

SOUTHEAST-MIDWEST HOUSEWRITE: PACKET 7

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NOTE: THESE TOSSUPS AND BONUSSES ARE PAIRED. IF THE TOSSUP GOES DEAD, SKIP THE ASSOCIATED BONUS. DO NOT GO BACK AND READ ANY BONUSSES THAT ARE SKIPPED.

1. A 2006 documentary set at a tournament revolving around these things featured creators of these things like Trip Payne and Brendan Quigley. Leonard Dawe was suspected of using these things to leak secret information about D-Day to the Germans. During Margaret Farrar's tenure editing a set of these things, common features like 180-degree radial symmetry were standardized. One of these things created the day before the (*) 1996 Presidential Election appeared to predict either outcome when completed. Will Shortz edits a set of these things that are published daily in the New York Times and includes a challenging "Sunday" variety. For 10 points, name these puzzles that involve entering letters "Across" and "Down" into a grid.

ANSWER: crossword puzzles [or crosswords]

<Strombeck, Other> [Ed. Lei/Ashbrook]

1. Macha's curse rendered all of Ulster's men except for this figure incapable of fighting a cattle raid. For 10 points each:

[E] Name this figure who fought the armies of queen Medb ("Med'v") during the Cattle Raid of Cooley. This hero of the Ulster Cycle used the spear Gáe Bulg ("Guy Buhlg") to kill his best friend Ferdiad during the battle.

ANSWER: Cú Chulainn ("COO CUH-lin") [accept Sétanta]

[M] A different cattle raid sees an annual war break out between Veles and this chief Slavic god of thunder after Veles steals his cattle. After the Christianization of Kievan Rus, statues of this god were thrown into the Dnieper.

ANSWER: Perun

[H] In the Mahabharata, the Trigarta kingdom launches a cattle raid against a kingdom with this name ruled by Virata. A figure in Hindu mythology who also has this name saves Manu and the Saptarishis.

ANSWER: Matsya

<Prabhakar, Myth> [Edited]

2. In a novella from this country, a character complains about hearing "Valencia" and "Tea for Two" on a phonograph as he looks onto a sky with two suns. In that novella, a political fugitive falls in love with a recording of Faustine. That work is by an author from this country who declares that "mirrors and copulation" are "abominable" in one story. An author from this country wrote the introduction to this country's (*) *The Invention of Morel*, as well as a story detailing the discovery of a fictional country in the Anglo-American Cyclopaedia. In another story from this country, the sinologist Stephen Albert is shot by the German spy Yu Tsun, whose ancestor spends thirteen years constructing the title labyrinth in a book. For 10 points, name this home country of the author of "The Garden of Forking Paths," Jorge Luis Borges.

ANSWER: Argentina

<Leahy, Short Fiction/Other> [Edited]

2. A set of six compositions written over 30 years by Joan Tower have a collective name that responds to the name of this earlier composition. For 10 points each:

[M] Name this composition that opens with three percussion calls before the trumpets play the ascending notes *[read slowly]* “F B-flat F.” This piece commissioned by Eugene Goossens is scored only for percussion and brass.

ANSWER: **Fanfare for the Common Man**

[E] This American composer used a Henry Wallace quote as inspiration for his *Fanfare for the Common Man*. He used the Shaker hymn “Simple Gifts” in his score for the ballet *Appalachian Spring*.

ANSWER: Aaron **Copland**

[H] Joan Tower dedicated her piece *Fanfare for the Uncommon Woman* to this conductor of the Baltimore Symphony Orchestra. This conductor became the first woman to direct the Last Night of the Proms in 2013.

ANSWER: Marin **Alsop**

<Karthik/Strombeck, Classical Music> [Ed. Strombeck]

3. Description Acceptable. Before this event, the main participant’s abdomen was cut open and his organs were washed in a gold tray. Later during this event, that figure chooses a vessel of milk over a vessel of wine. One man who wept during this event advised the main participant to “lessen the burden” on his people. A tree with fruits and leaves as large as elephants’ ears was the location where the (*) *salah* was established during this event. A white animal with a woman’s face was used for transport in this event, during which one man led in prayer and conversed with Adam, Jesus, and Moses. During this event that man travelled to the “farthest mosque” on the Buraq. For 10 points, name this event in which the angel Gabriel guided Muhammad to Jerusalem and gave him a tour of the seven heavens.

