxies according to what law named for an American astronomer?

ANSWER: **Hubble**’s law [or **Hubble**–Lemaître law or **Lemaître**’s law]

<Other Science>

10. A symphony by this composer opens with [read slowly] four repeated Cs, then descending B, A, G, in the celli and bass. That third symphony by this composer features a fortissimo descending horn call in its third and final movement and, like his fourth symphony, repeatedly uses a C-F sharp tritone. This composer’s fifth symphony ends with six unison isolated chords and features the slow horn theme [read slowly] E flat up to B flat, down to E flat, D, A, D, representing birds he saw in flight with a “swan call.” This composer’s seventh symphony in one movement uses a theme named for his wife, Aino. For 10 points, the nationalistic symphonic poem *Tapiola* is by what composer of the *Lemminkäinen Suite* and the tone poem *Finlandia*?

ANSWER: Jean **Sibelius** [or Johan Julius Christian **Sibelius**]

<Classical Music>

11. Unusually, these organisms have 62 copies of CGGBP1, suggesting recent horizontal gene transfer. These organisms have a jelly-filled structure on their snout called the rostral organ, which senses low-level electrical impulses. One of the two extant species of these organisms was discovered in a market in Sulawesi. Like members of the order Dipnoi, these organisms diverged from tetrapods 400 million years ago as members of the Sarcopterygii (“sar-cop-tuh-RIDGE-ee-ai”). These organisms, which have a three-lobed caudal fin, belong to the genus *Latimeria*, named for Marjorie Courtenay-Latimer, the curator of the East London Museum. The West Indian Ocean species of these organisms was rediscovered by Hendrik Goosen in the 1930s after it was thought extinct. For 10 points, name these “living fossils,” evolutionarily ancient fishes.

ANSWER: **coelacanth** (“SEE-luh-canth”) [or **Actinistia**; accept ***Latimeria*** until read; prompt on bony fish or Osteichthyes; prompt on jawed fish; prompt on lobe-finned fish; prompt on Sarcopterygii until read]

<Biology>

12. An alleged genocide [emphasize] *within* this European country targeted supposed Nazi collaborators among its Cham ethnic minority. In 1943, Nazis in this country killed POWs belonging to the Acqui (“OCK-kwee”) Division. In this country’s capital, the massacre of strikers in late 1944 resulted in a series of clashes termed the “December Events,” or *Dekemvriana* (“theh-kem-vree-AH-NAH”). The disastrous failure of a 1941 “spring offensive” prompted Hitler to assist an Italian invasion of this country, which forced its king George II to flee to Egypt. Along with a similar conflict in Turkey, a postwar civil war in this country was used by Harry Truman to justify the doctrine of containment. For 10 points, name this country once ruled by the dictator Ioannis Metaxas (“yo-AH-neece meh-tock-SAHSS”), whose iconography often referenced the Minoans.

ANSWER: **Greece** [or **Elláda** or **Hellas**; or **Hellenic** Republic or **Ellinikí** Dimokratía; accept **Greek** Civil War]

<European History>

13. They’re not genitals, but certain types of these objects are prohibited by the Hebrew term “orlah” and are blessed with the recitation “borei pri ha-etz.” According to an interpretation of the Gemara, the insides of one of these objects are numbered 613 like the mitzvot (“meets-VOTE”). Alongside the combined lulav, a person shakes one of these objects in the cardinal directions, in front of, and behind them during the festival of Sukkot. Ceremonially important examples of these objects include the etrog. People celebrating Rosh Hashanah eat a type of these objects dipped in honey. For 10 points, latkes are served with a “sauce” made of what general type of food that grew on the Tree of Knowledge?

ANSWER: **fruit** [accept **tree**s until “lulav” is read and prompt afterwards; accept **citrus** fruits or **citron**s or **apple**s or other specific fruits; accept **apples**auce; accept **etrog**s until read; prompt on plants; prompt on food until read]

<Religion>

14. This character faints with chest pains after reading a letter from his wife that says “we will never, ever see each other again.” This character repeats the observation “still the gloom of night around” in the poem “Holy Week.” While returning home from visiting a woman he met at the library, this character is abducted by men loyal to the cocaine addict Liberius. This character is the protagonist of a novel that was covertly distributed in Brussels and published through CIA intervention. This character learns that Tonya was deported after escaping the Forest Brotherhood. After she tries to shoot the lawyer Komarovsky, Lara has an affair with this character amidst the Russian Civil War. For 10 points, name this physician who titles a novel by Boris Pasternak.