ANSWER: the **Night Journey** [accept **Isra and Mi’raj**; accept answers referring to **Muhammad’s** time in **Heaven**; prompt on partial descriptions like **Muhammad** going somewhere or descriptions of **Muhammad’s** trip to **Jerusalem** before Jerusalem is mentioned]

<Valan, Myth> [Ed. Groger]

3. Stars in this region of the H-R diagram have an inert core of carbon and oxygen surrounded by two burning shells of hydrogen and helium. For 10 points each:

[H] Name this region which is plotted on the H-R diagram slightly to the left of the red giants. The horizontal branch feeds into this region.

ANSWER: **asymptotic giant** branch [or **AGB**; prompt on **asymptotic**]

[M] Stars found in the late stages of the asymptotic giant branch that are named for Mira exhibit this behavior. In other stars, this behavior is driven by the kappa-mechanism and allowed Henrietta Swan Leavitt to use them as standard candles.

ANSWER: **variable** brightness [or **pulsating** brightness or **pulsing** brightness or **oscillating** brightness or **periodic** brightness; accept **periodicity**; accept **Cepheid variables** or **Mira variables**; prompt on **inconsistent** brightness; prompt on **Cepheids** with “what distinctive behavior do Cepheids exhibit?”]

[E] Because of mass loss due to solar wind, AGB stars fall below the threshold necessary to conclude their life cycle in one of these explosive astronomical events.

ANSWER: **supernovae** [do NOT accept or prompt on “novae”]

<Bowman, Astronomy> [Edited]

4. In this city, Japanese and Russian troops suppressed a 1915 mutiny of the 5th Light Infantry that was a part of the larger Hindu-German conspiracy. Four people in this city were killed on Black Thursday, the beginning of this city's Hock Lee bus riots. During an invasion of this city that began with a landing at Sarimbun Beach, hundreds of people were massacred at this city's (*) Alexandra Hospital. That invasion ended in Arthur Percival surrendering this city, known as the "Gibraltar of the East." Since 1959, this southernmost of the Four Asian Tigers has been governed by the People's Action Party. Lee Kuan Yew led, for 10 points, what city-state at the tip of the Malay Peninsula?

ANSWER: Republic of Singapore

<Lau, World History> [Ed. Prabhakar]

4. After this man declared African-Americans would support the Soviet Union during the Cold War, Jackie Robinson was asked by the House Committee on Un-American Affairs to denounce him. For 10 points each: [H] Name this singer and actor blacklisted for his communist sympathies. This man also founded the American Crusade Against Lynching.

ANSWER: Paul Leroy Robeson

[E] Robeson was among those targeted in the Second Red Scare, which was incited by this Wisconsin Senator. This man claimed he had a list of 205 Communists working in the State Department.

ANSWER: Joseph Raymond McCarthy

[M] Robeson's activism was criticized in an article calling him "the Lost Shepherd" in this magazine published by the NAACP. Editors of this magazine have included W.E.B. DuBois and Roy Wilkins.

ANSWER: *The Crisis*

<Nageswaran, American History> [Edited]

5. A 24-step sequence known as the PEG model describes one type of this process. A "facilitation" model of this process was developed by Connell and Slatyer. Clements and Gleason produced contrasting views of this process as either community or individually driven, and stages in this process are known as seres ("sears"). This process can end at the (*) plagioclimax if human interference prevents it from reaching a climax state. Pioneer species colonize a barren landscape and soil forms in the primary type of this process, while the secondary type of this process occurs after a flood, fire, or other disaster. For 10 points, name this process, in which species that make up an ecological community change over time.

ANSWER: ecological succession [accept specific types of succession]

<Karthik, Biology> [Ed. Lei]

5. In the play in which it appears, a man speaking as this being tells another that "he sees you forever and ever." For 10 points each:

[H] Name this being. A boy supposedly under the influence of this being repeats jingles about Doublemint Gum and Typhoo Tea to Martin Dysart.

ANSWER: Equus [prompt on Nugget]

[E] The god Equus speaks to Alan Strang through these animals, and Alan later blinds six of these animals with a pick. After losing one of these animals in battle, Shakespeare's *Richard III* offers his kingdom for one of these animals.

ANSWER: horses

[M] *Equus* is a play by this author, who also wrote about Mozart and Salieri's musical rivalry in *Amadeus*.

ANSWER: Peter Shaffer

<Karthik, Drama> [Ed. Leahy]

6. A newly opened building in this city is composed of three turquoise glass towers next to each other, each one increasing in height. That building's architect, Jeanne Gang, also designed a skyscraper in this city that uses changing balcony shapes to create undulating concrete patterns on its exterior. A Modernist apartment complex in this city also known as the "Glass House" was designed by (*) Mies van der Rohe. This city is home to Aqua, as well as a skyscraper designed by Bruce Graham that uses X-shaped trusses to provide exterior support. A skyscraper in this city combines nine sections in a bundled tube structure and was engineered by Fazlur Rahman Khan. For 10 points, name this American city home to the John Hancock Center and Willis Tower.

ANSWER: **Chicago**, Illinois

<Strombeck, Architecture> [Edited]

6. A princess of this polity established a group of female teachers called *jajis* who would travel to rural areas and educate the women there in Islam. For 10 points each:

[H] Name this polity, a Muslim empire established in West Africa after the Fulani Jihad of Usman dan Fodio. This polity was eventually subjugated by the British in 1903.

ANSWER: **Sokoto** Caliphate [accept **Fulani** Empire before mentioned]

[M] In 1827, this Egyptian ruler invited Clot Bey to establish a school of medicine for women to help maintain a healthy populace for conscription. That same year, this ruler's navy was destroyed at the Battle of Navarino.

ANSWER: **Muhammad Ali** Pasha al-Mas'ud ibn Agha

[E] Private schools for girls began to open in this modern-day country during the reign of the Qajar dynasty. Their reign also saw the creation of a women's hospital at the Dar ul-Funun in this country's capital of Tehran.

ANSWER: Islamic Republic of **Iran** [accept **Persia**]

<Karthik, World History> [Ed. Prabhakar]

7. The writing of this novel is interwoven with the story of a transgender disciple of I.J. Good in a 2019 novel by Jeanette Winterson. A character in this novel claims to be "the miserable and the abandoned, to be spurned at and kicked and trampled on." One character in this novel reads on the "stupendous genius and mental activity of the Grecians" through Volney's *Ruins of Empires*. (*) That character is shot while rescuing a girl from a stream and is chased away by Felix de Lacey. While vacationing on Lake Geneva, this novel's protagonist's fiancée is murdered, leading him to chase the killer through the Arctic circle. The protagonist's wife Elizabeth Lavenza is murdered in, for 10 points, what proto-feminist novel about an artificial man, written by Mary Shelley?

ANSWER: **Frankenstein: Or the Modern Prometheus**

<Ashbrook, Long Fiction> [Ed. Leahy]

7. In one of these places, an author uses Nietzsche's quote "he who has a why to live can bear with almost any how" to explain how he kept his resolve. For 10 points each:

[E] Name these places described in Viktor Frankl's *Man's Search for Meaning*. Elie Wiesel writes about his experience in one of these places in his memoir *Night*.

ANSWER: **concentration camps** [or **death camps**; prompt on **camps**; anti-prompt on **Auschwitz**; prompt on **prisons**]

[M] This author classified Auschwitz prisoners as "drowned" or "saved" in his memoir *If This is a Man*. The narrator walks through his Piedmont Jewish ancestry in "Argon," a story in this author's *The Periodic Table*.

ANSWER: Primo **Levi**

[H] This other story from *The Periodic Table* discusses Levi's time at Auschwitz, where he was afflicted with scarlet fever from a bowl of soup. With his friend Alberto, Levi traded for rations with cigarette lighter flints of the title element.

ANSWER: "**Cerium**"

<Bowman, Short Fiction/Other> [Ed. Leahy]

8. Early members of the Kadam school drew lineages between the first holder of this position and the sage Drömtonpa (“DRUM-tunn-pah”). One holder of this position stirred controversy when speaking out against followers of *Shugden* (“SHUG-denn”); that holder of this position was interviewed by Howard Cutler in what became the book *The Art of Happiness*. The lake Lhamo Lhatso is used by senior (*) religious authorities to determine the holders of this position. Holders of this position are given a title meaning “ocean” and lead the *Gelug* school. The current holder of this position resides in Dharamsala rather than at Potala Palace due to political tensions with China. Tenzin Gyatso is the 14th and current holder of, for 10 points, what religious position that leads Tibetan Buddhism?