ANSWER: Doctor **Zhivago** [or **Yuri** Andreievich Zhivago]

<European Literature>

15. This equation’s explicit time dependence is neglected under the MQS approximation. This equation arises from setting nu equal to 1, 2, and 3 in an expression for the 4-derivative of the raised Faraday tensor “F superscript mu, nu.” Taking the divergence of this equation yields the charge continuity equation. The modern form of this law includes the term [read slowly] “mu-nought epsilon-nought times the partial derivative of the E-field with respect to time.” In addition to terms equal to “mu-nought J” and the curl of the B-field, this law includes a displacement current term added by James Clerk Maxwell. For 10 points, the line integral of the magnetic field around a closed path is related to the enclosed current by what law named for a French physicist?

ANSWER: **Ampère**’s law [accept **Ampère**’s circuital law or **Ampère**–Maxwell law; prompt on Maxwell’s equations until “Maxwell” is read] (MQS stands for “magnetoquasistatic.”)

<Physics>

16. A poem titled for one of these people describes “strange license plates and engines that devour America.” A speaker who thinks of “how terrible orange is” asks one of these people, “where’s SARDINES?” in a Frank O’Hara poem titled “Why I Am Not” this sort of person. A Lawrence Ferlinghetti poem lauds one of these people for observing “suffering humanity.” These people “never forgot...the dreadful martyrdom” in a poem that praises them for showing how “everything turns away / quite leisurely from the disaster” of “white legs disappearing into the green.” That poem notes that “about suffering” [these people] “were never wrong.” For 10 points, W. H. Auden’s “Musée des Beaux Arts” (“moo-ZAY day bo-ZAR”) begins by describing a member of what profession who created *Landscape with the Fall of Icarus*?

ANSWER: **painter**s [accept **artist**s until “Arts” is read and prompt afterwards; accept Old **Master**s; accept “Why I Am Not a **Painter**”] (The Ferlinghetti poem is “In Goya’s Greatest Scenes We Seem To See…”)

<American Literature>

17. *Note to moderator: Read the answerline carefully.*

The *Suma Oriental* (“SOO-mah or-ee-en-TAO”) reports that rice was exchanged for these items by Demak (“DEH-mock”). A circa-14th-century minister supposedly vowed that he would never rest or enjoy these items until he unified Nusantara (“noo-sahn-TAH-rah”) in the Palapa Oath recorded in the *Pararaton*. The extirpatie (“ex-teer-POT-see”) policy destroyed sources of these items in the sultanates of Tidore (“tee-DOR-ay”) and Ternate (“tair-NAH-tay”) after the genocidal conquest of the Bandanese. Varieties of these items were named for Tellicherry and the Malabar Coast, whence they were exported to Europe by Cochin and Calicut. Said bin Sultan’s Zanzibar grew plantations of these items that Europeans used to stud orange pomanders. The Moluccas were nicknamed the “islands” of these items due to native evergreen trees that supplied mace. For 10 points, what luxury goods include Indonesian cloves and nutmeg?

ANSWER: **spice**s [or **seasoning**s or **flavoring**s; accept **clove**s or **nutmeg** or **mace** until each is read; accept black **pepper** or long **pepper**; accept **cinnamon** or **cassia** or **cardamom**; accept **spicy** food or **hot food**; accept **coconut** meat; accept **spice** trade or **Spice** Islands; prompt on crops or plants or trees or buds or bark or fruit or similar; prompt on food or comestibles or equivalents; prompt on aromatic materials or perfumes or fragrances or scents or equivalents] (The second line refers to Gajah Mada of Majapahit.)