ANSWER: **Dalai Lama** [prompt on lama]
<Ashbrook, Religion> [Edited]

8. It’s not a pendulum, but the “double” form of this system is a common demonstration of Lagrangian mechanics because generalized coordinates allow it to be solved in two equations. For 10 points each:

[M] Name this system. The acceleration of the masses in this system is equal to little-*g* times the difference of the two masses over the sum of the two masses.

ANSWER: **Atwood** machine [prompt on pulley]

[E] The Atwood machine is made up of this simple machine with two weights attached to its rope. This simple machine is composed of a wheel that has a rope around its rim.

ANSWER: **pulley**

[H] After finding the generalized coordinates for the double Atwood machine, this equation can be applied to the Lagrangian to find the equations of motion. This equation states that “the time derivative of the partial of *L* with respect to *q*-dot equals the partial of *L* with respect to *q*.”

ANSWER: **Euler–Lagrange** equation [or **Euler** equation]

<Bowman, Physics> [Edited]

9. This book divides knowledge into random experience, reason, and intuition in a section that claims that an object must be viewed “under the aspect of eternity” in order to truly grasp its meaning. According to this book, a circle found in nature and the idea of a circle are equivalent, just realized through different attributes. This book argues that every creature has the ability to “persevere in being,” a skill which it calls (*) *conatus*. This book claims that the “affects” of humans are divided into actions and passions, which both act on the “modes” of the mind and the body. This book’s claim that God and Nature are the same led to the author’s exile from the Jewish community of Amsterdam. For 10 points, name this comprehensive philosophical text by Baruch Spinoza.

ANSWER: ***Ethics, Demonstrated in Geometrical Order*** [or ***Ethica, ordine geometrico demonstrata***]

<Ashbrook, Philosophy> [Edited]

9. Patricia, a mayor with this surname, was dragged through her city, had her hair cut, and was covered in red paint before being forced to resign during demonstrations in November 2019. For 10 points each:

[H] Give this surname, which also belongs to a candidate who defeated Carlos Mesa in a 2020 presidential election. That politician with this surname, Luis, is a member of the Movement for Socialism Party.

ANSWER: **Arce** [accept Luis (Alberto) **Arce** (Catacora) or Lucho **Arce**; accept Patricia **Arce** (Guzmán)]

[E] Luis Arce earlier served as Minister of Economy and Public Finance in this country. Arce served under Evo Morales, a long-serving indigenous socialist president of this Andean country.

ANSWER: Plurinational State of **Bolivia**

[M] Elon Musk responded to accusations that he benefited from the coup government’s lax policies on mining this element by tweeting, “We’ll coup whoever we want! Deal with it.” Tesla uses this element for its car batteries.

ANSWER: **lithium** [accept **lithium**-ion batteries; accept **lithium** hydroxide; accept **Li**]

<Strombeck, Current Events> [Ed. Nageswaran]

Note to moderator: read answerline carefully.

10. When this quantity can be expressed as “ a times r to the n ,” its time average times n is equal to 2 times the time average of T . This quantity is added to the centrifugal term “ L -squared over $2\mu r$ -squared” to find a related, “effective” quantity, which is used to simplify problems in orbital mechanics. For a dipole in a magnetic field, this quantity is equal to the negative dot product of \mathbf{B} and magnetic moment. According to Hooke’s law, this quantity is equal to (*) “one-half kx -squared” for a spring. The change in this quantity is equal to negative work. The gravitational form of this quantity is equal to “ mgh .” For 10 points, name this energy that objects have at rest, contrasted with kinetic energy.

ANSWER: **potential energy** [prompt on potential or effective potential; prompt on U ; prompt on V ; prompt on energy; do NOT accept or prompt on “kinetic energy”; do NOT accept or prompt on “electric potential”]

<Valan/Bowman, Physics> [Ed. Bowman]

10. Answer some questions about Jewish scholar Moses Maimonides (“my-MAH-nih-deez”), for 10 points each.

[M] Maimonides’s *Kitab al-Siraj* (“KEE-tahb al-see-RAHJ”) is the first complete commentary on this text that codifies Jewish law, or *halakha*. The Talmud consists of this text and the *Gemara*.

ANSWER: **Mishneh Torah** [accept **Sefer Yad ha-Hazaka**]

[H] Maimonides was a proponent of apophatic theology, which is better known as this type of theology. Rather than directly describing God, this theology characterizes God according to what they are not.

ANSWER: **negative** theology [accept via **negativa** or via **negationis**]

[E] Maimonides advocated for this practice among Jewish men to decrease their sexual desire and identify followers of God. This practice involves removing the foreskin.

ANSWER: **circumcision** [or **bris**; or **brit milah**]

<Prabhakar/Ashbrook, Religion> [Edited]

11. Sarah Schroth noted the similarities of this painting’s structure to Dürer’s *Adoration of the Trinity* and connected three figures at its bottom to Titian’s *Entombment*. The Byzantine-inspired *Dormition of the Virgin* has been suggested by several art historians as a predecessor of this painting. In this painting, three musicians sit below a figure in yellow who dangles (*) two keys. John the Baptist and the Virgin Mary form a triangular *Deësis* (“duh-EE-siss”) with Christ at this painting’s top. Several men in black clothing with huge white ruffs form a line dividing this painting’s two halves. The bottom of this painting shows Saint Stephen and Saint Augustine lowering the body of the title figure. For 10 points, name this El Greco painting that depicts the entombment of a Spanish nobleman.

ANSWER: **The *Burial of Count Orgaz*** [or **The *Burial of the Count of Orgaz*** or **El *Entierro del Conde de Orgaz***]

<Dantzer, Painting & Sculpture> [Ed. Strombeck]

11. Answer the following about diatomic helium, for 10 points each.

[M] Sadly, diatomic helium doesn’t exist, because this quantity for diatomic helium is equal to 0. This quantity is equal to one-half the difference between the number of electrons in bonding and antibonding MOs.

ANSWER: bond **order**

[E] If diatomic helium existed, it would have the “dia” form of this property because it repels external fields. The “ferro” type of this property is displayed by iron and cobalt.

ANSWER: **magnetism** [accept types of magnetism like **diamagnetism** or **ferromagnetism**]

[H] Helium can form a van der Waals molecule, which is too fragile to be imaged conventionally but can be imaged with the long-path-length variant of this technique. Salt plates can be used to contain samples in this technique.

ANSWER: **infrared spectroscopy** [or **IR spectroscopy**; prompt on infrared or IR; prompt on spectroscopy]

<Karthik, Chemistry> [Ed. Lei]

12. Merging of these entities can lead to vertical systems of them, which are the most common system in which they are differentiated in only one dimension. Ablaut refers to the variation of these entities in related words that was prevalent in Proto-Indo-European. A hook diacritic attached to the upper-right of the symbols for these entities indicates that they are r-colored. When these entities act as a boundary rather than a (*) syllable nucleus, they are given the distinction “semi.” In languages like Korean, two of these entities can affect each other in a namesake “harmony.” All Japanese syllables end in “n” or these sounds. For 10 points, name these linguistic sounds that underwent a “Shift” in English between the 14th and 17th centuries and are contrasted with consonants.

ANSWER: **vowels**

<Pan, Linguistics> [Ed. Ashbrook]

12. This character is accompanied by soft, echoing pairs of violins and trumpets as he sings another character to sleep in the aria “Possente spirto.” For 10 points each:

[M] Name this character who first appears after a brassy toccata in that 1607 opera. This character and his wife appear in the title of a “reform” opera with libretto by Ranieri de’ Calzabigi.

ANSWER: **Orpheus** [accept *L’Orfeo*; accept **Orpheus** and *Eurydice* or **Orphée** et *Eurydice*]

[E] *L’Orfeo* is by this late Renaissance composer of *The Coronation of Poppea*, whose operas are some of the oldest regularly performed.

ANSWER: Claudio **Monteverdi**

[H] This other Italian Renaissance composer wrote both the first work recognized as an opera and the first opera whose music has survived to the present day. Those operas are, respectively, *La Dafne* and *L’Euridice*.

ANSWER: Jacopo **Peri**

<Karthik, Opera> [Ed. Strombeck]

13. Cochran’s formula provides a way to calculate this quantity given an ideal precision. Given the effect size, significance level, and power, a power analysis can calculate a minimum value for this quantity. When this quantity is equal to 1, the hypergeometric distribution and binomial distribution are the same. The (*) standard error of the mean is equal to the standard deviation over the square root of this quantity. The number of degrees of freedom in a chi-square test is equal to this quantity minus one. The central limit theorem claims that as this quantity grows, the distribution of the sampling means approaches the normal distribution. For 10 points, name this quantity symbolized *n* that represents the number of datapoints a sample has.