<World History>

18. A mural of Apollo and the Muses by this artist draws on his sketches of the Black elevator attendant Thomas McKeller, whom this artist also depicted in a nude portrait. A woman wears a lavender sash around her waist in a portrait by this artist, who created a painting in which a line of men walk in single file with bandages over their eyes. In another painting by this artist, two guitars hang on a wall above a man clapping his hands.A girl leans against a porcelain vase as three other girls stare at the viewer in a group portrait by this artist of *Gassed* and *El Jaleo*. This artist of *The* *Daughters of Edward Darley Boit* painted a controversial portrait of a woman wearing a black dress with one strap missing. For 10 points, name this artist of *Portrait of Madame X.*

ANSWER: John Singer **Sargent**

<Painting & Sculpture>

19. A thinker from this tradition argued that a man who gets his foot amputated has his substance destroyed and regenerated, according to the “growing argument.” A member of this tradition used a hand to illustrate different levels of understanding, with an open palm being perception and a covered fist being knowledge. Five proposition connectives were developed by a follower of this tradition who literally died of laughter. This tradition emphasized volition, or prohairesis (“pro-hair-REE-sis”), in holding that the only good and bad things in the world are what’s within our control. Zeno of Citium founded this tradition, whose other practitioners included Epictetus (“eh-pick-TEE-tuss”) and Marcus Aurelius. For 10 points, name this ancient school of philosophy, whose name today refers to indifference to emotions.

ANSWER: **Stoic**ism [or word forms like the **Stoic**s; or **Stoic**ismus]

<Philosophy>

20. A work by this author inspired a woodblock-like drawing of a woman wearing a feather headdress and swirling skirt glaring at an androgynous “Syrian.” Aleister Crowley removed a butterfly plaque that covered the testicles of a monument to this author and wore it as a necklace. Visitors wearing lipstick often damaged the lamassu-inspired naked winged angel on that monument to this author designed by Jacob Epstein. After liking a drawing of a woman kissing a severed head, this author asked Aubrey Beardsley to illustrate the play that inspired it. This author proclaimed “all art is quite useless” in the preface to a novel in which the “yellow book” is read by a man who poses for Basil Hallward. For 10 points, name this author who discussed art’s nature in *The Picture of Dorian Gray*.

ANSWER: Oscar **Wilde** [or Oscar Fingal O’Flahertie Wills **Wilde**; accept Oscar **Wilde**’s tomb] (The play is *Salome*.)

<Other Fine Arts (Mixed Visual Arts)>

TB. Signs of this disease include circular calcifications surrounding epiphyseal centers called Wimberger’s rings, projections in the metaphysis called Pelkin spurs, and a pencil-point cortex. It’s not rickets, but this condition can cause an expansion of the costochondral junctions in a namesake type of “rosary.” Fairly specific signs of this disease include perifollicular hemorrhage and corkscrew hairs. This disease can be prevented by raw fish and organ meats. The manifestations of this disease are due to the loss of a cofactor required for hydroxylating proline and lysine, which are necessary for assembling collagen fibrils. Bleeding gums are a sign of this disease, for which James Lind developed a successful treatment after studying sailors. For 10 points, name this disease caused by a deficiency of vitamin C.

ANSWER: **scurvy** [or **scorbutus**; accept **hypovitaminosis C** or **vitamin C deficiency** or **hypoascorbemia** until “deficiency” is read; accept **scorbutic** rosaries; prompt on malnutrition]

<TB (Biology)>

Bonuses

1. In this novel, Amor clashes with her brother Anton about whether a house should be given to the servant Salome. For 10 points each:

[10h] Name this 2021 novel about the Swart family’s lives in South Africa between 1986 and 2018.

ANSWER: *The* ***Promise***

[10e] In 2021, Damon Galgut’s novel *The Promise* won this annual literary prize awarded to a novel published in English. From 2002 to 2019, this prize was partly named for the Man Group.

ANSWER: **Booker** Prize [or **Booker** Prize for Fiction; accept Man **Booker** Prize]

[10m] Much of *The Promise* is set on one of these places outside of Pretoria. In J. M. Coetzee’s (“coot-SAY’s”) novel *Disgrace*, David Lurie spends time at one of these places owned by his daughter Lucy.

ANSWER: **farm**s [or **plantation**s; or **plaas**]

<World Literature>

2. Pierre Schaeffer’s work on this type of composition resulted in the formation of a French research group named for it that included Edgar Varèse (“vah-REZ”) and Karlheinz Stockhausen. For 10 points each:

[10h] Give this two-word French name for a musical composition that consists of manipulated recordings of sounds, such as tapes of instruments or the human voice.

ANSWER: **musique concrète** (“kon-KREHT”)

[10m] This composer used taped portions of a pastor’s sermon at different speeds in the piece “It’s Gonna Rain.” Holocaust survivors were taped discussing their experiences for this composer’s piece *Different Trains*.