ANSWER: sample **size** [accept ***n*** before mentioned; accept **number of trials**; prompt on **number**; do NOT accept or prompt on “population size”]

<Bowman, Math> [Edited]

13. A character with this profession is the only one in his organization to realize a sketch of a secret military installation is actually scaled vacuum cleaner parts. For 10 points each:

[E] Name this profession of Hawthorne in *Our Man in Havana*. *Casino Royale* was the first in a series of Ian Fleming novels featuring a man with this profession, James Bond.

ANSWER: **spies**

[M] This British author and former MI6 agent was renowned for his many espionage novels. George Smiley tracks down a Soviet mole at the Circus in this author’s novel *Tinker, Tailor, Soldier, Spy*.

ANSWER: John **le Carré**

[H] An unnamed spy consults on a Vietnam war film called *The Hamlet* in this Viet Thanh Nguyen novel. That spy is coerced into confession by a character known as “the man with no face.”

ANSWER: ***The Sympathizer***

<Leahy, Long Fiction> [Edited]

14. The short-lived Camp TERA was part of the She-She-She camps established for women during this decade. A president elected in this decade was advised by the “Black Cabinet” organized by Mary McLeod Bethune. Journalist Lorena Hickok gained fame for covering an election in this decade. The planned community of Arthurdale, West Virginia was established in this decade with the support of a (*) First Lady who also began writing the column “My Day” during this decade. The first woman in a presidential cabinet, Frances Perkins, advocated for the passage of the Fair Labor Standards Act during this decade. For 10 points, Eleanor Roosevelt became the First Lady of the United States in which decade during the Great Depression?

ANSWER: **1930s** [prompt on the **30s**]

<Nageswaran, American History> [Edited]

14. The second-newest national park in the United States, White Sands National Park, is located in this state. For 10 points each:

[E] Name this state in the American Southwest. This state is also home to Gila National Forest and Cibola National Forest, which is located near this state’s largest city of Albuquerque.

ANSWER: **New Mexico**

[M] New Mexico is also home to this national park located in the Guadalupe Mountains. This park contains such features as the Big Room and Chocolate High.

ANSWER: **Carlsbad Caverns** National Park

[H] New Mexico also has many National Monuments, like the Rio Grande del Norte National Monument near this northern New Mexico town. The Mabel Dodge Luhan House is a National Historic Landmark in this town.

ANSWER: **Taos** [do NOT accept or prompt on “Taos Pueblo”]

<Sareddy/Prabhakar, Geography> [Ed. Prabhakar]

15. An author from this city described a “tool, craft of culture, how we go on” in a poem about a hatchet. That author wrote the main English translation of Hanshan in the collection *Riprap & Cold Mountain Poems*. Poets from this city were called “Mature Bohemians” in an essay by Kenneth Rexroth. A poet from this city described seeing people when they “first attained the title of “suffering humanity”” in Goya’s paintings. Authors like Gary Snyder published poems at a (*) store in this city owned by Lawrence Ferlinghetti. A poem written in this non-New York city describes “angelheaded hipsters burning for the ancient heavenly connection” after claiming “I saw the best minds of my generation destroyed by madness.” For 10 points, name this city, whose City Lights Bookstore served as a hub for Allen Ginsberg and other Beat authors on the west coast.

ANSWER: **San Francisco**, California [or **San Fran**, CA]

<Ashbrook, Poetry> [Ed. Leahy]

15. Clare Pettitt wrote a book titled for this four-word phrase. For 10 points each:

[M] Name this famous four-word phrase that Henry Morton Stanley supposedly used to greet a Scottish missionary he met at Ujiji. This phrase’s recipient supposedly responded “Yes, I feel thankful that I am here to welcome you.”

ANSWER: “**Doctor Livingstone, I presume?**”

[H] Livingstone’s only convert as a missionary in Africa was chief Sechele in this modern-day country. The chief Khama III invited a British protectorate in this country and his grandson Seretse later became its first president.

ANSWER: Republic of **Botswana**

[E] After finding Livingstone, Stanley later worked as an agent for this Belgian king’s International African Association. This king’s agents committed numerous atrocities in his privately owned Congo Free State.

ANSWER: King **Leopold II** of Belgium [prompt on **Leopold**]

<Sareddy, Other History> [Ed. Prabhakar]

16. A reaction that treats these compounds uses the fluorotag dansyl chloride; that process treats these compounds with phenyl isothiocyanate ("iso-thio-cyanate"). These compounds undergo a cycle of activation, coupling, deprotection from Boc, and finally cleavage from resin in a synthesis mechanism. The racemization of these compounds, quantified by the D to L ratio, is vital to a dating technique. A nitrile intermediate is hydrolyzed to form these compounds in the (*) Strecker synthesis. Some of these compounds are zwitterions at physiological pH, and hydrogen bonds between these compounds can lead to alpha helices or beta sheets. These compounds have NH₂ and OH groups that react to form a peptide bond. For 10 points, name these monomers of proteins.

ANSWER: **amino acids** [accept polypeptides or **proteins** before mention; accept specific amino acids like **cysteine**]

<Valan, Chemistry> [Ed. Lei]

16. A poem named for this man imagines a "black slave.. balancing the black dignity of his stature...conquering happiness," and states "You taught me to be an American." For 10 points each:

[H] Name this man. Another poem named after this man tells the addressee "you...give boys drops of foul death with bitter poison" and urges him to "stay asleep on the Hudson's banks."

ANSWER: Walt **Whitman** [accept "Ode to Walt **Whitman**"]

[E] The two poems titled "Ode to Walt Whitman" were written by Pablo Neruda and Federico Garcia Lorca, two poets who wrote in this language.

ANSWER: **Spanish** [accept **Español**]

[M] This Nicaraguan poet declares that "It is with the voice of the Bible, or verse of Walt Whitman, / that we should reach you, Hunter!" in "To Roosevelt." This father of the *modernismo* movement also wrote the collection *Azul*.

ANSWER: Rubén **Darío**

<Kala, Poetry> [Ed. Leahy]

17. Following this man's most notable undertaking, he was sent on a diplomatic mission to persuade Argentina to enter World War I. John Rowett helped fund one of this man's expeditions. Frank Hurley documented one of this explorer's expeditions using an early form of color photography. Along with Tom Crean and Frank Worsley, this explorer crossed a certain island with only 50 feet of rope and an adze ("ads"). This explorer climbed Mount (*) Erebus during his *Nimrod* expedition. This man and five crew members rowed 800 miles in a lifeboat after being shipwrecked, eventually drifting to Elephant Island. The ill-fated Imperial Trans-Antarctic Expedition was led by, for 10 points, what British Antarctic explorer who commanded the HMS *Endurance*?

ANSWER: Ernest Henry **Shackleton**

<Lau, Other History> [Ed. Prabhakar]

17. Answer the following about sculptures in Florence's open-air Loggia dei Lanzi gallery, for 10 points each.

[M] The tallest sculpture in the loggia is this Mannerist artist's bronze depiction of a triumphant *Perseus with the Head of Medusa*.

ANSWER: Benvenuto **Cellini**

[H] The Loggia also contains *Hercules and Nessus* and *The Rape of the Sabine Women*, two sculptures by this other Mannerist who created a *Flying Mercury*.

ANSWER: **Giambologna** [or **Giovanni da Bologna** or **Jean de Boulogne**]

[E] The Loggia was the previous home of this early Renaissance sculptor's *Judith and Holofernes*. This sculptor's bronze *David*, the first freestanding nude male sculpture since antiquity, is displayed in Florence's Bargello Museum.

ANSWER: **Donatello** [or Donatello Niccolò di **Betto Bardi**]

<Strombeck, Painting & Sculpture> [Edited]

18. The protagonist of this play claims to abandon the “bribe of bread” and “bribe of heaven” at this play’s end. In this play, a character who “played his trombone like a madman” at a meeting is referred to as a “Prince of Darkness” by his daughter. A man who is nicknamed “Euripides” by the protagonist of this play quotes the author to a man who values “money and (*) gunpowder” above all else. A coworker of this play’s protagonist is hit by the “rough” Bill Walker before her father matches a donation from a whiskey distillery. An inheritance crisis in this play is resolved by the foundling Adolphus Cusins, who meets the criteria of the arms manufacturer Andrew Undershaft. For 10 points, name this play by George Bernard Shaw about the title Salvation Army worker.

ANSWER: Major Barbara

<Leahy, Drama> [Edited]

18. Napoleon directly commanded the Imperial Guard in this battle until Marshal Ney could be saved. For 10 points each:

[M] Name this 1806 battle that saw the French army decisively defeat a Prussian army under Prince Hohenlohe. Another battle that took place the same day as this one saw Marshal Davout defeat the main Prussian army.