ANSWER: Steve **Reich** (“RAISH”)

[10e] Stockhausen’s piece *Gesang der Jünglinge* (“geh-ZAHNG duhr YOONG-ling-uh”), which combines electronic music with musique concrète, is one of these typically choral settings of the Catholic liturgy.

ANSWER: **mass** [or **missa** or **Messe**]

<Classical Music>

3. Algorithms for finding these things include MEME (“meem”), which uses the expectation-maximization algorithm and outputs a colored diagram with letters of various heights. For 10 points each:

[10h] Identify these recurrent patterns in a set of nucleic acid or protein sequences. An example of these things is consensus binding sites for proteins in DNA or RNA.

ANSWER: sequence **motif**s [prompt on conserved sequences]

[10m] Motif-finding algorithms discovered the Asn-X-Pro (“A-S-N-X-P-R-O”) motif for the *N*-linked form of this chemical modification, which involves adding sugar residues to another macromolecule.

ANSWER: **glycosylation** [or word forms like **glycosylated**; reject “glycation”]

[10e] *N*-linked glycosylation occurs in this organelle, which packages proteins for transport to the Golgi apparatus. The smooth version of this organelle makes lipids.

ANSWER: **endoplasmic reticulum** [or **ER**; accept smooth **ER** or smooth **endoplasmic reticulum**; accept rough **ER** or rough **endoplasmic reticulum**]

<Biology>

4. A paper titled for this action uses the example of spelunkers blowing up a man blocking a cave exit to demonstrate how some actions can be made permissible if they aren’t an intended consequence. For 10 points each:

[10m] Name this action that Judith Jarvis Thomson defended in a paper that poses a thought experiment in which a person wakes up connected to a famous violinist.

ANSWER: **abortion** [or induced **abortion**; or equivalents such as **abort**ing a pregnancy or **termination** of a **fetus**; accept “A Defense of **Abortion**”]

[10h] An essay by this philosopher analyzed abortion ethics using the lens of the doctrine of double effect. This philosopher outlined the “natural normativity” theory of ethics in the book *Natural Goodness*.

ANSWER: Philippa **Foot** [or Philippa Ruth **Foot**; or Philippa **Bosanquet**]

[10e] Foot’s essay on abortion also introduced this ethical problem, which asks you to decide whether you should let a vehicle run over and kill five people or divert its path to only kill one person.

ANSWER: **trolley** problem [or **tram** problem; accept **trolley** dilemma]

<Philosophy>

5. A rather abrupt solo in this musical style interrupts the saxophone on the third track of Charles Mingus’s album *The Black Saint and the Sinner Lady*. For 10 points each:

[10h] Name this musical style that titles a track that Bill Evans described as “a series of five scales, each to be played as long as the soloist wishes.” That track titled for this style is preceded by “All Blues” on an album’s Side 2.

ANSWER: **flamenco** [accept “**Flamenco** Sketches”]

[10e] Flamenco music informed tracks like “Solea” on this musician’s album *Sketches of Spain*. The track “Flamenco Sketches” appears on this trumpeter’s album *Kind of Blue*.

ANSWER: Miles **Davis** [or Miles Dewey **Davis** III]

[10m] Guitarist Paco de Lucía recorded a flamenco cover of “Spain,” a standard by a player of this instrument named Chick Corea. Wynton Kelly played this instrument on the *Kind of Blue* track “Freddie Freeloader.”

ANSWER: **piano** [or **piano**forte; accept electric **piano**; accept **keyboard** or **key**s]

<Other Fine Arts (Jazz)>

6. A novel from this country begins with the crucifixion of Jesus and ends with the crucifixion of the title character, Barabbas. For 10 points each:

[10m] Name this home country of the Nobel Prize-winning author of a children’s book about the *Wonderful Adventures of Nils*. A redheaded girl created by an author from this country has a pet monkey and lives in the Villa Villekula.

ANSWER: **Sweden** [or Kingdom of **Sweden** or Konungariket **Sverige**] (The girl is Astrid Lindgren’s character Pippi Longstocking.)

[10h] This Swedish author wrote *Barabbas* and described the title character’s life during the Renaissance in *The Dwarf.*

ANSWER: Pär **Lagerkvist** [or Pär Fabian **Lagerkvist**]

[10e] Selma Lagerlöf’s novel about the priest Gösta Berling is titled for this genre of epic Norse literature. Medieval works in this genre include one titled for the Völsungs.

ANSWER: **saga**s [accept *Völsunga* ***saga*** or ***Saga*** *of the Völsungs*; accept Norse **saga**s or Icelandic **saga**s; accept *Gösta Berling’s* ***Saga***]

<European Literature>

7. This statesman introduced basic health insurance, accident insurance, and social security as part of his plan to undermine the popularity of the Social Democratic Party. For 10 points each:

[10e] Name this “Iron Chancellor” who helped unify Germany in the mid-to-late 1800s.

ANSWER: Otto von **Bismarck** [or Otto Eduard Leopold von **Bismarck**; or Otto, Prince of **Bismarck**, Count of Bismarck-Schönhausen, Duke of Lauenburg or Otto Fürst von **Bismarck**, Graf von Bismarck-Schönhausen, Herzog zu Lauenburg; prompt on Duke of Lauenburg or Herzog zu Lauenburg]

[10m] Bismarck was himself a member of this class of Prussian elites. This class held immense sway over German politics through their virtual monopoly on agriculture.

ANSWER: **Junker**s (“YOONG-kers”)

[10h] The German SPD was co-founded by August Bebel and a revolutionary foe of Bismarck with this surname. Another revolutionary with this surname co-founded the Spartacist League with Rosa Luxemburg.

ANSWER: **Liebknecht** [accept Karl **Liebknecht** or Karl Paul August Friedrich **Liebknecht**; accept Wilhelm **Liebknecht** or Wilhelm Martin Philipp Christian Ludwig **Liebknecht**]

<European History>

8. Some of these movements predict the return of Masren. For 10 points each:

[10m] Name these religious movements in which people pray and prepare for the delivery of goods from foreign societies.

ANSWER: **cargo** cults [or **cargo**ism; prompt on cults; prompt on new religious movements or NRMs or revitalization movements; prompt on millenarian movements or millenarianism]

[10h] A major figure in several cargo cults bears this name. First attested by missionaries on Tanna Island, Vanuatu, this messianic figure is said to live in the volcano Yasur.

ANSWER: **John Frum** [prompt on John]

[10e] A Yaohnanen cargo cult from Vanuatu believed in the divinity of this British royal, who was married to Queen Elizabeth II until his death in 2021.

ANSWER: Prince **Philip** [or Prince Philip, Duke of **Edinburgh**; or Prince **Philip** of Greece and Denmark; accept Philip **Mountbatten**]

<Religion>

9. One of these events that originated from underneath Loma Prieta Peak coincided with a 1989 World Series match between the San Francisco Giants and Oakland Athletics. For 10 points each:

[10e] Name these natural disasters, another of which leveled San Francisco in 1906.

ANSWER: earth**quake**s [or **temblor**s; prompt on tremors or seismic events]

[10m] The Loma Prieta earthquake led to the collapse of a freeway named for this man. A class of aircraft carrier is named for this admiral, who commanded the Pacific Fleet during World War II.

ANSWER: Chester W. **Nimitz** [or Chester William **Nimitz**; accept ***Nimitz***-class aircraft carrier]

[10h] After the 1906 earthquake, a banker of this ethnicity granted loans to victims by asking for no more than a handshake. San Francisco’s North Beach neighborhood was historically home to many people of this ethnicity.

ANSWER: **Italian**-Americans [or **italo**americani or **italiani**; accept Little **Italy**] (The banker was Amadeo Giannini, who founded Bank of America.)

<American History>

10. The confusing nature of this particle prompted I. I. Rabi (“RAH-bee”) to say “who ordered that?” after its discovery. For 10 points each:

[10m] Name this ordinary-matter particle that makes up the second generation of leptons along with its namesake neutrino.

ANSWER: **muon**s [or **mu** leptons; accept **muon** neutrino]

[10e] Due to having a much greater mass than electrons, muons can be used to catalyze this process, in which multiple nuclei combine to form a more massive nucleus.

ANSWER: nuclear **fusion** [or **fusing** nuclei or word forms; accept hydrogen **fusion**; accept muon-catalyzed **fusion**]

[10h] Depending on chirality, muons have a value of either minus one-half or zero for the “weak” analog of this quantity. This quantity’s third component equals the number of up quarks minus the number of down quarks, all over two.