ANSWER: Battle of Jena [accept Jena-Auerstedt]

[H] The main Prussian army at Auerstedt was led by the Duke of Brunswick and this king of Prussia. This king’s wife Queen Louise led the pro-war faction at the Prussian court.

ANSWER: Frederick William III [accept Friedrich Wilhelm III; prompt on Frederick William or Friedrich Wilhelm; do NOT accept or prompt on “Frederick,” “Friedrich,” “William,” nor “Wilhelm”]

[E] After winning at Jena-Auerstedt, Napoleon signed the Treaties of Tilsit with Frederick William III and Tsar Alexander I, who ruled this country. Napoleon launched a disastrous invasion of this country in 1812.

ANSWER: Russian Empire

<Alaro, British/European History> [Ed. Prabhakar]

19. In a symphony of this number, a slow set of variations marked *Ruhevoll* precedes a final movement song describing Heaven from a child’s point of view. That G major symphony of this number begins with two measures of flutes playing grace notes over sleigh bells. A composer’s symphony of this number, his last, adapted an eight-measure theme from a Bach cantata as the basis for 30 variations in its (*) passacaglia final movement. A “Hunt” scherzo appears in Bruckner’s symphony of this number, dubbed the “Romantic.” This is the number of symphonies written by Johannes Brahms. Haydn pieces with nicknames like “Sunrise” and “Emperor” are performed by this many players. For 10 points, name this number of movements in a standard symphony.

ANSWER: four [accept Mahler’s fourth symphony, Brahms’ fourth symphony, or Bruckner’s fourth symphony] (the first piece is Gustav Mahler’s Symphony No. 4)

<Dantzer, Classical Music> [Ed. Strombeck]

19. The amino acid tyrosine plays several important roles in the body. For 10 points each:

[M] Tyrosine names a receptor variety of these enzymes. The cyclin-dependent types of these enzymes serve an important role during cell cycle checkpoints.

ANSWER: kinases [accept receptor tyrosine kinase or cyclin-dependent kinases]

[E] In a neural context, tyrosine is used in the body to synthesize this “feel-good” neurotransmitter that regulates pleasure. Parkinson’s disease results when cells die in the substantia nigra, an area of the brain that produces this neurotransmitter.

ANSWER: dopamine [or 3,4-dihydroxyphenethylamine]

[H] The decomposition of tyrosine yields acetoacetate (“uh-SEE-toe-acetate”) and this other compound that then enters the Krebs cycle. This compound is then hydrated to malate in the next step of the cycle.

ANSWER: fumarate [accept fumaric acid]

<Valan, Biology> [Ed. Lei]

20. In this conflict, devices that released a cluster of bombs when dropped were nicknamed “bread baskets” by one side after the enemy claimed they were airlifting food for starving citizens. One side in this conflict forced their enemies into small pockets, or *motti*, to pick them off. This conflict was initially justified by a false flag attack on the border village of Mainila. During this conflict’s Battle of Kollaa, one soldier earned the nickname (*) “White Death” for his 500 confirmed sniper kills. One side in this conflict had previously set a border at the Mannerheim Line, and this conflict ended with the cession of Karelia to Joseph Stalin. For 10 points, name this brief conflict between the Soviet Union and Finland at the start of World War II, named for the coldest season of the year.

ANSWER: **Winter War** [accept **Talvisota** or **Vinterkriget**; prompt on **World War II** before mentioned]
<Strombeck, British/European History> [Edited]

20. According to the St. Petersburg Paradox, the expected value of a coin flip game that pays two to the n dollars for the n-th head flipped in a row is infinity. Answer the following about “resolutions” to the Paradox, For 10 points each.

[M] The classic “resolution” is to introduce this concept, quantifying the satisfaction that players derive from the game. Indifference curves plot the points where this quantity is maximized for two agents.

ANSWER: marginal **utility**

[E] Richard Jeffrey’s “resolution” is that this phenomenon will solve the paradox by reducing the value of large wins. This phenomenon causes increased prices due to increased monetary supply.

ANSWER: **inflation**

[H] These two economists argued that defining a “specific utility of gambling” is impossible in their book *Theory of Games and Economic Behavior*. These two economists name a theorem that says that agents maximize the expected value of utility from choices made.

ANSWER: John **von Neumann** AND Oskar **Morgenstern** [prompt on partial answer; accept the **von Neumann-Morgenstern** utility function]

<Karthik, Economics> [Ed. Ashbrook]