ANSWER: **isospin** [accept weak **isospin**; accept **isobaric spin** or **isotopic spin**; prompt on I; reject “spin”]   
<Physics>

11. An initiative called “La Gran [*this country*]” upgraded Rómulo Betancourt’s CVP into the state-owned PDVSA, which oversaw an oil industry that was reopened during “La Apertura” (“lah ah-pair-TOO-rah”). For 10 points each:

[10m] Name this country whose oil industry was nationalized after a 1976 ceremony at Zumaque 1 (“soo-MAH-kay uno”). This country joined Iran, Iraq, Saudi Arabia, and Kuwait as a founding member of OPEC (“OH-peck”) in 1960.

ANSWER: **Venezuela** [or Bolivarian Republic of **Venezuela** or República Bolivariana de **Venezuela**; accept La Gran **Venezuela**; accept Petróleos de **Venezuela**, S.A. or Corporación **Venezolana** del Petróleo]

[10h] During his first term, this Democratic Action president nationalized Venezuelan iron and petroleum and created the “Great Marshall of Ayacucho” scholarship. Ten years later, the Caracazo (“kah-rah-KAH-soh”) protested this president’s “Economic Package.”

ANSWER: Carlos Ándrés **Pérez** (“CAR-loce on-DRESS PAY-ress”) [or Carlos Andrés **Pérez** Rodríguez; accept **CAP**; prompt on Rodríguez]

[10e] This later Venezuelan president, who led a failed 1992 coup against Pérez, used oil revenue to fund leftist social programs called the Bolivarian missions. Nicolás Maduro (“nee-ko-LAHSS mah-THOO-roh”) succeeded him in 2013.

ANSWER: Hugo **Chávez** (“OO-go CHAH-vess”) [or Hugo Rafael **Chávez** Frías; accept **Chavismo**]

<World History>

12. A 2017 study by Styles and Gawne found that speakers of the Himalayan language Syuba (“s’YOO-bah”) used these two words inconsistently. For 10 points each:

[10h] Name these two words that were shown to be used consistently by about 98 percent of participants, regardless of the language they spoke, in a 2001 study by Ramachandran and Hubbard.

ANSWER: **kiki** AND **bouba** [accept answers in either order]

[10e] One explanation for the kiki-bouba effect involves the “b” in “bouba” being a bilabial consonant, which means it is made when this pair of body parts touches, stopping airflow through the mouth.

ANSWER: **lip**s

[10m] Ramachandran’s research on the kiki-bouba effect contrasted American college students with speakers of Tamil, a language from this family that also includes Telugu.

ANSWER: **Dravidian** languages [or **Dravidic** languages]

<Social Science>

13. Answer the following about mythological squirrels, for 10 points each.

[10e] The squirrel Ratatoskr carried messages between the dragon Nidhogg and the eagle sitting atop this world tree, the center of the nine realms in Norse myth.

ANSWER: **Yggdrasil** (“eeg-drah-SEEL”)

[10h] Squirrels were once giant murderous beasts before this Wabanaki culture hero made them shrink by petting them. This culture hero birthed the Mi’kmaq people after lying on the ground for one year straight.

ANSWER: **Glooscap** [or **Gluskabe** or **Gluskabi** or **Kluscap**; or **Kloskomba**]

[10m] In another culture’s mythology, this figure gave squirrels their white stripes when he ran his fingers through their fur. In a text named for this figure, he leaves his wife before she proves her chastity by walking into a lit pyre.

ANSWER: **Rām**a [or **Rām**achandra; accept the ***Rāmā****yaṇa* or ***Rāmā****yaṇam*; prompt on Vishnu] (His wife is Sītā.)

<Mythology>

14. This pope praised “African values” such as “community life” in his “Message to Africa,” which contained a thinly veiled appeal to aid the Catholics of Igboland in the Biafran War. For 10 points each:

[10m] Name this pope who canonized the Uganda martyrs and later visited Kampala in 1969 in the first papal trip to Africa. This pope presided over the end of Vatican II after the death of John XXIII (“the twenty-third”).

ANSWER: **Paul VI** [or **Paulus VI** or **Paolo VI**; or Giovanni Battista Enrico Antonio Maria **Montini**; prompt on Paul or Paulus or Paolo]

[10e] Pope Paul VI convened a symposium of African bishops that was partially named for this island country, whose Vy Vato Sakelika society led the 1947 Malagasy Uprising against French rule.

ANSWER: **Madagascar** [or Republic of **Madagascar** or Repoblikan'i **Madagasikara** or République de **Madagascar**; accept Symposium of Episcopal Conferences of Africa and **Madagascar**]

[10h] Madagascar’s Merina people largely became Protestant rather than Catholic due to this Congregationalist group. David Livingstone traveled for this “missionary society,” which competed with the Anglican Church Mission Society.

ANSWER: **London** Missionary Society [or **LMS**]

<Other History>

15. An “inverse electron-demand” version of this reaction reverses the typical paradigm for electron-donating and withdrawing substituents. For 10 points each:

[10m] Name this cycloaddition reaction in which a diene (“DAI-een”) and dienophile (“dai-EEN-oh-fyle”) combine to form a cyclohexene skeleton.

ANSWER: **Diels–Alder** (“DEELS ALL-der”) reaction [accept inverse electron-demand **Diels–Alder** reaction]

[10h] A diene with one EDG (“E-D-G”) and a dienophile with one EWG (“E-W-G”) can participate in a Diels–Alder reaction to form a cyclohexene core with two possible disubstitution (“di-substitution”) patterns. Name either.

ANSWER: **1,2** (“one-two”)-substitution OR **1,4** (“one-four”)-substitution

[10e] Esters, aldehydes, and carboxylic acids are moderate electron-withdrawing groups that can be added to the dienophile because they contain this functional group that consists of a carbon double-bonded to an oxygen.

ANSWER: **carbonyl** (“carbon-eel”) [prompt on oxo group]

<Chemistry>

16. A. C. Bradley suggested that a character doing this action had been denied “the dignity of verse” due to the largely prosaic form of the scene in which this action occurs. For 10 points each:

[10m] Name this action observed by a Doctor of Physic in a character who rubs her hands together and exclaims, “out damned spot, out, I say!” while doing this action.

ANSWER: **sleepwalk**ing [or **somnambulism**; prompt on sleeping or hallucinating]

[10e] This character sleepwalks in her final scene before her husband learns of her death. This Shakespeare character persuades her husband, the Thane of Cawdor, to murder Duncan, and eventually becomes the queen of Scotland.

ANSWER: **Lady Macbeth** [reject “Macbeth”]

[10h] At the end of the sleepwalking scene, Lady Macbeth exits for the final time after noting that she hears this sort of action, which she previously hears in a scene that titles an essay by Thomas de Quincey.

ANSWER: **knock**ing [accept “On the **Knock**ing at the Gate in Macbeth”]

<British Literature>

17. From 2020 to 2021, this politician led the Kuskokwim (“KUH-skuh-kwim”) River Inter-Tribal Fish Commission. For 10 points each:

[10h] Name this Democrat who won a 2022 election to replace Representative Don Young, in which Nick Begich III (“BAY-gich the third”) was eliminated in the first round.

ANSWER: Mary Sattler **Peltola** [or **Akalleq**; accept Mary **Kapsner** or Mary **Sattler**]

[10e] Peltola won a 2022 special election in this state based on transfers from ranked-choice voting. She defeated this state’s one-time governor Sarah Palin with a platform that supported its large oil and gas industries.

ANSWER: **Alaska** [or **AK**]

[10m] In 2018, this state became the first to use ranked-choice voting in a federal election. This state and Vermont are the only two states represented by independents in the Senate.

ANSWER: **Maine** [or **ME**] (Maine’s independent senator is Angus King.)

<Current Events>

18. This type of transformation is characterized by the matrix with elements [read slowly] “cosine theta, minus sine theta, [pause] sine theta, cosine theta.” For 10 points each:

[10e] Name these geometric transformations, which in two dimensions are characterized by an angle and a direction of either clockwise or counterclockwise.

ANSWER: **rotation**s [accept **rotate**d or **rotating**]

[10h] This group represents the symmetries of a regular polygon under rotation and reflection. For a regular polygon with *n* sides, this group has 2*n* elements.

ANSWER: **dihedral** group [or **Dn** (“D-n”) or **D2n** (“D-two-n”)]

[10m] For *n* greater than 2, the dihedral group is non-abelian (“non-ah-BEE-lee-un”), which means that its group operation [emphasize] *does not* have this property.

ANSWER: **commutative** [or **commutativity**]

<Other Science>

19. After this character accidentally burns down his newly-constructed mansion, he moves back to his Vermont farm with his wife, Persis. For 10 points each:

[10m] Name this fictional Boston paint magnate, who squanders his fortune by investing in his former partner’s business schemes in a William Dean Howells novel titled for his “Rise.”

ANSWER: **Silas** Lapham [or Silas **Lapham**; accept *The Rise of* ***Silas*** *Lapham*]

[10h] *The Rise of Silas Lapham* satirizes a formulaic genre epitomized by this novel, in which the title bootblack eventually becomes a merchant named Richard Hunter.

ANSWER: ***Ragged Dick*** [or ***Ragged Dick****; or, Street Life in New York with the Boot Blacks*]

[10e] This author parodied Horatio Alger’s rags-to-riches stories like *Ragged Dick* in his short story “A Self-Made Man.” This author also wrote the novel *The Red Badge of Courage*.

ANSWER: Stephen **Crane**

<American Literature>

20. Answer the following about art vandalism, for 10 points each.

[10e] In 2022, the glass that covers this Leonardo da Vinci painting of a woman with an enigmatic expression was smeared with cake.

ANSWER: ***Mona Lisa*** [or *La* ***Gioconda***; or *La* ***Joconde***]

[10m] In 1985, sulfuric acid was thrown on this artist’s painting of Danaё (“duh-NAY-ee”) before it was sliced with a knife. This artist’s wife Saskia was the original model for Danaё in that painting.

ANSWER: **Rembrandt** [or Rembrandt **van Rijn** or Rembrandt Harmenszoon **van Rijn**]

[10h] Cài Yuán (“tsai y’wen”) and Jiàn Jūn Xī (“j’yen j’win shee”) jumped on this Tracey Emin piece while shirtless for the unlicensed performance “Two Naked Men Jump Into” this installation. Empty liquor bottles, condoms, and other detritus clutter a blue rug next to this installation’s title object.

ANSWER: ***My Bed*** [prompt on bed or Tracey Emin’s bed or similar descriptions; prompt on *Two Naked Men Jump into Tracey’s Bed*]

<Painting & Sculpture>

TB. A former commander of the Black Flag Army led a short-lived republic in this territory, where the Indigenous Seediq (“suh-AY-deek”) people staged a rebellion called the “Musha Incident.” For 10 points each:

[10m] Name this territory that was ceded with the nearby Pescadores in the Treaty of Shimonoseki (“shee-moh-noh-seck-ee”). As part of Nanshin-ron, Japan annexed this territory years before occupying South Sakhalin and Korea.

ANSWER: **Taiwan** [or **Formosa**; or **Táiwān** or **Tâi-uân** or **Tǒi-vǎn**; accept Republic of **Formosa** or **Tâi-oân** Bîn-chú-kok or **Thòi-vân** Mìn-chú-koet]

[10h] Satō Haruo critiqued Japanese rule of Taiwan during this era, when Hara Takashi advanced a failed “Racial Equality Proposal.” This Japanese era names brief stirrings of “democracy” despite the Peace Preservation Law.

ANSWER: **Taishō** era [accept **Taishō** democracy or **Taishō** demakurashī or **Taishō** liberalism; accept Emperor **Taishō** or **Taishō**-tennō] (The Racial Equality Proposal was rejected at the Paris Peace Conference.)

[10e] Taishō Japan signed the Five-Power Washington Treaty to disarm these forces. All-rice diets caused beriberi (“BAIR-ee-BAIR-ee”) in Meiji Japan’s force of this kind, which was modernized with ironclads and dreadnoughts.

ANSWER: **navy** [or word forms like **navies** or **naval**; accept war**ship**s or battle**ship**s or **cruiser**s or torpedo **boat**s or **destroyer**s or **sub**marines; accept Washington **Naval** Treaty or Washington **Naval** Conference; accept Imperial Japanese **Navy** or **IJN** or Nippon **Kaigun** or Dai-Nippon Teikoku **Kaigun**; prompt on military forces or equivalents]

<TB (World History)>